

**Performance Assessment for the Saltstone Disposal Facility at the  
Savannah River Site: Quality Assurance Report**

**January 2020**

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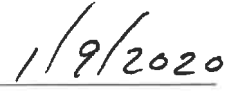
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## APPROVALS

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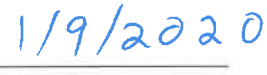


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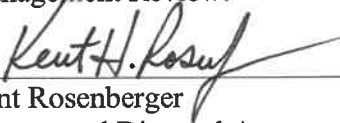


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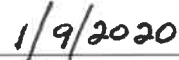


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Date



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## ACRONYMS

APR	Air Pathway Release
BE	Best Estimate or Best Estimate Case
CBP	Cementitious Barriers Partnership
CE	Conservative Estimate or Conservative Case
CFR	Code of Federal Regulations
CV	Compliance Value or Compliance Case
DLL	Dynamic Linked Library
DM	Design Margin
DOE	U.S. Department of Energy
ECC	Engineered Closure Cap
FEPs	Features, Events, and Processes
FY	Fiscal Year
GCL	Geosynthetic Clay Liner
HDPE	High-Density Polyethylene
IHI	Inadvertent Human Intruder
$K_d$	Distribution Coefficient
MOP	Member of the Public
MPAD	Most Probable and Defensible
PA	Performance Assessment
QA	Quality Assurance
SA	Special Analysis
SDF	Saltstone Disposal Facility
SDU	Saltstone Disposal Unit
SEE	Systems Engineering Evaluation
SQAP	Software Quality Assurance Plan
SREL	Savannah River Ecology Laboratory
SRNL	Savannah River National Laboratory
SRNS	Savannah River Nuclear Solutions, LLC
SRR	Savannah River Remediation LLC
SRS	Savannah River Site
UVA	University of Virginia
WDA	Waste Disposal Authority

## 1.0 INTRODUCTION

The purpose of this report is to document input data verification and technical checking of model files and calculations developed in support of the Fiscal Year (FY) 2019 *Performance Assessment (PA) for the Saltstone Disposal Facility (SDF) at the Savannah River Site (SRS)*, hereafter referred to as the FY2019 SDF PA. [SRR-CWDA-2019-00001] This report focuses on technical checking of work performed by Waste Disposal Authority (WDA) staff, as well as verification of inputs provided to WDA by organizations external to Savannah River Remediation LLC (SRR), such as the Savannah River Site Ecology Laboratory (SREL) and Savannah River National Laboratory (SRNL).

Section 2 describes checking and verification activities related to input development. Sections 3 and 4 describe the checking of models developed in support of the FY2019 SDF PA. Section 5 discusses checking and verification of post-processed data and model results. Section 6 provides a summary of software Quality Assurance (QA). Finally, Section 7 summarizes the results of these QA activities.

### 1.1 Scope and Method

The scope of this report focuses on input data verification and technical checking of inputs and modeling components that have changed since the issuance of the 2009 SDF PA and subsequent Special Analyses (SAs) including the FY2013 SDF SA, FY2014 SDF SA, and FY2016 SDF SA. [SRR-CWDA-2009-00017; SRR-CWDA-2013-00062, SRR-CWDA-2014-00006, SRR-CWDA-2016-00072] QA documentation for information used in the SAs completed since the issuance of the 2009 SDF PA has been captured in QA reports associated with issuance of each SA and is not repeated herein. [SRR-CWDA-2013-00087, SRR-CWDA-2014-00010, SRR-CWDA-2016-00109] Only information used in the generation of the FY2019 SDF PA that has been generated since the issuance of the FY2016 SDF SA is included in this QA report.

The activities documented within this report were performed according to the following documents, as appropriate:

- *Quality Assurance Management Plan* [SRNS-RP-2008-00020]
- E7 Manual, *Conduct of Engineering*, Procedure 2.60, Technical Reviews [E7-2.60]
- S4 Manual, *Liquid Waste Organization Administrative Procedures*, Procedure ENG.51, *Verification and Checking of Technical Documents* (for SRR) [S4-ENG.51]
- *Technical Report Design Check Guidelines* (for SRNL) [WSRC-IM-2002-00011]
- 1Q *Quality Assurance Manual*, Procedure 20-1, *Software Quality Assurance* [1Q-20-1]

S4-ENG.51 and WSRC-IM-2002-00011 supplement E7-2.60. The objective of these documents is to ensure that inputs, calculations, and results are technically correct, accurate and complete. Sections 2 through 7 of this report describe how this objective was met for various aspects of the FY2019 SDF PA development.

Completed QA documentation associated with the FY2019 SDF PA accompanies this report as supporting files. Excel files associated with the new figures and tables presented within the FY2019 SDF PA have all been independently checked per E7-2.60 according to guidelines provided in S4-ENG.51.

## **1.2 QA Summary**

This report concludes that the FY2019 SDF PA has no outstanding issues that require resolution. Therefore, the results of the FY2019 SDF PA are technically defensible and complete and satisfy the requirements established by the Procedure Manual E7, 2.60 *Technical Reviews*. The FY2019 SDF PA modeling results are appropriate for the intended use.

## 2.0 SDF PA INPUT DATA VERIFICATION

The following sections provide detailed information about data verification for various datasets used as inputs to the FY2019 SDF PA.

### 2.1 Conceptual Model Development

The 2009 SDF PA was developed to provide the technical basis for demonstrating that the SDF will be compliant with performance objectives as defined in U.S. Department of Energy (DOE) Manual 435.1-1 and 10 Code of Federal Regulations (CFR) 61. [SRR-CWDA-2009-00017] Development of the 2009 SDF PA did not, however, apply a well-documented, formal process for developing conceptual models. In support of the FY2019 SDF PA, a report, *Conceptual Model Development for the Saltstone Disposal Facility Performance Assessment*, SRR-CWDA-2018-00006, was prepared to support that the PA would meet performance objectives.

Due to the complex nature of PA models, a structured methodology was necessary to ensure that relevant components were adequately addressed during model development. Therefore, PA models were developed within defined boundaries and with appropriate consideration of relevant (site-specific) features, events, and processes (FEPs).

The determination of the site-specific FEPs for the SDF PA (hereafter referred to as the FEPs List) was documented in the SDF FEPs report (*Features, Events, and Processes for the Saltstone Disposal Facility Performance Assessment*). [SRR-CWDA-2017-00057] These site-specific FEPs were considered during the development of the conceptual model(s) described in the conceptual model report.

Development of the SDF FEPs report and supporting analyses were subject to the QA program and requirements as defined in Manual S4, Procedure ENG.51 – *Verification and Checking of Technical Documents* and underwent technical review per E7-2.60. The report was compiled by Steve Hommel and was prepared with the support of the FEPs screening team that consisted of Steve Hommel (SRR), Andrew Garrabrants (Vanderbilt University), Terry Killeen (Savannah River Nuclear Solutions, LLC [SRNS]), Mark Layton (SRR), Barry Lester (SRR), Jerry Mangold (SRR), Paul Rutland (Washington River Protection Solutions), Roger Seitz (SRNL), and Steve Simner (SRR) and the independent, technical review was conducted by David Watkins.

The purpose of the conceptual model report (SRR-CWDA-2018-00006) was to document: (1) the methods used in the development of the conceptual models for the FY2019 SDF PA; (2) a description of the recommended modeling scenarios and/or conceptual models; and (3) a discussion of how all the relevant SDF FEPs identified in SRR-CWDA-2017-00057 relate to the conceptual models, either through explicit modeling descriptions or through other approaches.

Development of the conceptual model report and supporting analyses were subject to the QA program and requirements as defined in Manual S4, Procedure ENG.51 – *Verification and Checking of Technical Documents* and underwent technical review per E7-2.60. The report was prepared by Steve Hommel and Barry Lester and the independent, technical review was conducted by Jerry Mangold and David Watkins.

## 2.2 Contaminant Release Updates

The updated FY2019 SDF PA incorporates new data developed through ongoing research activities. Several studies and reports have been prepared to support the updates to various  $K_d$  and solubility values used in the modeling effort.

### 2.2.1 Updated I-129 $K_d$ Values

As part of the FY2019 SDF PA, a GoldSim-based optimization model was designed to assist in selecting appropriate values for iodine sorption coefficients (or  $K_{ds}$ ) to be used for simulating the release and transport of dissolved I-129 within the SDF waste form (i.e., saltstone) and surrounding cementitious materials (i.e., Saltstone Disposal Units [SDUs]) located at the SDF. The optimization model was developed using GoldSim simulation software (GTG-2017a), an object oriented, probabilistic modeling software designed to evaluate parameter sensitivity and the influence of parameter uncertainty. These recommendations were captured in a memo, *Iodine  $K_{ds}$  for Simulating I-129 Releases from Saltstone SDUs*, SRR-CWDA-2018-00045, prepared by B.H. Lester. The memo and optimization model were reviewed by S.H. Hommel according to guidelines provided in S4-ENG.51, and documented as part of issuance of the memo.

### 2.2.2 Updated Tc-99 Solubility Limits

As described above, as part of the FY2019 SDF PA, a GoldSim-based optimization model was designed to assist in selecting appropriate solubility limits to be used for simulating the release and transport of Tc-99 within the SDF waste form (i.e., saltstone) and surrounding cementitious materials (i.e., SDUs) located at the SDF. The optimization model was developed using GoldSim simulation software (GTG-2017a), an object oriented, probabilistic modeling software designed to evaluate parameter sensitivity and the influence of parameter uncertainty. These recommendations were captured in a memo, *Technetium Solubility Limits for Simulating Tc-99 Releases from Saltstone SDUs*, SRR-CWDA-2018-00046, prepared by B.H. Lester. The memo and optimization model were reviewed by J. Mangold according to guidelines provided in S4-ENG.51, and documented as part of issuance of the memo.

## 2.3 Revised SDU Design and Layout

The revised layout of the SDF and the design for the 375-foot diameter SDUs are documented in the FY2016 SDF SA. [SRR-CWDA-2016-00072] Subsequent to the issuing of the FY2016 SDF SA, a System Engineering Evaluation (SEE) was held to re-evaluate the siting future SDUs (SDU 8 through SDU 12) and to provide recommendations. The results of the recommendations are provided in G-AES-S-00004.

Each of these documents were prepared according to QA controls, including independent Verifiers, Checkers, and Reviewers, as appropriate.

- C-CC-Z-00039, *Z Area Saltstone Disposal Site SDU6 Tank Design Concrete Foundation Plan*
- C-CC-Z-00042, *Z Area Saltstone Disposal Site SDU6 Tank Design Concrete Wall and Column Section and Details*



- C-CC-Z-00044, *Z Area Saltstone Disposal Site SDU6 Tank Design Concrete Sections and Details*
- C-CC-Z-00049, *Saltstone Disposal Site SDU6 Tank Design Concrete Roof Embed and Nozzle Plan*
- C-CG-Z-00047, *Z Area Saltstone Disposal Site SDU 6 Site Preparation Grading and Erosion & Sediment Control Plan (Phase 2) Excavation Area*
- C-CY-Z-00005, *Z Area Saltstone Disposal Site SDU 6 Tank Design HDPE/GCL, Leakage Detection and Settlement Monitoring Plan*
- C-CY-Z-00006, *Z Area Saltstone Disposal Site SDU6 Tank Design Civil Leakage Detection System Sections and Details*
- C-SPP-Z-00008, *Saltstone Disposal Site - SDU 6 (Procurement Spec)*

Primary modeling of these features was performed by SRNL/SRR staff (for PORFLOW) and by Barry Lester (for GoldSim®). Steve Hommel and Jeremiah Mangold independently verified that the revised design had been correctly incorporated into the PORFLOW and GoldSim® models according to guidelines provided in S4-ENG.51. David Watkins prepared the FY2019 SDF PA text (Section 3.2) based on the various design drawings.

## 2.4 Inventory Updates

The radiological and chemical inventories developed for the 2009 SDF PA and subsequent SDF SAs reflected data available at the time but did not reflect an SDF inventory based on the most current (i.e., 2018) data. Updates have been made to the current SDF inventory and future inventories based on Tank Farm estimates. Given the importance of Tc-99 and I-129 in estimating doses within SDF performance modeling, improved methods for projecting Tc-99 and I-129 inventories were performed.

### 2.4.1 Updated SDF Inventory

The updated SDF inventory was documented in *Determination of Inventory for FY2019 Performance Assessment Modeling*. [SRR-CWDA-2018-00041, Rev. 2] This document and the recommended values were reviewed by K.D. Dixon and M.H. Layton as documented on the approval page of the report. Primary modeling to incorporate these values was performed by SRNL/SRR staff (for PORFLOW) and by Barry Lester (for GoldSim®). Steve Hommel independently verified that the revised SDF inventory had been correctly incorporated into the PORFLOW and GoldSim® models according to guidelines provided in S4-ENG.51.

### 2.4.2 SDF Inventory Uncertainty Reduction

Two reports were prepared to provide better inventories for I-129 and Tc-99 by reducing the uncertainty inherent in estimating concentrations when no direct analytical data for the constituent is available. Previously, estimated values for Tc-99 and I-129 were determined by ratioing the analyzed concentrations of Cs-137 to analyzed concentrations of each of these radionuclides. For tanks where there was no I-129 or Tc-99 data available, the Cs-137 concentrations for the tank were multiplied by the determined element-specific ratio to get an estimated concentration. This approach was appropriate, except the decay of Cs-137 was not

taken into consideration as part of the inventory determination. In these reports, all Cs-137 analytical data are decayed to October 1, 2032, producing a more standardized ratio to use. These reports for reducing inventory uncertainty are provided in *Evaluation of I-129 Concentration Data to Improve Liquid Waste Inventory Projections*, SRR-CWDA-2015-00077 and *Evaluation of Tc-99 Concentration Data to Improve Liquid Waste Inventory Projections*, SRR-CWDA-2015-00123.

Development of these two reports and supporting analyses were subject to the QA program and requirements as defined in Manual S4, Procedure ENG.51 – *Verification and Checking of Technical Documents* and both underwent technical review per E7-2.60. The reports were prepared by Steve Hommel and the independent, technical reviews were conducted by Jerry Mangold.

## 2.5 Cementitious Material Degradation Updates

Studies of cementitious material degradation in the context of low-level waste disposal have identified sulfate attack, carbonation-influenced steel corrosion, and decalcification (primary constituent leaching) as the chemical degradation phenomena of most significance under SRS exposure conditions.

### 2.5.1 SRNL Cementitious Degradation Report

In 2018, SRNL prepared a report, *Degradation of Saltstone Disposal Unit Cementitious Materials*, SRNL-STI-2018-00077, where degradation time scales for each of these three degradation phenomena are estimated for saltstone and SDU concrete associated with each SDU design under conservative, compliance, and best estimate assumptions. The “compliance value” (CV) is an intermediate result recommended for PA compliance case modeling that is more probable than the “conservative estimate” (CE) and more defensible than the “best estimate” (BE). The combined effects of multiple phenomena are then considered to determine the most limiting degradation time scale for each cementitious material component (e.g. roof, wall, floor). Degradation times are estimated using analytic solutions, supported by numerical simulation codes provided through the DOE Cementitious Barriers Partnership (CBP) Software Toolbox. Onset of degradation may be delayed due to clean cap grout or High-Density Polyethylene (HDPE)/Geosynthetic Clay Liners (GCLs). Also considered is any physical and/or concrete degradation occurring during facility construction and/or operations, such as anchor penetrations and exposure to bleed water.

This report was prepared by Greg Flach and technically verified by Thomas Danielson of SRNL per *Technical Report Design Check Guidelines* (for SRNL), WSRC-IM-2002-00011. Emails documenting the technical review are attached in Appendix A.

### 2.5.2 Updates to Eh/pH Transitions for Cementitious Materials

The Geochemist’s Workbench Model was updated to include a two-step Eh/pH transition and was rerun to address the three cases to be modeled in the FY2019 SDF PA (Best Estimate Case [BE], Compliance Case [MPAD], and the Conservative Case [CE]). The updates to the Geochemist’s Workbench model are documented in the SRNL report, *Geochemical Model of Eh and pH Transitions in Pore Fluids during Saltstone and SDU Concrete Aging*, SRNL-STI-

2018-00586. This work was performed by James Dyer, SRNL, and technical review was performed by Johnbull Dickson, SRNL.

## 2.6 Closure Cap Updates

An engineered closure cap will be installed over the SDF following the closure of the final disposal unit. The closure cap description is based on an SRNL report (WSRC-STI-2008-00244) and updated according to the specification in *Saltstone Disposal Facility Closure Cap Concept Update for Large-Scale Disposal Units* (SRR-CWDA-2018-00087). The preliminary closure cap design was used to estimate initial infiltration and percolation rates. The closure cap design and infiltration information is preliminary and conceptual in nature, being consistent with a scoping level concept. However, it does provide sufficient information for planning purposes, to evaluate the closure cap configuration relative to its constructability and functionality, and to estimate infiltration over time through modeling. It is not intended to constitute final design. Final design and a re-evaluation of infiltration will be performed near the end of the operational period. Technological advances, increased knowledge, and improved modeling capabilities are all likely prior to closure and will result in improvements in both the final closure cap design and infiltration estimates. [WSRC-STI-2008-00244]

Listed below are updates to the closure cap design prepared since the issuance of the 2009 SDF PA.

### 2.6.1 UVA Closure Cap Long-Term Percolation Rates Report

The University of Virginia (UVA) was tasked to provide updated predictions of the percolation rate (also known as leakage rate) from the bottom of the engineered closure cap (herein “ECC”) anticipated for closure of the SDF. In April 2018, UVA provided a report, *Predicting Long-Term Percolation from the SDF Closure Cap*, SRRA107772-000009, detailing the results of the study. The results have been incorporated into the FY2019 SDF PA. The report was prepared by Craig Benson and Marie Benavides of UVA. The report was technically reviewed by Thomas Williams and Nicholas Chen of UVA per *UVA Quality Assurance Document for Research Conducted in Support of SRR* (SRRA107772-000005).

During independent review of the reference report (SRRA107772-000009) by Steve Hommel of SRR, it was determined that an incorrect unit conversion had been applied, wherein impingement rates of 400 cm/yr and 650 cm/yr were applied to the analytical solution instead of using 400 mm/yr and 650 mm/yr, respectively. Documentation of acknowledgement of this error is presented in Section 7.2.1 and in an attached email in Appendix A-4 dated November 9, 2018 between Steve Hommel, SRR and Craig Benson, UVA. This error is corrected in the memorandum: *Recommended Values for Percolation Rates to Support Future SDF Modeling* (SRR-CWDA-2018-00030), which was prepared by Steve Hommel and reviewed by William Dean.

### 2.6.2 Percolation Rate Updates

Based on SRRA107772-000009, three sets of recommended percolation values through the SDF closure cap were prepared:

- Best Estimate values (i.e., the most realistic) to reflect expected future conditions regardless of defensibility,

- Defensible Values (i.e., bounded by conservative assumptions) to use for providing defense-in-depth modeling, and
- Compliance Values (i.e., using a reasonable combination of the most probable and defensible (MPAD) inputs), blending the Best Estimate approach with the Defensible approach to provide values recommended for compliance modeling.

By organizing inputs in this way, models may be developed that either reflect expected conditions (i.e., best estimate values) or defensible conditions to provide a more clearly defined defense-in-depth approach. The MPAD values to support compliance fall somewhere between the expected and defensible values. The recommended percolation rates were compiled in *Recommended Values for Percolation Rates to Support Future SDU Modeling*, SRR-CWDA-2018-00030, underwent technical review per E7-2.60, which was documented as part of issuance of the memo. The memo was prepared by Steve Hommel and the independent, technical review was conducted by Ben Dean.

## 2.7 Air Pathway Release Updates

As part of the development of the 2009 SDF PA, an evaluation of the Air pathway dose to the Member of the Public (MOP) and Inadvertent Human Intruder (IHI) were performed to ensure performance objectives were met. For the air pathways analysis, the partitioning of contaminants was from the liquid to the gas phase, rather than from the solid to the liquid phase for groundwater modeling. As part of preparing the FY2019 SDF PA, updates needed to be performed to airborne release estimates.

### 2.7.1 Air and Radon Pathway Model

As part of preparing the FY2019 SDF PA, an updated air pathways model was developed in GoldSim by SRR to evaluate the release of radionuclides from SDUs to the atmosphere and through air pathways to the site boundary (pre-closure) and to a 100-meter compliance boundary (post-closure). The SDF Air Pathway Release (APR) Model (SDFAPR Model) was developed using GoldSim (Version 12.0) software (GTG-2017a, GTG-2017b).

The original GoldSim model developed for performing sensitivity analyses for the FY2019 SDF PA was developed to evaluate the release of radionuclides from SDUs to the atmosphere. This model was based on the Compliance Case PORFLOW model, CV.5. However, the PORFLOW model was updated to CV.8; therefore, the GoldSim air and radon pathway model was updated to a final version, *SaltstonePA\_Air&Radon\_PathwayModel\_V2.010.gsm*. Documentation of QA checking of several earlier iterations of the GoldSim file, along with subsequent sensitivity versions of the model, are documented in associated check forms. Table 2.7-1 provides a summary of the various model file versions and their associated completed check forms for documentation. Copies of the completed check forms are included in Appendix A-1.

The SDFAPR Model was developed to benchmark the calculations against previous modeling work performed in PORFLOW (as documented within Appendix A). Specifically, it was designed to provide the surface flux which can be used as input to an atmospheric transport model for evaluating the degree of attenuation associated with air-pathway transport to the site boundary and 100-meter compliance boundary.

In addition, this model was developed to update select input values to evaluate the release of radionuclides from SDUs to the atmosphere. Peak atmospheric concentrations calculated at the site boundary and 100-meter compliance boundary will be used to evaluate peak doses at the boundaries.

The SDFAPR Model has been designed for two purposes. First, to generate gas-phase radionuclide releases to be used in atmospheric transport and dose calculations. Secondly, to allow the PA developers to evaluate the degree of influence various processes will have on the resultant releases.

The report that documents the SDFAPR Model performed for the FY2019 SDF PA is *Air Pathway Release Model for the Saltstone Disposal Facility*, SRR-CWDA-2018-00025. Development of this report and supporting analyses were subject to the QA program and requirements as defined in Manual S4, Procedure ENG.51 – *Verification and Checking of Technical Documents* and underwent technical review per E7-2.60. The report was prepared by Barry Lester and Ben Dean and the independent, technical review was conducted by Steve Hommel. The design check of the SDFAPR Model work was independently documented within SRR-CWDA-2018-00025 and is not repeated herein.

## 2.8 Dose and Exposure Pathways Updates

The applicable dose calculations have been revised, relative to the approaches used in the 2009 SDF PA and the FY2016 SDF SA. The revised calculations are described in Revision 2 of the *Dose Calculation Methodology for Liquid Waste Performance Assessments at the Savannah River Site*. [SRR-CWDA-2013-00058] This approach was developed and implemented by Steven Hommel. Leslie Wooten provided technical review of the approach and Barry Lester reviewed the implementation of the calculations within the GoldSim<sup>®</sup> file. These reviews were performed per E7-2.60 according to guidelines provided in S4-ENG.51.

**Table 2.7-1: Summary of GoldSim® Air and Radon Pathway Model Dose Calculation Checking**

GoldSim® Air Pathway Model					
Checklist PDF for GoldSim Model Revision File	Source GoldSim Model File Name for Revision	Created By	Checked By	Revision Date	Pages
SaltstonePA_Air&Radon_PathwayModel_V2.007_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.006.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.008_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.007.gsm	Steve Hommel	Ben Dean	04/10/19	7
SaltstonePA_Air&Radon_PathwayModel_V2.009_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.008.gsm	Steve Hommel	Ben Dean	04/10/19	2
SaltstonePA_Air&Radon_PathwayModel_V2.009_Compliance_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_FullDesat_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_AltDesat_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_RealDesat_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_Satx0.1_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	2
SaltstonePA_Air&Radon_PathwayModel_V2.009_Satx0.5_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/15/19	2
SaltstonePA_Air&Radon_PathwayModel_V2.009_NoCap_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	2
SaltstonePA_Air&Radon_PathwayModel_V2.009_NoCapNoRoof_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	2
SaltstonePA_Air&Radon_PathwayModel_V2.009_NoRoof_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	2
SaltstonePA_Air&Radon_PathwayModel_V2.009_RealInv_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_OxIII_Henry_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_OxII_Henry_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_ReII_Henry_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_Saltstone_Henry_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_SoilB_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_SoilC_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_SoilD_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_Realistic_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_WorstCase_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_D-in-DInv_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.009_Defensible_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm	Steve Hommel	Ben Dean	04/10/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.010_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.009_NoCapNoRoof.gsm	Steve Hommel	Ben Dean	04/17/19	2
SaltstonePA_Air&Radon_PathwayModel_V2.010_Defensible_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm	Steve Hommel	Ben Dean	04/17/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.010_D-in-DInv_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm	Steve Hommel	Ben Dean	04/17/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.010_WorstCase_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm	Steve Hommel	Ben Dean	04/17/19	1
SaltstonePA_Air&Radon_PathwayModel_V2.010_SoilB_Check.pdf	SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm	Steve Hommel	Ben Dean	04/17/19	1

### 3.0 PORFLOW MODELING

PORFLOW modeling performed in support of the FY2019 SDF PA is pivotal to demonstrating the performance of the SDF system with respect to waste release and transport. Accordingly, the PORFLOW modeling underwent additional levels of scrutiny. The following checking and verification activities were performed to provide high confidence in the quality of the FY2019 SDF PA PORFLOW models.

The version of PORFLOW used for preparation of the FY2019 SDF PA was version 6.42.9. This version was tested with respect to known groundwater flow and transport problems in order to ensure PORFLOW performs according to its documentation and that its performance meets the needs of the tank, vault closure, and groundwater modeling applications at the Savannah River Site. The Quality Assurance tests confirm PORFLOW version 6.42.9 meets the needs for modeling applications at the Savannah River Site. The results of the testing and verification of the software is documented in SRNL-STI-2018-00275.

The report that documents the QA for the PORFLOW modeling performed for the FY2019 SDF PA is *PORFLOW Simulation Cases Supporting the Saltstone Disposal Facility PA Revision*, SRR-CWDA-2019-00043.

#### 3.1 Technical Review of PORFLOW Vadose Zone Flow Field Configuration Files

Various configurations were presented for Vadose zone flow field modeling. A total of 54 various flow fields were evaluated with differing configurations for infiltration rates, cementitious degradation rates (both for various combinations of Best Estimate, Compliance Case, and Defense-in-Depth values), saturated hydraulic conductivity for backfill, and the initial hydraulic conductivity of saltstone. The various configuration files for each of these iterations involved checking approximately 2,316 files for appropriate changes. The compilation of these configuration files along with the associated PORFLOW runs were performed by Greg Flach and the checking of each of the individual configuration files was performed by David Watkins and Ben Dean per E7-2.60 according to guidelines provided in S4-ENG.51. Each of these checks are documented in an Excel spreadsheet, included in Appendix B.

## 4.0 GOLDSIM® MODELING

This section describes the checking and verification activities for the development of model files and calculations performed in support of the FY2019 SDF PA.

### 4.1 GoldSim® Model File Development

GoldSim® modeling within the FY2019 SDF PA serves four functions. First, a fate and transport model is used for benchmarking the results from the PORFLOW model, providing greater confidence in the modeling approaches and to use for single parameter sensitivity analyses (i.e., deterministic modeling). Second, GoldSim® facilitates uncertainty analyses by allowing uncertainty distributions as input parameters that can be sampled over multiple realizations (i.e., probabilistic modeling). Next, the GoldSim® benchmarking model can be modified to perform deterministic sensitivity analyses. Finally, a GoldSim® dose calculator converts concentration data into doses (either to hypothetical members of the public or hypothetical human intruders).

Model development was an iterative process. As such, changes were tracked and checked until the final model versions were developed. The initial GoldSim® model used to prepare the FY2019 SDF PA was *SRS Saltstone v5.014\_CaseC.gsm* from the FY2016 SDF SA. As changes were made, newer versions of the model file were created. Each of these model revisions were given a subsequent model number and independently checked and verified.

The GoldSim® model used for the dose calculations based on PORFLOW results was *SRS Saltstone v5.051.gsm*. Subsequent versions of the GoldSim® model were prepared for evaluating various scenarios for sensitivities and their checking is documented on check forms up through *SRS Saltstone v5.054.gsm*.

### 4.2 GoldSim® Dose Calculations Using PORFLOW Concentrations

Doses were determined from the concentrations of several discrete PORFLOW runs in the FY2019 SDF PA. These PORFLOW doses are documented in Sections 5 and 6 of the FY2019 SDF PA. All dose calculations used the same GoldSim® file, except that the concentrations were replaced using the desired concentrations as determined in PORFLOW.

Each of the model files had its own independent checking and verification form. Table 4.2-1 provides a summary of the various model file versions and their associated checking forms for documentation. Copies of the completed check forms are included in Appendix A-2.

### 4.3 GoldSim® Benchmark Modeling

The GoldSim® file developed to support the benchmark modeling described in the FY2019 SDF PA was *SRS Saltstone v5.051.gsm*. This benchmarking model was designed to run deterministically, rather than probabilistically, and to preserve many time histories for result comparisons.



**Table 4.2-1: Summary of GoldSim® Model Version Checking**

GoldSim® All Species Model					
Checklist PDF for Model Revision File	Source Model File	Created By	Checked By	Revision Date	Number of Pages
SRS Saltstone v5.015_Check.pdf	SRS Saltstone v5.014_CaseC.gsm	Steve Hommel	Jerry Mangold	03/23/17	1
SRS Saltstone v5.016_Check.pdf	SRS Saltstone v5.015.gsm	Steve Hommel	Jerry Mangold	07/26/17	2
SRS Saltstone v5.017_Check.pdf	SRS Saltstone v5.016.gsm	Steve Hommel	Jerry Mangold	07/26/17	7
SRS Saltstone v5.018_Check.pdf	SRS Saltstone v5.017.gsm	Steve Hommel	Jerry Mangold	07/26/17	8
SRS Saltstone v5.019_Check.pdf	SRS Saltstone v5.018.gsm	Steve Hommel	Jerry Mangold	07/26/17	19
SRS Saltstone v5.020_Check.pdf	SRS Saltstone v5.019.gsm	Steve Hommel	Jerry Mangold	08/02/17	30
SRS Saltstone v5.021_Check.pdf	SRS Saltstone v5.020.gsm	Jerry Mangold	Steve Hommel	08/16/17	33
SRS Saltstone v5.022_Check.pdf	SRS Saltstone v5.021.gsm	Steve Hommel	Barry Lester	09/28/17	14
SRS Saltstone v5.023_Check.pdf	SRS Saltstone v5.022.gsm	Steve Hommel	Jerry Mangold	10/25/17	17
SRS Saltstone v5.024_Check.pdf	SRS Saltstone v5.023.gsm	Steve Hommel	Jerry Mangold	01/10/18	8
SRS Saltstone v5.025_Check.pdf	SRS Saltstone v5.024.gsm	Steve Hommel	Jerry Mangold	01/10/18	5
SRS Saltstone v5.026_Check.pdf	SRS Saltstone v5.025.gsm	Steve Hommel	Jerry Mangold	01/10/18	1
SRS Saltstone v5.027_Check.pdf	SRS Saltstone v5.026.gsm	Steve Hommel	Barry Lester	09/06/18	22
SRS Saltstone v5.028_Check.pdf	SRS Saltstone v5.027.gsm	Steve Hommel	Barry Lester	09/19/18	18
SRS Saltstone v5.029_Check.pdf	SRS Saltstone v5.028.gsm	Steve Hommel	Barry Lester	09/19/18	3
SRS Saltstone v5.030_Check.pdf	SRS Saltstone v5.029.gsm	Steve Hommel	Barry Lester	09/19/18	1
SRS Saltstone v5.031_Check.pdf	SRS Saltstone v5.030.gsm	Leslie Wooten	Steve Hommel	10/01/18	17
SRS Saltstone v5.032_Check.pdf	SRS Saltstone v5.031.gsm	Steve Hommel	Leslie Wooten	10/01/18	8
SRS Saltstone v5.033_Check.pdf	SRS Saltstone v5.032.gsm	Steve Hommel	Leslie Wooten	10/01/18	6
SRS Saltstone v5.034_Check.pdf	SRS Saltstone v5.033.gsm	Steve Hommel	Jerry Mangold	10/02/18	3
SRS Saltstone v5.035_Check.pdf	SRS Saltstone v5.034.gsm	Steve Hommel	Leslie Wooten	10/23/18	3
SRS Saltstone v5.036_Check.pdf	SRS Saltstone v5.035.gsm	Steve Hommel	Leslie Wooten	10/24/18	1
SRS Saltstone v5.037_Check.pdf	SRS Saltstone v5.036.gsm	Ben Dean	Steve Hommel	11/05/18	4
SRS Saltstone v5.038_Check.pdf	SRS Saltstone v5.037.gsm	Steve Hommel	Barry Lester	11/06/18	3
SRS Saltstone v5.039_Check.pdf	Check sheet for SRS Saltstone v5.039.gsm has been incorporated into check sheet for SRS Saltstone v5.051.gsm				
SRS Saltstone v5.040_Check.pdf	SRS Saltstone v5.039.gsm	Barry Lester	Steve Hommel	01/24/19	20
SRS Saltstone v5.041_Check.pdf	SRS Saltstone v5.040.gsm	Barry Lester	Steve Hommel	01/30/19	4

SRS Saltstone v5.042_Check.pdf	SRS Saltstone v5.041.gsm	Barry Lester	David Watkins	02/04/19	1
SRS Saltstone v5.043_Check.pdf	SRS Saltstone v5.042.gsm	Steve Hommel	Ben Dean	02/04/19	20
SRS Saltstone v5.044_Check.pdf	SRS Saltstone v5.043.gsm	Barry Lester	Steve Hommel	02/04/19	6
SRS Saltstone v5.045_Check.pdf	SRS Saltstone v5.044.gsm	Steve Hommel	Ben Dean	02/06/19	8
SRS Saltstone v5.046_Check.pdf	SRS Saltstone v5.045.gsm	Barry Lester	Steve Hommel	02/07/19	3
SRS Saltstone v5.047_Check.pdf	SRS Saltstone v5.046.gsm	Barry Lester	Steve Hommel	02/21/19	5
SRS Saltstone v5.048_Check.pdf	SRS Saltstone v5.047.gsm	Barry Lester	Greg Flach	02/27/19	1
SRS Saltstone v5.049_Check.pdf	SRS Saltstone v5.048.gsm	Barry Lester	Steve Hommel	03/06/19	11
SRS Saltstone v5.050_Check.pdf	SRS Saltstone v5.049.gsm	Barry Lester	David Watkins	04/04/19	21
SRS Saltstone v5.051_Check.pdf	SRS Saltstone v5.050.gsm	Barry Lester	Jerry Mangold	04/10/19	115
SRS Saltstone v5.052_Check.pdf	SRS Saltstone v5.051.gsm	Barry Lester	Steve Hommel	04/15/19	1
SRS Saltstone v5.053_Check.pdf	SRS Saltstone v5.052.gsm	Steve Hommel	Barry Lester	04/15/19	2
SRS Saltstone v5.054_Check.pdf	SRS Saltstone v5.053.gsm	Barry Lester	Steve Hommel	04/16/19	1

All checking was performed according to the requirements of S4-ENG.51.

#### **4.4 GoldSim® Probabilistic Modeling**

The GoldSim® file was developed to model fate and transport of contaminants in support of the FY2019 SDF PA.

Table 4.4-1 provides a summary of the model development checking documentation. Copies of the completed forms are presented in Appendix A-3.

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**Table 4.4-1: Summary of Various GoldSim® Model Compliance Case Dose Calculation Checking**

GoldSim® All Species Model					
Checklist PDF for GoldSim Model Revision File	Source GoldSim Model File Name for Revision	Created By	Checked By	Revision Date	Pages
SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Steve Hommel	Ben Dean	01/16/19	6
SRS Saltstone v5.038_CaseCV.7_100K_wSL_and_1-m_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Steve Hommel	Ben Dean	01/29/19	3
SRS Saltstone v5.038_CaseCV.7_SDUXX_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Steve Hommel	David Watkins	01/22/19	2
SRS Saltstone v5.038_CaseXX_template_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Steve Hommel	David Watkins	01/29/19	1
SRS Saltstone v5.038_CaseSA10.7_Infil_JonesAndPhifer_Che ck.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Steve Hommel	David Watkins	01/17/19	3
SRS Saltstone v5.038_CaseSA11.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA12.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA15.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA16.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA16.7-BasementDweller_Check.pdf	SRS Saltstone v5.038_CaseSA16.7.gsm	Steve Hommel	David Watkins	03/19/19	6
SRS Saltstone v5.038_CaseSA16.7-BasementDweller-NoDrill_Check.pdf	SRS Saltstone v5.038_CaseSA16.7.gsm	Steve Hommel	David Watkins	03/19/19	6
SRS Saltstone v5.038_CaseSA16.7-BasementDweller-SoilDrillAt120yr_Check.pdf	SRS Saltstone v5.038_CaseSA16.7.gsm	Steve Hommel	David Watkins	03/19/19	6
SRS Saltstone v5.038_CaseSA16.7-BasementDweller-SoilDrillAt200yr_Check.pdf	SRS Saltstone v5.038_CaseSA16.7.gsm	Steve Hommel	David Watkins	03/19/19	6
SRS Saltstone v5.038_CaseSA16.7-SoilDrilling_Check.pdf	SRS Saltstone v5.038_CaseSA16.7.gsm	Steve Hommel	David Watkins	03/19/19	4
SRS Saltstone v5.038_CaseSA17.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA18.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA19.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA20.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA21.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA26.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA27.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA28.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseSA29.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseF09.7_Infil_Low_Check.pdf	SRS Saltstone v5.038_CaseXX_template.gsm	Steve Hommel	David Watkins	01/29/19	2
SRS Saltstone v5.038_CaseF21.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseF25.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseF28.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseF29.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3

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SRS Saltstone v5.038_CaseF33.7_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/21/19	3
SRS Saltstone v5.038_CaseF45.7_Infil_High_Check.pdf	SRS Saltstone v5.038_CaseXX_template.gsm	Steve Hommel	David Watkins	01/29/19	2
SRS Saltstone v5.038_CaseBE.7_Realistic_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Steve Hommel	David Watkins	01/24/19	4
SRS Saltstone v5.038_CaseCE.7_Defense-in-Depth_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Steve Hommel	David Watkins	01/24/19	4
SRS Saltstone v5.038_CaseCV.7_IHla_Check.pdf	SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m.gsm	Steve Hommel	David Watkins	01/28/19	2
SRS Saltstone v5.038_CaseCV.7_IHlb_Check.pdf	SRS Saltstone v5.038_CaseCV.7_IHla.gsm	Steve Hommel	David Watkins	01/28/19	2
SRS Saltstone v5.038_CaseCV.7_IHlc_Check.pdf	SRS Saltstone v5.038_CaseCV.7_IHla.gsm	Steve Hommel	David Watkins	01/28/19	2
SRS Saltstone v5.038_CaseCV.7_MQB_Check.pdf	SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m.gsm	Steve Hommel	David Watkins	01/31/19	1
SRS Saltstone v5.038_CaseCV.7_UTR_Check.pdf	SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m.gsm	Steve Hommel	David Watkins	01/31/19	1
SRS Saltstone v5.038_CaseCV.7_noSL_Check.pdf	SRS Saltstone v5.038_CaseCV.7_MQB.gsm	Steve Hommel	David Watkins	01/31/19	1
SRS Saltstone v5.038_CaseCV.7_wBEDosepar_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/25/19	3
SRS Saltstone v5.038_CaseBE.7_wCVDosepar_Check.pdf	SRS Saltstone v5.038_CaseBE.7_Realistic.gsm	Ben Dean	David Watkins	02/25/19	1
SRS Saltstone v5.038_CaseCE.7_wCVDosepar_Check.pdf	SRS Saltstone v5.038_CaseCE.7_Defense-in-Depth.gsm	Ben Dean	David Watkins	02/25/19	1
SRS Saltstone v5.038_CaseCV.7_wCEDosepar_Check.pdf	SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	Ben Dean	David Watkins	02/25/19	3
SRS Saltstone v5.049_CaseSA24.7_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/26/19	2
SRS Saltstone v5.049_CaseSA24.7b_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/26/19	2
SRS Saltstone v5.049_CaseSA25.7_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/26/19	2
SRS Saltstone v5.049_CaseSA25.7b_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/26/19	2
SRS Saltstone v5.049_IHI_1mSoilInventory_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	David Watkins	03/19/19	2
SRS Saltstone v5.049_IHI_noDrillCutting_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	David Watkins	03/19/19	1
SRS Saltstone v5.049_IHI_XXXyr_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	David Watkins	03/18/19	2
SRS Saltstone v5.049-GS-ComplianceCase_AssumeOxKds_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/27/19	2
SRS Saltstone v5.049-GS-ComplianceCase_AssumeRegionIIKds_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/27/19	2
SRS Saltstone v5.049-GS-ComplianceCase_AssumeRegionIIIKds_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/27/19	2
SRS Saltstone v5.049-GS-ComplianceCase_AssumeAllLeachateImpact_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/27/19	2
SRS Saltstone v5.049-GS-ComplianceCase_AssumeNoLeachateImpact_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/27/19	2
SRS Saltstone v5.049-GS-ComplianceCase_SoilKds_xEpsilon_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/26/19	2
SRS Saltstone v5.049-GS-ComplianceCase_OxIKds_xEpsilon_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/26/19	2
SRS Saltstone v5.049-GS-ComplianceCase_ReIKds_xEpsilon_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/26/19	2

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SRS Saltstone v5.049-GS-ComplianceCase_OxIIIKds_xEpsilon_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/26/19	2
SRS Saltstone v5.049-GS-ComplianceCase_ReIIIKds_xEpsilon_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/26/19	2
SRS Saltstone v5.049-GS-ComplianceCase_AllKds_xEpsilon_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/26/19	5
SRS Saltstone v5.049-GS-ComplianceCase_AllKds_x0.01_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/26/19	5
SRS Saltstone v5.049-GS-ComplianceCase_AllKds_x0.001_Check.pdf	SRS Saltstone v5.049.gsm	Steve Hommel	Ben Dean	03/27/19	5
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## 5.0 OTHER CALCULATIONS AND TECHNICAL WORK

The following discusses the checking of calculations that were not discussed in the previous sections.

### 5.1 Updates to Reducing Capacity for Saltstone

Updated values were provided for the reducing capacity for saltstone to support the FY2019 SDF PA. The memo *Recommended Reducing Capacity for Saltstone for the SDF PA*, SRR-CWDA-2018-00048, was prepared by S.P. Hommel and K.D. Dixon. This memo and the recommended values were reviewed by W.B. Dean as documented on the first page of the memo.

## 6.0 SDF PA SOFTWARE QUALITY ASSURANCE

Table 6.0-1 maps the software used in the development of the FY2019 SDF PA to the related Software Quality Assurance Plans (SQAPs) and related QA documentation.

**Table 6.0-1: Summary of Software Used for the FY2019 SDF PA**

Software Name	Version	Software Quality Assurance Documentation	Purpose/Use
GoldSim®	12.1 (and sub- sequent service packs)	<i>Software Quality Assurance Plan for GoldSim® for the Savannah River Site's Liquid Waste Program (B-SQP-C-00002, Rev. 3)</i>	Used for benchmark testing, dose calculations, probabilistic modeling, and deterministic sensitivity modeling.
GoldSimFlows	2	<i>Software Quality Assurance Plan for PORFLOW Flow-Field Extraction Tool (GoldSimFlows) (Q-SQP-A-00008)</i>	Used to extract PORFLOW data and format it to be read by ReadPORFLOWData.dll.
mView	4.0	<i>Software Quality Assurance Plan for mView (B-SQP-C-00005)</i>	Used for sensitivity analysis of probabilistic modeling results.
The Geochemist's Workbench®	10.0	<i>Software Quality Assurance Plan for The Geochemist's Workbench®. (Q-SQP-A-00007, Rev. 1)</i>	Used for balancing reactions, calculating activity diagrams, computing speciation in aqueous solutions, plotting the results of these calculations, and storing the related data.
PORFLOW	6.42.9	<i>Testing and Verification Document (SRNL-STI-2018-00275) PORFLOW Software Quality Assurance Plan (G-SQP-A-00012)</i>	Used for deterministic modeling of flow and contaminant transport.
ReadPORFLOWData.dll	2.0	<i>Software Quality Assurance Plan for ReadPORFLOWData.dll for the Savannah River Site's Liquid Waste Program (B-SQP-C-00003, Rev. 1)</i>	Dynamic linked library called by GoldSim® software to read data from external files (i.e., PORFLOW result data).
TransitionTime.dll	1.0	<i>Software Quality Assurance Plan for TransitionTime.dll for the Savannah River Site Liquid Waste Program (SRR-CWDA-2014-00033)</i>	Dynamic linked library called by GoldSim® software to calculate transition times based on flows.
CAP88-PC	3.0	<i>Software Quality Assurance Plan for Environmental Dosimetry (Q-SQP-A-00002)</i>	Modeling code used to estimate dose and risk from radionuclide emissions to air.

All of the software listed above has undergone software qualification per SRS software qualification procedures (i.e., 1Q-20-1).

## 7.0 IRREGULARITIES AND INCONSISTENT APPLICATION OF ASSUMPTIONS

The FY2019 SDF PA is a collection of model files and analyses that are technically correct, accurate, and complete. The results of the FY2019 SDF PA provide an appropriate technical basis for informing decisions related to compliance requirements for final closure of the SDF.

During the course of the extensive checking and verification process, irregularities and inconsistencies were identified and are summarized below.

The FY2019 SDF PA has two known irregularities that were left uncorrected as they were identified after completion of the major PORFLOW modeling activities and determined to have a minimal impact on the modeled results. These irregularities are:

- Omission of Pd-107 from FY2019 SDF PA Modeling due to Removal During the Screening Process.
- Use of Incorrect Closure Cap Backfill Thickness.

In addition, during the preparation of the FY2019 SDF PA nine irregularities were identified and corrected prior to the issuance of the final PORFLOW modeling runs for incorporation into the PA. These irregularities are:

- Incorrect Conversion for Impingement Rate to Calculate Estimated Closure Cap Infiltration Rates
- Sheet Drain Placement Error from FY2019 SDF PA Modeling
- Incorrect Cementitious Material Inputs for FY2019 SDF PA Modeling
- Incorrect Calculation of Drill Cutting Volume in Inventory Document
- Garden Size Uncertainty
- $K_d$  Correction for SDU 1 and 4 Concrete
- Technetium Solubility
- Airborne Pathway Timestep Discretization
- Application of Boundary Conditions for PORFLOW Vadose Zone Modeling

Finally, there is one known inconsistent application of assumptions for the PA. This does not represent errors; however, the inconsistency is captured in Section 7.3 below for completeness. This inconsistency is:

- End-State Degradation of Mud Mat

### 7.1 Uncorrected Irregularities

Irregularities identified during the preparation of the FY2019 SDF PA that resulted in little to no impact to the PA results were not corrected. However, they are captured and described below for quality assurance purposes.

### **7.1.1      *Uncorrected Irregularity #1: Omission of Pd-107 from FY2019 SDF PA Modeling due to Removal During the Screening Process***

In the 2009 SDF PA, Pd-107 was included as a modeled Constituent of Concern. However, for the FY2019 SDF PA, the screening document inadvertently screened Pd-107 out. Therefore, Pd-107 was not included in any of the PORFLOW modeling or the associated GoldSim benchmarking efforts.

Per Table 4.5-3 of SRR-CWDA-2018-00041, the Pd-107 inventory is approximately an order of magnitude lower than that of I-129. Per Table 7.1-1 of SRR-CWDA-2013-00058, the Pd-107 Ingestion DCF ( $1.4\text{E-}07$  mrem/pCi) is more than 3 orders of magnitude lower than I-129 ( $4.0\text{E-}04$  mrem/pCi). Similarly, the Pd-107 Inhalation DCF ( $2.3\text{E-}06$  mrem/pCi) that is more than two orders of magnitude lower than I-129 ( $4.0\text{E-}04$  mrem/pCi). For External exposure, there are no DCFs for Pd-107, so there is no external exposure dose contribution.

Given the lower inventory and lower DCFs, if we conservatively assume that Pd-107 has the same transport properties as I-129, it would be reasonable to expect that the maximum dose contributions from Pd-107 would be at least four orders of magnitude lower than that of I-129. Since the peak dose contribution from I-129 (for the Compliance Case) was  $2.5\text{E-}03$  mrem/yr within the Compliance Period and  $0.56$  mrem/yr within the Performance Period (see Table 5.5-2 of the SDF PA), then the peak dose from Pd-107 would be on the order of  $3\text{E-}07$  mrem/yr and  $6\text{E-}05$  mrem/yr, respectively (assuming equivalent transport properties). However, Pd-107 and I-129 do not have equivalent transport properties; Table 15 of SRNL-STI-2009-00473 shows that the  $K_d$ s for Pd-107 in cementitious materials range from  $400$  mL/g to  $5,000$  mL/g (depending on the chemical conditions) versus the  $K_d$ s for I-129 which never exceed  $10$  mL/g (see Tables 4.3-5 and 4.3-6 of the SDF PA). This means that the release and transport of Pd-107 would be significantly slower than I-129. Therefore, omitting Pd-107 from the SDF PA has no impact on the results, as any dose contributions from Pd-107 would be negligible.

### **7.1.2      *Uncorrected Irregularity #2: Use of Incorrect Closure Cap Backfill Thickness***

The PORFLOW models assume specific values for the thickness of the overburden (i.e., the thickness of the lower backfill layer above each SDU). The values assumed were based on the previous closure cap design:

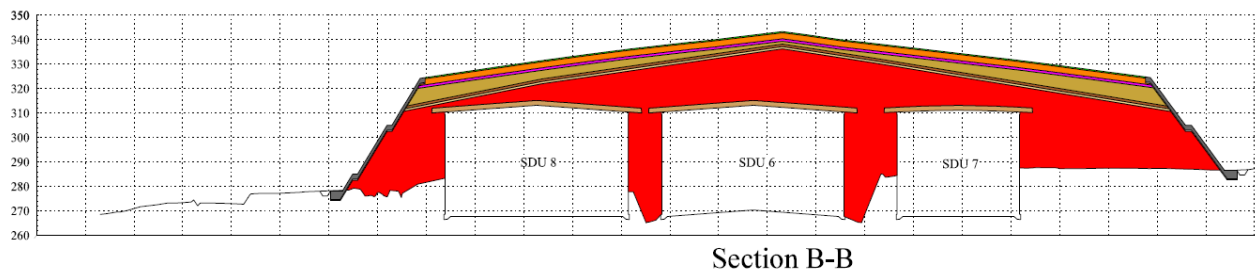
- SDU 1 = 4 feet of overburden
- SDU 4 = 24 feet of overburden
- All other SDUs = 7 feet of overburden

The new closure cap design applies a 12-inch minimum to the lower backfill layer, and based on the updated design drawings (SRR-CWDA-2018-00087), the thicknesses of this overburden are typically close to this minimum near the SDU edges. Regardless, the closure cap design is still considered preliminary and will be evaluated for final design conditions once those have been established.

Given that the Vadose Zone Flow Model and the Vadose Zone Transport Models simulate the near field environment surrounding each SDU up to the top of lower backfill layer of the

closure cap, the “overburden” thickness can be determined by estimating the thickness of the backfill above each SDU as depicted in the SRR-CWDA-2018-00087. For example, based on cross-section B-B (shown here as Figure 7.1-1), the average overburden thickness above SDUs 6, 7, and 8 are estimated to be 18.7 feet, 12.0 feet, and 5.5 feet, respectively.

**Figure 7.1-1. Example of Cross-Sections Used to Estimate Overburden Thicknesses**



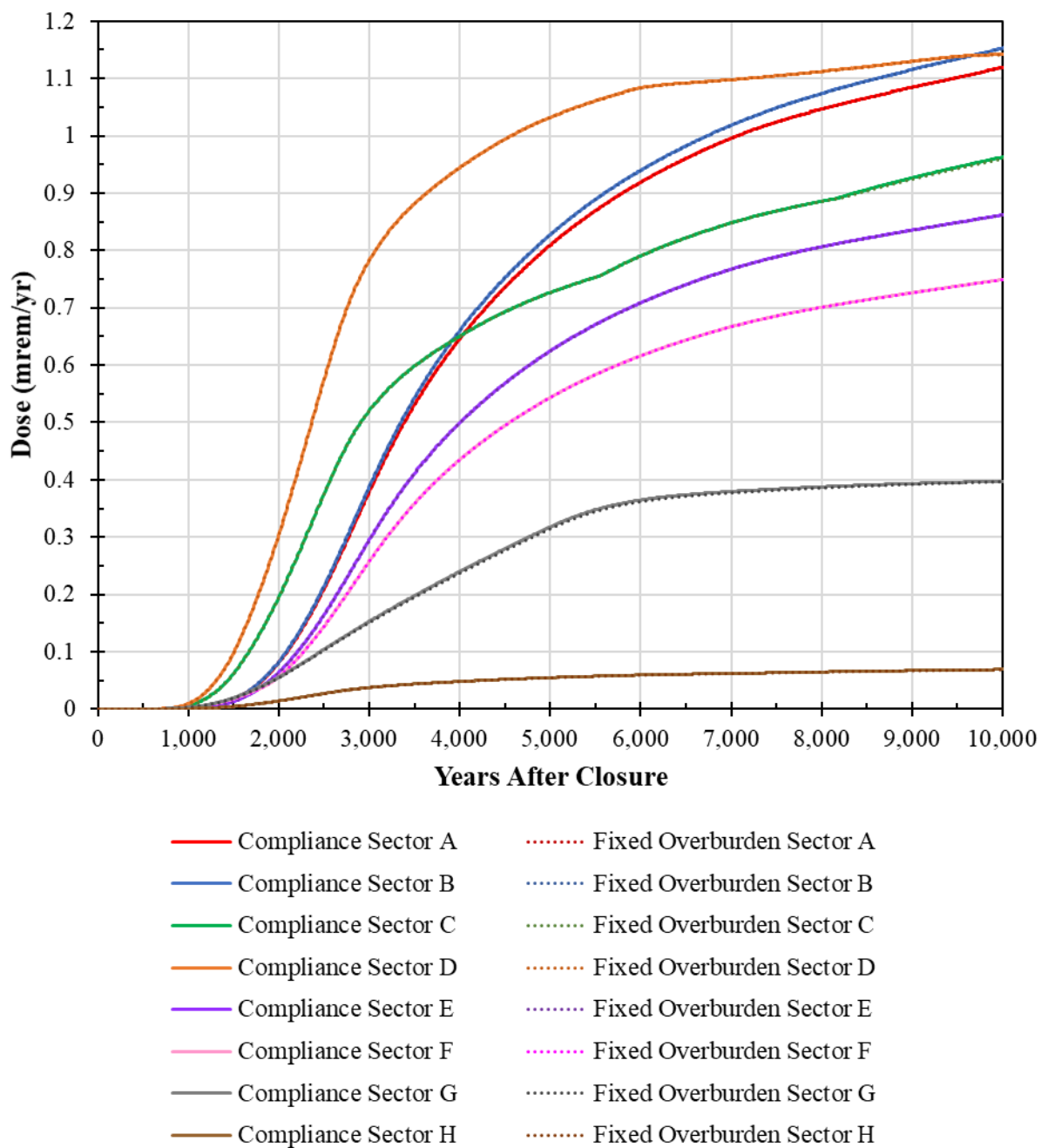
Based on these estimates, the average overburden heights for each SDU were estimated as presented in Table 7.1-1. This table also indicates the values that were assumed for the models in the SDF PA, and values that were assumed for a standalone model that was developed to evaluate the potential impacts of this uncorrected error. Note that SDU 1 and SDU 6 were not modified because the SDF PA already assumed values that were relatively close to the correct value. SDUs 7, 8, 10, 11, and 12 were also not modified, because all five of these SDUs rely on the same Vadose Zone models, and the average overburden for these SDUs is 7.1 feet which is also close to the value already used in the SDF PA. Therefore, only the overburden over SDU 4, SDU 6, and the 150-foot diameter SDUs were modified. For the 150-foot diameter SDUs, the average overburden thickness for SDUs 2A, 2B, 3A, 3B, 5A, and 5B (17.9 feet) was assumed.

These “fixed” overburden values were applied to the Vadose Zone Flow Model and the Vadose Zone Transport Model to recalculate flow and transport results. The resulting mass fluxes were applied to the Aquifer Transport Model to estimate the ground water concentrations which were then used to estimate modified dose results. Comparing these doses to the Compliance Case results (Figure 7.1-2) demonstrates that the impact of the overburden thicknesses is negligible, even in Sectors F and G where releases from SDU 4 had the potential to show a greater difference.

**Table 7.1-1. Overburden Thicknesses for Each SDU**

<b>SDU</b>	<b>Average Thickness (ft) Based on Current Closure Cap Design</b>	<b>Thickness (ft) Assumed in SDF PA Models</b>	<b>Thickness (ft) Assumed for Evaluation of Impact</b>
SDU 1	4.9	4.0	4.0
SDU 2A	20.1	7.0	17.9
SDU 2B	20.1	7.0	17.9
SDU 3A	12.6	7.0	17.9
SDU 3B	17.0	7.0	17.9
SDU 4	4.9	24.0	4.9
SDU 5A	18.9	7.0	17.9
SDU 5B	18.9	7.0	17.9
SDU 6	18.7	7.0	18.7
SDU 7	12.0	7.0	7.0
SDU 8	5.5	7.0	7.0
SDU 9	6.7	7.0	7.0
SDU 10	5.6	7.0	7.0
SDU 11	7.1	7.0	7.0
SDU 12	5.3	7.0	7.0

Figure 7.1-2. Dose Comparison for Fixed Overburden vs. Compliance Case



## 7.2 Corrected Irregularities

Irregularities identified during the preparation of the FY2019 SDF PA that may have resulted in impacts to the PA were corrected, as possible. They are captured and described below for quality assurance purposes.

### 7.2.1 *Corrected Irregularity #1: Use of Incorrect Conversion for Impingement Rate to Calculate Estimated Closure Cap Infiltration Rates*

As part of the calculations to determine closure cap infiltration rates to be used for PA PORFLOW modeling, percolation rates were calculated using the Giroud-Houlihan analytical solution described in Section 4.4.1.2 of the PA. During independent review of the reference report (SRRA107772-000009), it was determined that an incorrect unit conversion had been applied, wherein impingement rates of 400 cm/yr and 650 cm/yr were applied to the analytical solution instead of using 400 mm/yr and 650 mm/yr, respectively. Documentation of acknowledgement of this error is presented in an attached email in Appendix A-4 dated November 9, 2018 between Steve Hommel, SRR and Craig Benson, UVA. This error is corrected in the memorandum: *Recommended Values for Percolation Rates to Support Future SDF Modeling* (SRR-CWDA-2018-00030), which was prepared by Steve Hommel and reviewed by William Dean.

### 7.2.2 *Corrected Irregularity #2: Sheet Drain Placement Error from FY2019 SDF PA Modeling*

During a check of the output files from the SDF PORFLOW runs by Barry Lester on September 11, 2018, it was determined that the sheet drain elements for SDU 2 runs appeared to be located between the wall and the HDPE. After a review of the material property data from the RUN.OUT file generated by PORFLOW, it was clear this was a problem.

The input files were corrected by Thong Hang of SRNL and the PORFLOW files re-run with the sheet drain placed adjacent to the saltstone, allowing for assignment of either saltstone properties or fast zone properties. The new RUN.OUT files were confirmed by Barry Lester to be repaired, also on September 11, 2018. There was no impact to QA as a result of the identification of this initial error. These changes are documented in an email chain between Barry Lester and Greg Flach. The email chain is attached to Appendix A-4.

### 7.2.3 *Corrected Irregularity #3: Incorrect Cementitious Material Inputs for FY2019 SDF PA Modeling*

During a design check of the vadose zone simulations from PORFLOW, Tom Danielson, SRNL, identified an issue with the SDU 7 Design Margin (DM) Best Estimate (BE) case (VadoseSDU7DM/Flow/CaseBE.3). For some of the cementitious materials, the initial conductivity was drawn from SRR-CWDA-2018-00004, Rev. 1, Table 1 instead of the overriding values in SRNL-STI-2018-00077, Rev. 1, Table 11-1. The overrides reflect unrepaired penetrations assumed in the DM case. This case was subsequently re-run through PORFLOW. There was no impact to QA as a result of the identification of this initial error. These changes are documented in an email dated September 19, 2018 from Greg Flach to Steve Hommel. The email is attached to Appendix A-4.



#### **7.2.4      *Corrected Irregularity #4: Incorrect Calculation of Drill Cutting Volume in Inventory Document***

During PA modeling an overestimation error was found in the calculation of drill cutting volumes for determining inventory for PA modeling. Section 5 of *Determination of Inventory for FY2019 Performance Assessment*, SRR-CWDA-2018-00041, Rev. 1, describes how the drill cutting inventories were estimated. The calculations are documented in Excel file: 2019PA\_TotalEstimatedInventory\_Rev1.xlsx, Sheet: MPAD Drill Cuttings\_Rad. In the Excel file, the volume of the drill cuttings (in cubic feet) was calculated in cell Z9. The formula used was:

$$=PI()*(Z8/2)*Z7$$

Where:    Z8 = diameter of the drill cutting core (8 inches or 0.667 feet)

          Z7 = height of the SDU (43 feet)

This formula is essentially:  $\pi * radius * height$ , which would result in units of square feet (area) and not cubic feet (volume). Since the formula for the volume of a cylinder is  $\pi r^2 * h$  the formula in Excel cell Z9 was revised to read:

$$=PI()*((Z8/2)^2)*Z7$$

The volume was effectively reduced from 45 ft<sup>3</sup> to 15 ft<sup>3</sup> or from 337 gallons down to 112 gallons. The inventory document, SRR-CWDA-2018-00041, was revised and Rev. 2 issued in February 2019 to use a volume equivalent to 112 gallons for SDU drill cuttings. Subsequent to the inventory revision, the drill cuttings inventories in the PA modeling were revised and new drill cutting inventories were modeled. This error is documented in an email dated January 23, 2019 from Steve Hommel to Leslie Wooten. The email is attached to Appendix A-4.

#### **7.2.5      *Corrected Irregularity #5: Garden Size Uncertainty***

During review of the uncertainty modeling for preparation of the PA, an issue was identified with garden size on February 15, 2019. The dose calculations for the IHI doses rely on the concentration of contaminants from contaminated drill cuttings being mixed into the soil used for raising crops or gardens. Within the SDF GoldSim Model, uncertainty in the area of the garden is addressed using a stochastic element (*GardenSizeUncert*) that samples a multiplier using a triangular distribution where both the mode and then minimum values are set to 1 and with a maximum value of 10 (see Table 4.4-115 in Section 4.4.8 of the PA). The result of this sampling distribution should be multiplied by the default value of 100 m<sup>2</sup> from the model element *GardenSize*, any time that *GardenSize* is used. While the uncertainty multiplier is applied to the calculations for the fraction of total produce grown by the MOP or IHI (see Eq. 4.4-241 in Section 4.4.8 of the PA), it was not applied to the calculation used to determine the concentration of these contaminants once mixed into the garden (see Eq. 4.4-206 in Section 4.4.8 of the PA). This results in the model conservatively over-predicting the concentration of contaminants in the garden as it always assumes the smaller volume of uncontaminated soils were used for mixing with the drill cuttings. Corrections for this error are documented in an email dated February 20, 2019 from Steve Hommel to Barry Lester. The email is attached to Appendix A-4.

### **7.2.6      *Corrected Irregularity #6: $K_d$ Correction for SDU 1 and 4 Concrete***

On February 20, 2019, Barry Lester identified an error in the GoldSim model. For SDUs 1 and 4, the SDF GoldSim Model was applying the saltstone  $K_d$  values to the SDU concrete. For most elements the saltstone  $K_d$ s = the concrete  $K_d$ s, but per PA Table 4.3-6: Ba, I, Ra, and Sr have saltstone specific values that are different from the values in SDU concrete. This error was only in the SDU 1 and SDU 4 model setup and did not impact the cylindrical SDUs. This does not impact the Dose Calculations, therefore, rerunning of the dose calculator was not required.

### **7.2.7      *Corrected Irregularity #7: Technetium Solubility***

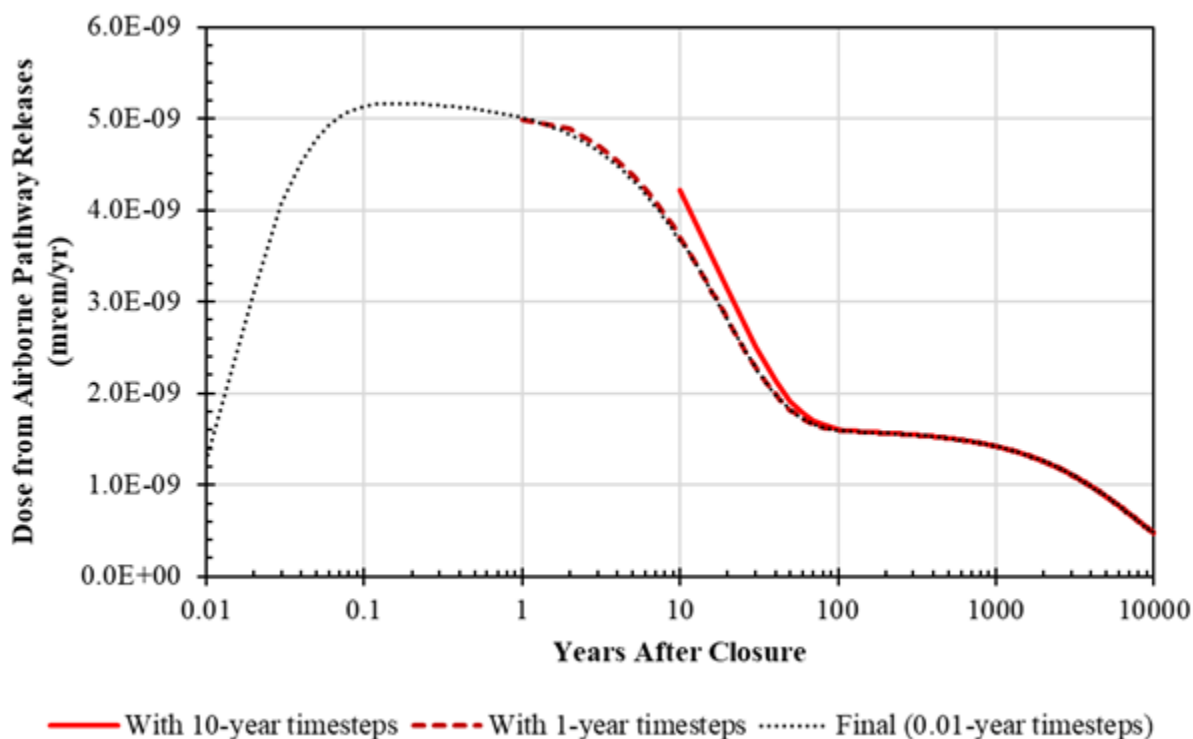
Comparison of the non-shrinking core model simulations for Tc-99 (CaseSA32.7, CaseSA32.7b) to the compliance case (CaseCV.7) revealed a deficiency in the Tc-99 effective  $K_d$  model described in SRNL-STI-2018-00652 when Tc solubility is high relative to initial inventory. Now the Tc solubility has increased from 1.0E-8 mol/L (as used in earlier modeling efforts through the FY2016 SA) to 4.5E-7 to 9.7E-7 mol/L as used in the current PA (45x to 97x increase), thus the Tc solubility is now high relative to the initial inventory. Specifically, the SRNL-STI-2018-00652 release model assumes that the effective  $K_d$  under solubility control is larger than the initial oxidative release  $K_d$ , which is no longer the case. The SRNL-STI-2018-00652 model used through Iteration 7 simulations (e.g. CaseCV.7) was modified for Iteration 8 (CaseCV.8) simulations to correct this issue, such that the model now accommodates a wide range of Tc solubility and inventory combinations, not just combinations where the solubility-control  $K_d$  exceeds the initial oxidative release  $K_d$ . Additional information on the corrections to the Tc solubility and other PORFLOW QA checking can be found in *PORFLOW Simulation Cases Supporting the Saltstone Disposal Facility PA Revision*, SRR-CWDA-2019-00043.

To capture the changes in the Tc solubility in the GoldSim modeling, the model was versioned up to SRS Saltstone v5.054.gsm and all files re-run, re-checked, and documented in check sheets listed in Tables 4.2-1 and 4.4-1 and attached to Appendix A.

### **7.2.8      *Corrected Irregularity #8: Airborne Pathway Timestep Discretization***

During the technical review of the Airborne Pathways analyses, it was determined that additional discretization of the timestep was necessary to accurately capture the peak releases. Correcting this input resulted in a slight increase to the reported peak values (see Figure 7.2-1). This was corrected within GoldSim, and the results were updated within the PA. Note that while these doses are negligible, correcting the timesteps was necessary to confirm this.

**Figure 7.2-1: Comparison of Airborne Pathway Dose Results Based on Timestep Discretization**



### 7.2.9 *Corrected Irregularity #9: Application of Boundary Conditions for PORFLOW Vadose Zone Modeling*

During the development of the GoldSim Benchmarking analysis, it was determined that fluxes from the SDU-specific Vadose Zone Transport Models (via PORFLOW) showed initial model results with inexplicable behavior. Specifically, at very early times (while flow rates were extremely low) fluxes at the water table were occurring at rates that should have been physically impossible given the low flow rates. This phenomenon was most pronounced in the fluxes from SDU 1 for highly mobile radionuclides (for examples, see Figure 7.2-2 and Figure 7.2-3).

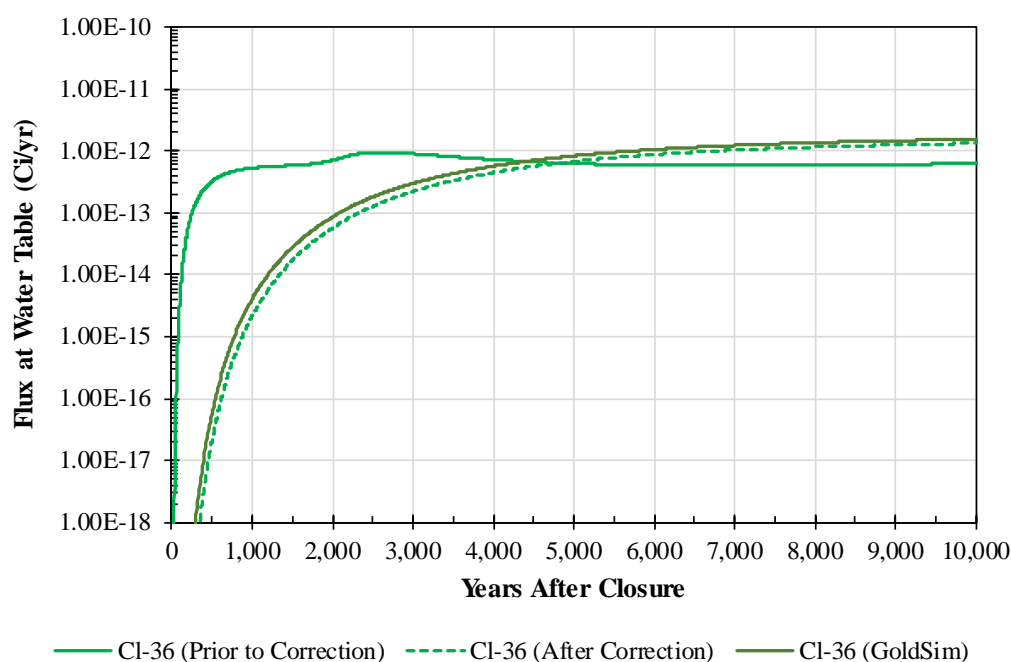
Upon inspection, it was determined that because the advective flow rates are so low at early times the system is effectively dominated by diffusive releases for the first few thousand years. These diffusive releases were reaching the top of the model domain. In reality, it is expected that any mass that diffuses up from the SDU and reaches to the top of the lower backfill would encounter first the foundation layer of the closure cap (which was not modeled), then it would reach the relatively impermeable composite barrier (HDPE and GCL). The composite barrier is expected to prevent mass from further upward diffusion. However, the model mechanics were such that any mass leaving the model domain was assumed to be mass at the water table, regardless of which boundary is being crossed to exit the model domain. Any flux along either the bottom boundary or the top boundary of the model is treated as flux at the water table. As such, the upward diffusing mass was inadvertently being added to the mass that was being transported downward (into the saturated zone for aquifer transport).

This issue was further complicated by the definition of the boundary conditions at the top of the model. Previously, the top of the model was defined as a zero-concentration boundary instead of a no-flux boundary. This definition for the top of the boundary resulted in mass being “pulled” via diffusive processes from the top of the SDU to the top boundary of the model domain. To correct for this phenomenon, the definitions of the boundary conditions were modified (see Figure 7.2-4).

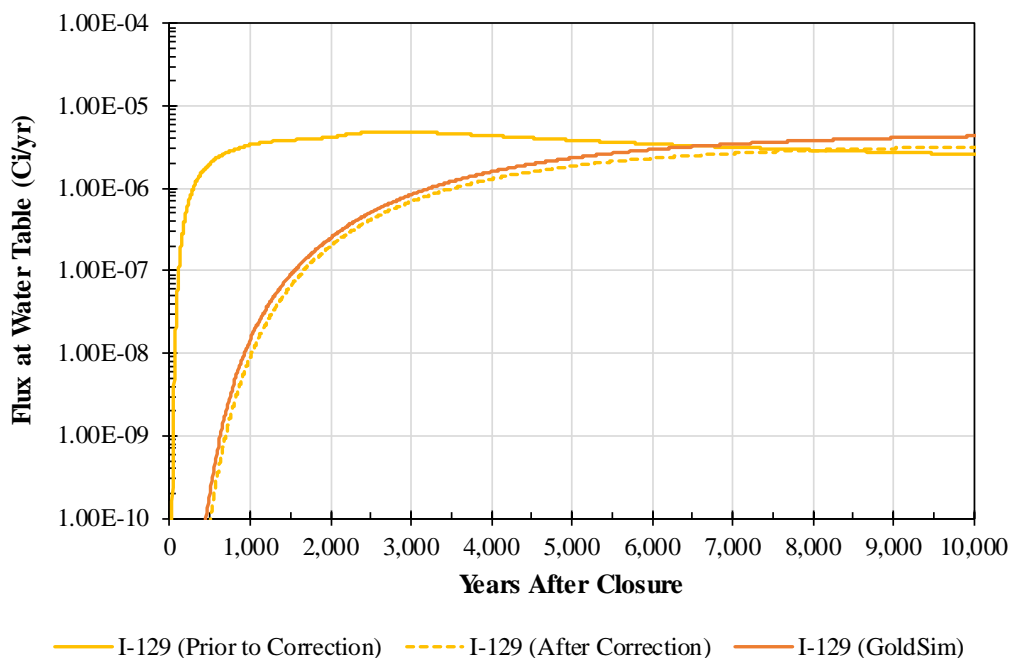
The flux results in Figure 7.2-2 and Figure 7.2-3 demonstrate that this correction to the boundary conditions in the SDU-specific Vadose Zone Transport Models results in fluxes that very closely reflect the fluxes simulated in the GoldSim Benchmarking model. This reproducibility of behavior provides greater confidence that both models are functioning appropriately.

The checking of the output files from this revised modeling effort is documented in an email from David Watkins to Steve Hommel dated January 17, 2019 and is included in Appendix A-4. Within PORFLOW, this correction is represented as the change from Iteration 6 simulations (e.g., CaseCV.6) to Iteration 7 simulations (e.g., CaseCV.7).

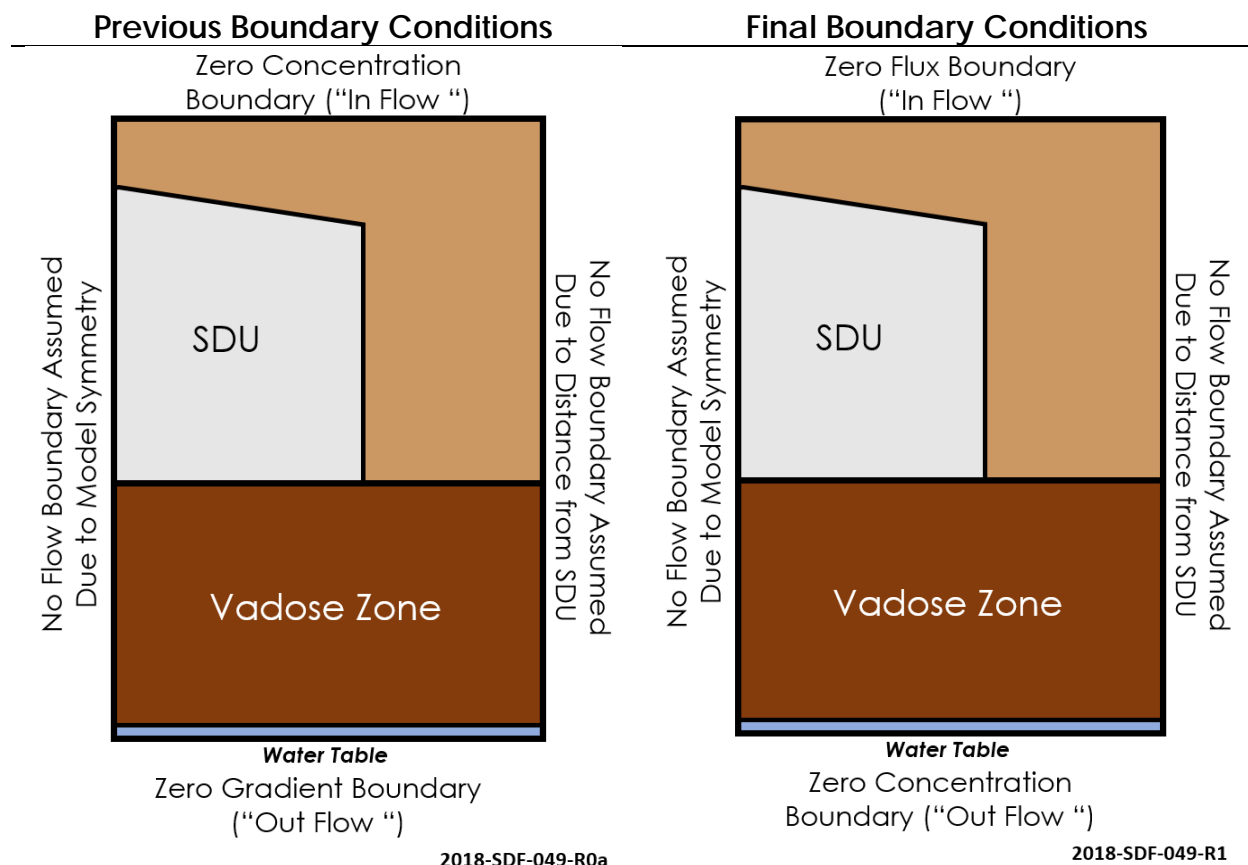
**Figure 7.2-2: Cl-36 Flux at the Water Table from SDU 1, Comparison of the Effects of Model Boundary Conditions versus Flux from GoldSim Benchmarking**



**Figure 7.2-3: I-129 Flux at the Water Table from SDU 1, Comparison of the Effects of Model Boundary Conditions versus Flux from GoldSim Benchmarking**



**Figure 7.2-4: Summary of Boundary Conditions**



### 7.3 Inconsistent Application of Assumptions

Inconsistent application of assumptions identified during the preparation of the FY2019 SDF PA are captured and described below for quality assurance purposes.

#### 7.3.1 *Inconsistent Application of Assumptions #1: End-State Degradation of Mud Mat*

In Section 4.4.4.3 of the PA, there are tables that specify the initial and the degraded saturated hydraulic conductivities of each material zone (e.g., see Table 4.4-81). These tables are correct in describing what was modeled but there is an inconsistent application of assumptions.

For the roof, walls, saltstone, and columns it was assumed that these materials will degrade to backfill, as these materials are surrounded by the backfill. Therefore, the fully degraded state is  $4.1\text{E-}05$  cm/sec.

For the floors, because these are assumed to be more influenced by the underlying "native soil" (or natural vadose zone soil) rather than the backfill (due to the surface area interfaces), it was assumed the floors would degrade to  $9.1\text{E-}05$  cm/sec. Consistent with this approach, the mud

mats should also have been degraded to  $9.1\text{E-}05$  cm/sec; however, instead these were degraded them to the value for backfill ( $4.1\text{E-}05$  cm/sec).

This is not an error, but an inconsistent application of assumptions because the mud mats and floors should assume the same end state, regardless of what that assumed end state is. Based on the results from the backfill sensitivity cases (see Section 5.8.3.2 of the PA), it is expected that this inconsistency will have a minimal impact on the final results.

## **8.0 CONCLUSIONS**

The FY2019 SDF PA is a collection of model files and analyses that are technically correct, accurate, and complete with the exception of those irregularities and inconsistencies identified in Section 7. Given the discussion in Section 7, and the performance of the QA activities described throughout this report, the results of the FY2019 SDF PA provide an appropriate technical basis for informing decisions related to compliance requirements for final closure of the SDF.



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SRR-CWDA-2018-00045, *Iodine  $K_{ds}$  for Simulating I-129 Releases from Saltstone SDUs*, Savannah River Site, Aiken, SC, Rev. 0, August 9, 2018.

SRR-CWDA-2018-00046, *Technetium Solubility Limits for Simulating Tc-99 Releases from Saltstone SDUs*, Savannah River Site, Aiken, SC, Rev. 0, August 20, 2018.

SRR-CWDA-2019-00043, *PORFLOW Simulation Cases Supporting the Saltstone Disposal Facility PA Revision*, Savannah River Site, Aiken, SC, Rev. 0, May 2019.

SRRA107772-000005, *UVA Quality Assurance Document for Research Conducted in Support of SRR*, School of Engineering, University of Virginia, Charlottesville, VA, April 2018.

WSRC-IM-2002-00011, *Technical Report Design Check Guidelines*, Savannah River Site, Aiken, SC, Rev. 2, August 2004.

## **APPDENDIX A – MODEL CHECKING FORMS**

## **APPENDIX A. MODEL CHECKING FORMS FOR THE GOLDSIM MODEL**

The following checklists were prepared to demonstrate that the FY2019 SDF PA Model meets quality assurance expectations. These checklists address input and data verification and implementation checking.

The modeling check forms show checking comments made during the development and updating of the GoldSim model files. As provided on the check form, the checking comments (prepared by Steve Hommel) were addressed by the Analyst and concurrence was reached, thus satisfying quality assurance expectations.

The original GoldSim model file used to prepare the FY2019 SDF PA was derived from the FY2016 SDF SA GoldSim file (SRS Saltstone v5.014\_CaseC.gsm). The modeling check forms that follow demonstrate that the GoldSim model files (SRS Saltstone v5.015 through v5.054) were all checked and found to be correct and consistent with the conceptual description provided in SRR-CWDA-2018-00006.

Note that all model check forms used to document model checking and data verification activities, as provided within this appendix, are not specifically required for procedural compliance. Rather, these forms demonstrate the application of quality assurance practices consistent with Manual E7, 2.60, Technical Reviews and provide confidence that models were developed correctly and with appropriate inputs.

## **Appendix A-1**

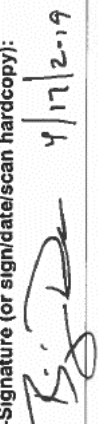
### **Check Sheets for Table 2.7-1:**

#### **Summary of GoldSim<sup>®</sup> Air and Radon Pathway Model Dose Calculation Checking**

SaltstonePA\_Air&Radon\_PathwayModel\_V2.007.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.007.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.006.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 3/28/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Versioned Latest model file so all subsequent changes can be tracked.						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	[not applicable]	Versioned model up to version 2.007	Y			
SDUTransportSubmodel	\\Air_PathwayTransport\OuterLoop_SDU\InnerLoop_SDU	Submodel shows as changed in version history, but there was no change made.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/17/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.007\_Check

1 of 1

4/17/2019



SaltstonePA\_Air&Radon\_PathwayModel\_V2.008.gsm Changed Model Check Form (7  
Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.008.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.007.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 4/10/2019				
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>	<b>Checker Comment</b>	<b>Analyst Response</b>	<b>Checker Concur? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model updated to apply more user options to support sensitivity cases.						
[not applicable]	[not applicable]	Model was renamed.	Y			
[Model Settings → Time]	[not applicable]	Modified timestepping to 10 years, but also under "Advanced Time Settings" creates more discrete steps at early times. Also under "Advanced Time Settings" preserved "CompliancePeriod" values at 1,000 years.	Y			
SDUTransportSubmodel	\\Air_PathwayTransport\OuterLoop_SDU\InnerLoop_SDU	Modified timestepping to 10 years, but also under "Advanced Time Settings" creates more discrete steps at early times. Also under "Advanced Time Settings" preserved "CompliancePeriod" values at 1,000 years.	Y			
HenrysLawConstant_cmnt_Opt	\\UserSettings	Created Element to provide user control on the assumed Henry's Law Constants for cementitious materials.	Y			

SaltstonePA\_Air&Radon\_PathwayModel\_V2.008\_Check

1 of 7

4/17/2019

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.008.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.007.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
HenrysLawConstant_soi l_Opt	\\UserSettings	Created Element to provide user control on the assumed Henry's Law Constants for soil materials.	Y			
Replace_SS_HennysLa wConstant	\\UserSettings	Renamed element. Previously named: HenrysLawConstant_OxIII and added description	Y			
ClosureCapThicknessM ultiplier	\\UserSettings	Added element to give users option to modify closure cap thickness	Y			
SDURoofThicknessMulti plier	\\UserSettings	Added element to give users option to modify SDU Roof thickness	Y			
InventorySelector	\\UserSettings	Added element to allow users to select between the three Central Scenario Inventory Options	Y			
HenrysLawConstant_co ncr_OxIII	\\GeneralInput\\Che micalProperties\\Li quid_Air	Renamed element. Previously named: HenrysLawConstant_conc rete	Y			
HenrysLawConstant_co ncr_OxII	\\GeneralInput\\Che micalProperties\\Li quid_Air	Added Element. Data is from SRNL-TR-2010- 00096, Table 3, and used OxIII value (Rn only)	Y			
HenrysLawConstant_co ncr_Rell	\\GeneralInput\\Che micalProperties\\Li quid_Air	Added Element. Data is from SRNL-TR-2010- 00096, Table 3, and used OxIII value (Rn only)	Y			

SaltstonePA\_Air&Radon\_PathwayModel\_V2.008\_Check

2 of 7

4/17/2019

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.008.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.007.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
HenrysLawConstant_Concrete	\GeneralInput\ChemicalProperties\Li quid_Air	Added element to apply the user-control options.	Y			
HenrysLawConstantNDim_concrete	\GeneralInput\ChemicalProperties\Li quid_Air	Updated links to use values from HenrysLawConstant_Concrete	Y			
HenrysLawConstant_Concrete_dA	\GeneralInput\ChemicalProperties\Li quid_Air	Renamed element. Previously named: HenrysLawConstant_soil	Y			
HenrysLawConstant_Concrete_dB	\GeneralInput\ChemicalProperties\Li quid_Air	Added Element. Data is from SRNL-TR-2010- 00096, Table 3, and SRNL- STI-2017-00331 page 8 (Rn only)	N	The Henry's Law constant for Se should be 2.4E44.	Agreed, value changed and incorporated into V2.010	Y
HenrysLawConstant_Concrete_dC	\GeneralInput\ChemicalProperties\Li quid_Air	Added Element. Data is from SRNL-TR-2010- 00096, Table 3, and SRNL- STI-2017-00331 page 8 (Rn only)	Y			
HenrysLawConstant_Concrete_dD	\GeneralInput\ChemicalProperties\Li quid_Air	Added Element. Data is from SRNL-TR-2010- 00096, Table 3, and SRNL- STI-2017-00331 page 8 (Rn only)	Y			
HenrysLawConstant_soil	\GeneralInput\ChemicalProperties\Li quid_Air	Added element to apply the user-control options.	Y			

SaltstonePA\_Air&Radon\_PathwayModel\_V2.008\_Check

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4/17/2019

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.008.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.007.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
LayerThickesses_SDU 1	\GeneralInput\Geo metry\SDU1	Applied thickness multipliers from user control settings	Y			
LayerThickesses_SDU 4	\GeneralInput\Geo metry\SDU4	Applied thickness multipliers from user control settings	Y			
LayerThickesses_SDU 150	\GeneralInput\Geo metry\SDU_150	Applied thickness multipliers from user control settings	Y			
LayerThickesses_SDU 375	\GeneralInput\Geo metry\SDU_375	Applied thickness multipliers from user control settings	Y			
DRF_100m	\GeneralInput\Che micalProperties	Added element. Dose Release Factors at 100 m from: SRNL-STI-2008- 00415 Table 6	Y			
DRF_100m_Species	\GeneralInput\Che micalProperties	Added element to format DRF_100m into the species listing array	Y			
DRF_100m_SDU_mtx	\GeneralInput\Che micalProperties	Added element to format DRF_100m into a matrix for species and SDUs	Y			
DRF_11800m	\GeneralInput\Che micalProperties	Added element. Dose Release Factors at 11,800 m from: SRNL-STI-2008- 00415 Table 6	Y			

SaltstonePA\_Air&Radon\_PathwayModel\_V2.008\_Check

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4/17/2019

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.008.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.007.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DRF_11800m_Species	\GeneralInput\ChemicalProperties	Added element to format DRF_11800m into the species listing array	Y			
DRF_11800m_SDU_matrix	\GeneralInput\ChemicalProperties	Added element to format DRF_11800m into a matrix for species and SDUs	Y			
ComplianceInventory	\GeneralInput\Inventory	Renamed Element. Previous name was: NominalInventory. Updated values to reflect SRR-CWDA-2018-00041, Rev. 2. Note that some of these values were previously screened out due to short half-lives (per SRR-CWDA-2018-00044), but since we are looking at early years, I have screened those back in.	Y			
RealisticInventory	\GeneralInput\Inventory	Added element. Values reflect SRR-CWDA-2018-00041, Rev. 2.	Y			
DefenseinDepthInventory	\GeneralInput\Inventory	Added element. Values reflect SRR-CWDA-2018-00041, Rev. 2.	N	The values for rads Sn-126 and below are incorrect	Agreed, values changed and incorporated into V2.010	Y

SaltstonePA\_Air&Radon\_PathwayModel\_V2.008\_Check

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4/17/2019

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.008.gsm			<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.007.gsm			
<b>New Model File Date:</b> 4/10/2019			<b>Source Model File Date:</b> 4/10/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Inventory_opt	\GeneralInput\Inventory	Updated selector logic to support the selection of the three inventory sets for deterministic modeling.	Y			
DoseResults	\SDU_Output	Added container for holding dose results	Y			
AirRelease_Dose100m	\SDU_Output\DoseResults	Added element to calculates air pathway doses at 100m	Y			
AirRelease_Dose100m_XX where XX = 1 to 15	\SDU_Output\DoseResults	Added elements: Rad-specific doses at 100 meters from each SDU (by index number)	Y			
AirRelease_Dose100m_MAXSDU	\SDU_Output\DoseResults	Added element: Assumes the maximum rad-specific value regardless of SDU	Y			
AirRelease_Dose100m_Total	\SDU_Output\DoseResults	Added element: Total air pathway dose	Y			
[not applicable]	[not applicable]	Versioned model up to version 2.008	Y			
If checker has no comments, check here. <input type="checkbox"/> Add additional rows above, as needed.						

SaltstonePA\_Air&Radon\_PathwayModel\_V2.008\_Check

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Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.008.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.007.gsm	
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 4/10/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
<b>Analyst Name (print):</b> Steve Hommel			<b>Checker Comment</b> <i>See 4/17/2019</i>
<b>Checker Name (print):</b> Ben Dean			<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Ben Dean 4/17/2019</i>
			<b>Analyst Response</b> <i>4/17/2019</i>
			<b>Checker Concur? Y,N</b>

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.008\_Check



SaltstonePA\_Air&Radon\_PathwayModel\_V2.009.gsm Changed Model Check Form (2  
Pages)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.008.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model. <b>Objective:</b> Updated saturation data. It was previously updated based on PORFLOW runs associated with CaseCV.5. This now uses CaseCV.6, which is the latest set for flow runs.						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDUTransportSubmodel	\\Air_PathwayTransportOuterLoop_SDUs\\innerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
PeakDose_rads	\\SDU_Output\\DoseR results	Added element to record peak values.	Y			
PeakDose_Total	\\SDU_Output\\DoseR results	Added element to record peak value.	Y			
SaturationSaltstoneSDU1 SaturationCleanGroutSDU1 SaturationRoofSDU1 SaturationDrainSDU1	\\GeneralInput\\PhysicalProperties\\ZonalProperties_SDU1	Updated saturation values. See file(s) at: \\pitstop\\PITDATA2\\C&WDA\\Folks\\SDF\\z_04_Modeling\\PORFLOW\\PORFLOW_Results\\Vadose_Zone_Flow_Results.6	Y			
SaturationSaltstoneSDU150 SaturationCleanGroutSDU150 SaturationRoofSDU150 SaturationDrainSDU150	\\GeneralInput\\PhysicalProperties\\ZonalProperties_SDU150	Updated saturation values. See file(s) at: \\pitstop\\PITDATA2\\C&WDA\\Folks\\SDF\\z_04_Modeling\\PORFLOW\\PORFLOW_Results\\Vadose_Zone_Flow_Results.6	Y			
SaturationSaltstoneSDU375 SaturationCleanGroutSDU375 SaturationRoofSDU375 SaturationDrainSDU375	\\GeneralInput\\PhysicalProperties\\ZonalProperties_SDU375	Updated saturation values. See file(s) at: \\pitstop\\PITDATA2\\C&WDA\\Folks\\SDF\\z_04_Modeling\\PORFLOW\\PORFLOW_Results\\Vadose_Zone_Flow_Results.6	Y			

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Check

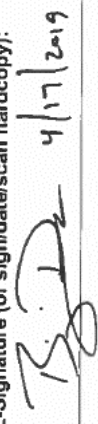
1 of 2

4/17/2019



Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.008.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaturationSaltstoneSDU4 SaturationCleanGroutSDU4 SaturationRoofSDU4 SaturationDrainSDU4	\GeneralInput\Physic alProperties\ZonalPro perlies_SDU4	Updated saturation values. See file(s) at: \\pitstop1\ITDATA\2\VC&WDA\Folks\IS DF\z_04_Modeling\PORFLOW\PO RFLOW_Results\Vadose_Zone_Flo w_Results.6	Y			
[not applicable]	[not applicable]	Versioned model up to version 2.009	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/17/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Check


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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Compliance.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority


**Changed Model Check Form**

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009_Compliance.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective: Model Ran for compliance case results</b>						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDUTransportSubmodel	Air_PathwayTransportOuterLoop_SDUsInnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/17/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_FullDesat.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_FullDesat.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective: Model Ran for saturation sensitivity</b>						
[not applicable]	[not applicable]	Model was renamed.	Y			
ZeroSaturation_opt	UserSettings	Value set to 3. Sets saturation in all zones to zero.	Y			
SDUTransportSubmodel	Air_PathwayTransportOuterLoop_SDUsInnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/17/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_FullDesat\_Check

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4/17/2019

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_AltDesat.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009_AltDesat.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective: Model Ran for saturation sensitivity</b>						
[not applicable]	[not applicable]	Model was renamed.	Y			
ZeroSaturation_opt	\UserSettings	Value set to 1. Sets saturation in the clean cap zone (or top of saltstone) and the closure cap to zero.	Y			
SDUTransportSubmodel	\Air_PathwayTransportOuterLoop_SDUsInnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Ben Dean</i> 4/17/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_AltDesat\_Check


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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_RealDesat.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_RealDesat.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y/N	Checker Comment	Analyst Response	Checker Concur? Y/N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for saturation sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
ZeroSaturation_opt	\\UserSettings	Value set to 0. Sets saturations in SDU and saltstone to reflect the PORFLOW-calculated saturations under MPAD conditions.	Y			
SDUTransportSubmodel	\\Air_Pathway\\transpo rt\\OuterLoop_SDUs\\ InnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/17/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_RealDesat\_Check

1 of 1

4/17/2019



SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Satx0.1.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009_Satx0.1.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
<b>New Model File Date:</b> 4/15/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for saturation sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
ZeroSaturation_opt	\UserSettings	Value set to 0. Sets saturations in SDU and saltstone to reflect the PORFLOW-calculated saturations under MPAD conditions.	Y			
AverageSaturation_SDUI1	\GeneralInput\PhysicalProperties\ZonalProperties_SDUI1	Divided saturation values by 10	Y			
AverageSaturation_SDUI150	\GeneralInput\PhysicalProperties\ZonalProperties_SDUI150	Divided saturation values by 10	Y			
AverageSaturation_SDUI375	\GeneralInput\PhysicalProperties\ZonalProperties_SDUI375	Divided saturation values by 10	Y			
AverageSaturation_SDUI4	\GeneralInput\PhysicalProperties\ZonalProperties_SDUI4	Divided saturation values by 10	Y			
SDUTransportSubmodel	\Air_PathwayTransport\OuterLoop_SDUI1InnerLoop_SDUIs	Model versioning shows the submodel is changed, but it was not changed.	Y			


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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Satx0.1\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_Satx0.1.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	
New Model File Date: 4/15/2019		Source Model File Date: 4/10/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.			Checker Comment
Analyst Name (print): Steve Hommel			Analyst Response
Checker Name (print): Ben Dean			Checker Concur? Y,N
E-Signature (or sign/date/scan hardcopy):			E-Signature (or sign/date/scan hardcopy):  4/17/2019

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Satx0.1\_Check

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Satx0.5.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009_Satx0.5.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
<b>New Model File Date:</b> 4/15/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for saturation sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
ZeroSaturation_opt	\\UserSettings	Value set to 0. Sets saturations in SDU and saltstone to reflect the PORFLOW-calculated saturations under MPAD conditions.	Y			
AverageSaturation_SDUI1	\\GeneralInput\\PhysicalProperties\\ZonalProperties_SDUI1	Divided saturation values by 2	Y			
AverageSaturation_SDUI150	\\GeneralInput\\PhysicalProperties\\ZonalProperties_SDUI150	Divided saturation values by 2	Y			
AverageSaturation_SDUI375	\\GeneralInput\\PhysicalProperties\\ZonalProperties_SDUI375	Divided saturation values by 2	Y			
AverageSaturation_SDUI4	\\GeneralInput\\PhysicalProperties\\ZonalProperties_SDUI4	Divided saturation values by 2	Y			
SDUTransportSubmodel	\\Air_PathwayTransport\\OuterLoop_SDUI\\InnerLoop_SDUI	Model versioning shows the submodel is changed, but it was not changed.	Y			


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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Satx0.5\_Check



Waste Disposal Authority  
Charged Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_Salx0.5.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	
New Model File Date: 4/15/2019		Source Model File Date: 4/10/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
If checker has no comments, check here. <input checked="" type="checkbox"/>		Checker Comment	Analyst Response
Analyst Name (print): Steve Hommel		Checker Concur? Y,N	
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)	
		E-Signature (or sign/date/scan hardcopy):  4/17/2019	

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_NoCap.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_NoCap.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for layer thickness sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
CellThicknesses_SDU1	\GeneralInput\Geometry\SDU1	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU1	\GeneralInput\Geometry\SDU1	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU150	\GeneralInput\Geometry\SDU150	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU150	\GeneralInput\Geometry\SDU150	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU375	\GeneralInput\Geometry\SDU375	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU375	\GeneralInput\Geometry\SDU375	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU4	\GeneralInput\Geometry\SDU4	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU4	\GeneralInput\Geometry\SDU4	Linked values to the Roof and Closure Cap thickness multipliers	Y			
ClosureCapThicknessMultiplier	\UserSettings	Set value to 1.0E-08	Y			
SDUTransportSubmodel	\Air_PathwayTransport\OuterLoop_SDUInnerLoop_SDU	Model versioning shows the submodel is changed, but it was not changed.	Y			

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_NoCap\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_NoCap.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm	
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.			
Analyst Name (print): Steve Hommel		Checker Comment	
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)  E-Signature (or sign/date/scan hardcopy): SigD 4/17/2019	
		Analyst Response	Checker Concur? Y,N

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_NoCap\_Check

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_NoCapNoRoof.gsm Changed Model  
Check Form (2 Pages)


Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009_NoCapNoRoof.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for layer thickness sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
CellThicknesses_SDU1	\\GeneralInput\\Geometry\\SDU1	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU1	\\GeneralInput\\Geometry\\SDU1	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU150	\\GeneralInput\\Geometry\\SDU150	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU150	\\GeneralInput\\Geometry\\SDU150	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU375	\\GeneralInput\\Geometry\\SDU375	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU375	\\GeneralInput\\Geometry\\SDU375	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU4	\\GeneralInput\\Geometry\\SDU4	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU4	\\GeneralInput\\Geometry\\SDU4	Linked values to the Roof and Closure Cap thickness multipliers	Y			
ClosureCapThicknessMultiplier	\\UserSettings	Set value to 1.0E-08	Y			
SDURoofThicknessMultiplier	\\UserSettings	Set value to 1.0E-08	Y			
SDUTransportSubmodel	\\Air_PathwayTransport\\OuterLoop_SDU\\InnerLoop_SDU	Model versioning shows the submodel is changed, but it was not changed.	Y			

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_NoCapNoRoof.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel						
E-Signature (or sign/date/scan hardcopy): (Not required if no comments)						
Checker Name (print): Ben Dean						
E-Signature (or sign/date/scan hardcopy):  4/17/2019						

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_NoCapNoRoof\_Check

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_NoRoof.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_NoRoof.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for layer thickness sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
CellThicknesses_SDU1	\\GeneralInput\\Geometry\\SDU1	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU1	\\GeneralInput\\Geometry\\SDU1	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU150	\\GeneralInput\\Geometry\\SDU150	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU150	\\GeneralInput\\Geometry\\SDU150	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU375	\\GeneralInput\\Geometry\\SDU375	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU375	\\GeneralInput\\Geometry\\SDU375	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU4	\\GeneralInput\\Geometry\\SDU4	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU4	\\GeneralInput\\Geometry\\SDU4	Linked values to the Roof and Closure Cap thickness multipliers	Y			
SDURoofThicknessMultiplier	\\UserSettings	Set value to 1.0E-08	Y			
ClosureCapThicknessMultiplier	\\UserSettings	Confirmed value set to 1	Y			
SDUTransportSubmodel	\\Air_PathwayTransport\\OuterLoop_SDUs\\InnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_NoRoof\_Check

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Waste Disposal Authority

Changed Model Check Form

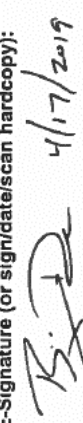
New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_NoRoof.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel						
E-Signature (or sign/date/scan hardcopy): (Not required if no comments)						
Checker Name (print): Ben Dean						
E-Signature (or sign/date/scan hardcopy): TS: Dean 4/17/2019						

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_NoRoof\_Check

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_RealInv.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_RealInv.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for inventory sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
InventorySelector	\\UserSettings	Set value to 1 for realistic inventory	Y			
SDUTransportSubmodel	\\Air_PathwayTranspo rt\\OuterLoop_SDUs\\ InnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/17/2019				


4/17/2019

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_RealInv\_Check



SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_OxIII\_Henry.gsm Changed Model  
Check Form (1 Page)

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_OxIII_Henry.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y/N	Checker Comment (QA&DV Form 4)?	Analyst Response	Checker Concur? Y/N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for Henry's Law Constants sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
Replace_SS_HenrysLawConstant	UserSettings	Set to true to replace salts(one and grout values with the SDU concrete values (in oxidized region III)	Y			
SDUTransportSubmodel	\\Air_PathwayTransportOuterLoop_SDU\\InnerLoop_SDU	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/17/2019				

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_OxIII\_Henry\_Check

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_OxII\_Henry.gsm Changed Model  
Check Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_OxII_Henry.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y, N	Checker Comment (QA&DV Form 4)?	Analyst Response	Checker Concur? Y, N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for Henry's Law Constants sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
Replace_SS_HenrysLawConstant	\\UserSettings	Set to true to replace saltstone and grout values with the SDU concrete values (in oxidized region II)	Y			
HenryLawConstant_cmrt_Op	\\UserSettings	Set value to 2 to set SDU concrete values to use oxidized region II	Y			
SDUTransportSubmodel	\\Air_PathwayTransport\\OuterLoop_SDU\\InnerLoop_SDU	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/17/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_OxII\_Henry\_Check


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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_ReII\_Henry.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_ReII_Henry.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct Y/N	Checker Comment (QA&DV Form 4)?	Analyst Response	Checker Concur? Y/N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for Henry's Law Constants sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
Replace_SS_HenrysLawConstant	\\UserSettings	Set to true to replace saltstone and grout values with the SDU concrete values (in reducing region II)	Y			
HenrysLawConstant_cmnl_Op	\\UserSettings	Set value to 1 to set SDU concrete values to use reducing region II	Y			
SDUTransportSubmodel	\\Air_PathwayTransportOuterLoop_SDUInnerLoop_SDU	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/17/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_ReII\_Henry\_Check


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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Saltstone\_Henry.gsm Changed Model  
Check Form (1 Page)

Waste Disposal Authority


**Changed Model Check Form**

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009_Saltstone_Henry.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for Henry's Law Constants sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
Henry's Law Constant Inv. conc rele	GeneralInput\ChemicalProperties\Liquid_Air	Changed logic of selector to replace SDU concrete values with the saltstone and groud values.	Y			
SDU Transport Submodel	\\Air_PathwayTransport\OuterLoop_SDU\InnerLoop_SDU	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/17/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_SoilB.gsm Changed Model Check Form  
(1 Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009_SoilB.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for Henry's Law Constants sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
Henry's Law Constant_soil_Opt	\\User\\Settings	Set value to 2 to use soil Condition B values	Y			
SDUTransportSubmodel	\\Air_PathwayTransportOuterLoop_SDUs\\InnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Sieve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/18/2019				

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_SoilB\_Check



SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_SoilC.gsm Changed Model Check Form  
(1 Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009_SoilC.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y/N	Checker Comment	Analyst Response	Checker Concur? Y/N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for Henry's Law Constants sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
HenryLawConstant_soil_Opt	UserSettings	Set value to 3 to use soil Condition C values	Y			
SDUTransportSubmodel	Vair_PathwayTransportOuterLoop_SDUsInnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Ben Dean</i> 4/18/2019				

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_SoilC\_Check

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_SoilD.gsm Changed Model Check Form  
(1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_SoilD.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Model Ran for Henry's Law Constants sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
Henry's Law Constant_soil_Opt	\UserSettings	Set value to 4 to use soil Condition D values	Y			
SDUTransportSubmodel	\\Air_PathwayTransportOuterLoop_SDUs\InnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): <i>Ben Dean</i> 4/18/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_SoilD\_Check


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4/18/2019

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Realistic.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009_Realistic.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for realistic case sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
HenrysLawConstant_cmnl_Op	\\UserSettings	Set to 2 to use Oxidized Region II values for the SDU concrete	Y			
InventorySelector	\\UserSettings	Set to 1 for realistic inventory	Y			
ZeroSaturation_opt	\\UserSettings	Set to 0 to use saturation based on PORFLOW (MPAD conditions)	Y			
SDUTransportSubmodel	\\Air_PathwayTransportOuterLoop_SDUs\\InnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/17/2019				

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Realistic\_Check



SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_WorstCase.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_WorstCase.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment (QA&DV Form 4)?	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective: Model Ran for worst case sensitivity</b>						
[not applicable]	[not applicable]	Model was renamed.	Y			
Replace_SS_HenrysLawConstant	\\UserSettings	Set to TRUE to use oxidized region III	Y			
InventorySelector	\\UserSettings	Set to 3 for defense-in-depth inventory	Y			
ZeroSaturation_opt	\\UserSettings	Set to 3 to desaturate all materials	Y			
SDUTransportSubmodel	\\Air_PathwayTransportOuterLoop_SDUsInnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): <i>Ben Dean</i> 4/18/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_WorstCase\_Check


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4/18/2019

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_D-in-DInv.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_D-in-DInv.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective: Model Ran for inventory sensitivity</b>						
[not applicable]	[not applicable]	Model was renamed.	Y			
InventorySelector	UserSettings	Set value to 3 for defense-in-depth inventory	Y			
SDUTransportSubmodel	\\Air_PathwayTransport\\OuterLoop_SDUs\\InnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/17/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_D-in-DInv\_Check


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4/17/2019

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Defensible.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_Defensible.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective: Model Ran for defensible case sensitivity</b>						
[not applicable]	[not applicable]	Model was renamed.	Y			
Replace_SS_HenryslawConstant	\UserSettings	Set to TRUE to use oxidized region III	Y			
InventorySelector	\UserSettings	Set to 3 for defense-in-depth inventory	Y			
ZeroSaturation_opt	\UserSettings	Set to 2 to desaturate space above saltstone and clean grout	Y			
SDUTransportSubmodel	\Air_PathwayTransportOuterLoop_SDUs\InnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/17/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.009\_Defensible\_Check

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.010.gsm Changed Model Check Form (2  
Pages)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_NoCapNoRoof.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Fixed errors identified during checking.						
<b>Note:</b> I started with an unversioned sensitivity case model, so the text colored in BLUE indicates the changes that were made as part of the source file.						
[not applicable]	[not applicable]	Model was renamed.	Y			
CellThicknesses_SDU1	\\GeneralInput\\Geometry\\SDU1	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU1	\\GeneralInput\\Geometry\\SDU1	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU150	\\GeneralInput\\Geometry\\SDU150	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU150	\\GeneralInput\\Geometry\\SDU150	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU375	\\GeneralInput\\Geometry\\SDU375	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU375	\\GeneralInput\\Geometry\\SDU375	Linked values to the Roof and Closure Cap thickness multipliers	Y			
CellThicknesses_SDU4	\\GeneralInput\\Geometry\\SDU4	Linked values to the Roof and Closure Cap thickness multipliers	Y			
LayerThicknesses_SDU4	\\GeneralInput\\Geometry\\SDU4	Linked values to the Roof and Closure Cap thickness multipliers	Y			
ClosureCapThicknessMultiplier	\\UserSettings	Set value to 1.0E-08. Then changed back to the default value of 1 to reset the model version.	Y			
SDURoofThicknessMultiplier	\\UserSettings	Set value to 1.0E-08. Then changed back to the default value of 1 to reset the model version.	Y			
SDUTransportSubmodel	\\Air_PathwayTransport\\OuterLoop_SDU\\InnerLoop_SDU	Model versioning shows the submodel is changed, but it was not changed.	Y			


SaltstonePA\_Air&Radon\_PathwayModel\_V2.010\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.009_NoCapNoRoof.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DefenseInDepthInventory	\\GeneralInput\\Inventory	Corrected error in inventory	Y			
HenrysLawConstant_CondB	\\GeneralInput\\ChemicalProperties\\Liquid_Air	Corrected Se value from 2.4e4 mol/atm-L to 2.4e44 mol/atm-L	Y			
[not applicable]	[not applicable]	Model was versioned.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/22/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.010\_Check

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.010\_D-in-DInv.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.010_D-in-DInv.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment (QA&DV Form 4)	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for inventory sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
InventorySelector	\\UserSettings	Set value to 3 for defense-in-depth inventory	Y			
SDUTransportSubmodel	\\Air_PathwayTransport\\OuterLoop_SDUs\\InnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/18/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.010\_D-in-DInv\_Check


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4/18/2019

SaltstonePA\_Air&Radon\_PathwayModel\_V2.010\_SoilB.gsm Changed Model Check Form  
(1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.010_SoilB.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Model Ran for Henry's Law Constants sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
Henry's Law Constant_soil_Opt	\UserSettings	Set value to 2 to use soil Condition B values	Y			
SDUTransportSubmodel	Vair_PathwayTransportOuterLoop_SDUsInnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/18/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.010\_SoilB\_Check

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.010\_Defensible.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.010_Defensible.gsm		Source Model ID (or filename): SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Model Ran for defensible case sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
Replace_SS_HenrysLawConstant	\\UserSettings	Set to TRUE to use oxidized region III	Y			
InventorySelector	\\UserSettings	Set to 3 for defense-in-depth inventory	Y			
ZeroSaturation_opt	\\UserSettings	Confirmed - Set to 2 to desaturate space above saltstone and clean grout. No change.	Y			
SDUTransportSubmodel	\\Air_PathwayTransportOuterLoop_SDUsInnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): <i>Ben Dean</i> 4/18/2019				

SaltstonePA\_Air&Radon\_PathwayModel\_V2.010\_Defensible\_Check

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SaltstonePA\_Air&Radon\_PathwayModel\_V2.010\_WorstCase.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority


Changed Model Check Form

<b>New Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.010_WorstCase.gsm		<b>Source Model ID (or filename):</b> SaltstonePA_Air&Radon_PathwayModel_V2.010.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/17/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model Ran for worst case sensitivity						
[not applicable]	[not applicable]	Model was renamed.	Y			
Replace_SS_HennysLawConstant	\\UserSettings	Set to TRUE to use oxidized region III	Y			
InventorySelector	\\UserSettings	Set to 3 for defense-in-depth inventory	Y			
ZeroSaturation_opt	\\UserSettings	Set to 3 to desaturate all materials	Y			
SDUTransportSubmodel	\\Air_PathwayTransportOuterLoop_SDUs\\InnerLoop_SDUs	Model versioning shows the submodel is changed, but it was not changed.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Ben Dean</i> 4/18/2019				

## **Appendix A-2**

### **Check Sheets for Table 4.2-1: Summary of GoldSim® Model Version Checking**

SRS Saltstone v5.015.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						Changed Model Check Form			
New Model ID (or filename): SRS Saltstone v5.015.gsm		Source Model ID (or filename): SRS Saltstone v5.014_CaseC.gsm							
New Model File Date: 02/09/2017		Source Model File Date: 09/08/2016							
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N			
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.									
<b>Objective:</b> Versioned the FY2016 SDF SA model file (SRR-CWDA-2016-00072) to allow for easier traceability of model changes.									
		Put model into Edit mode.	Y	None	N/A	Y			
N/A	Model → Versioning	Versioned the model. No other changes were made.	Y	None	N/A	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>									
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)							
Checker Name (print): Jerry Mangold		E-Signature (or sign/date/scan hardcopy):  3/23/2017							

3/22/2017

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SRS Saltstone v5.015\_Check.docx

SRS Saltstone v5.016.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.016.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.015.gsm				
<b>New Model File Date:</b> 06/07/2017		<b>Source Model File Date:</b> 02/09/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Port to GoldSim Version 12.						
		Opened Model in GoldSim version 12. When opening in version 12, a number of elements failed the "Model Validity Check" due to the risk of sequencing errors from internal loops. All of these errors were associated with elements in the logic for an alternative approach to inventory uncertainty within: \\Inventory\\Tank_to_FDC This was addressed by deleting this container and all of its contents and repairing the associated links. Inventory uncertainty will need to be redesigned for future sampling.				
Tank_to_FDC	\\Inventory	Container element and all of its contents were deleted.	Y	None	N/A	Y
StochasticInventory_FD C	\\Inventory	Element deleted. No longer needed after removing the Tank_to_FDC container.	Y	None	N/A	Y

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SRS Saltstone v5.016\_Check.docx

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.016.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.015.gsm				
<b>New Model File Date:</b> 06/07/2017		<b>Source Model File Date:</b> 02/09/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FDCMultiplier	Inventory	Removed logic that was previous associated with StochasticInventory_FDC. The approach for inventory uncertainty will need to be redeveloped.	Y	None	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Jerry Mangold		<b>E-Signature (or sign/date/scan hardcopy):</b>				

SRS Saltstone v5.016\_Check.docx

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SRS Saltstone v5.017.gsm Changed Model Check Form (7 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.017.gsm		Source Model ID (or filename): SRS Saltstone v5.016.gsm				
New Model File Date: 06/08/2017		Source Model File Date: 06/07/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> General model clean up and update inventory uncertainty logic after porting to GoldSim version 12.						
Documentation	\	Deleted container and all contents. At the root of the model, there was a Documentation container. The intent of this container was to document changes to the model, but because model documentation is external to the model file, updating this container was deemed inefficient.	Y	None	N/A	Y
SouthSourceMult	\\Inventory\SouthID USourceMultiplier	Moved element up a level to \\Inventory - This was done so the host container could be deleted. Then, after making other changes, this element became obsolete and was deleted.	Y	None	N/A	Y

SRS Saltstone v5.017\_Check.docx

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.017.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.016.gsm				
<b>New Model File Date:</b> 06/08/2017		<b>Source Model File Date:</b> 06/07/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Nominal_V1_andV4_In v	Inventory\SouthD USourceMultiplier s	Moved element up a level to \Inventory - This was done so the host container could be deleted.  Then, after making other changes, this element became obsolete and was deleted.	Y	None	N/A	Y
SouthDUSourceMultipli ers	\Inventory	Deleted container after moving contents.  Deleted container and all contents. Inventory uncertainty will be redesigned.	Y	None	N/A	Y
InventoryUncertainty	\Inventory	[Note: Later I added an expression element with this same name.]	Y	None	N/A	Y

SRS Saltstone v5.017\_Check.docx

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.017.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.016.gsm				
<b>New Model File Date:</b> 06/08/2017		<b>Source Model File Date:</b> 06/07/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
NominalInventory	\\Inventory	Element was added to replace NominalInventory_FDC and Nominal_V1_andV4_Inv. For future modeling, this change enables us to more quickly update inventory values by having a single element to update. Values were copied from NominalInventory_FDC and Nominal_V1_andV4_Inv	Y	None	N/A	Y
NominalInventory_FDC	\\Inventory	Element was deleted. It is being replaced by: NominalInventory	Y	None	N/A	Y
SDU_InventoryUncertainties	\\Inventory	Added container.	Y	None	N/A	Y

SRS Saltstone v5.017\_Check.docx

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.017.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.016.gsm				
<b>New Model File Date:</b> 06/08/2017		<b>Source Model File Date:</b> 06/07/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
InventoryUncertainty_S DU* * = Each SDU	\\Inventory\ SDU_InventoryUn certainties	Added stochastic element. This element will provide a frame work for future SDU- specific inventory uncertainty.	Y	Would it be helpful to have two data elements: one for "InventoryUncertainty_M in" and another for "InventoryUncertainty_M ax" that are arrays with Rows = Species and Columns = SDUVCells. That way the user specifies the min and max values for all species and SDUs by altering only two data elements rather than 15?	These current elements are here primarily as placeholders.  There are a number of ways that we might consider for developing inventory uncertainty. My intention is to have our Inventory SME (Wooten) sit down with a statistician (TBD) and a member of the modeling team to determine (and document) the most appropriate and defensible approach for handling inventory uncertainty.	Y
InventoryUncertainty	\\Inventory	Added element to consolidate all of the SDU- specific inventory uncertainties into a single matrix.	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.017.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.016.gsm				
<b>New Model File Date:</b> 06/08/2017		<b>Source Model File Date:</b> 06/07/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FDCMultiplier – renamed to ModeledInventory	\\Inventory	Renamed element to indicate that this element reflects the inventory that is modeled. Updated logic of selector to use NominalInventory or NominalInventory times uncertainty multipliers according to user settings.	Y	One issue with this is what if the User wants to run a unit inventory simulation in deterministic mode? Should the "Realization=0" logic in the first If/Then statement be removed?	Agreed This change should be incorporated into v5.020.	Y
FDCInvMult_uncertain – renamed to InventoryForSubModel	\\Inventory	Renamed element to indicate the elements role. This element is used to pass inventory values into the submodel (i.e., all SDUs except for SDUs 1 and 4). Changed logic in this element to read values from element. ModeledInventory	Y	None	N/A	Y
SouthDisposalUnitIndex	\\Inventory	Element deleted. It served no purpose. Changed logic to read data from element: ModeledInventory	Y	None	N/A	Y
Inventory_mass	\\DisposalUnits\\Vau ult_1	Also Changed logic to remove reference to UnitInventory_Switch	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.017.gsm		Source Model ID (or filename): SRS Saltstone v5.016.gsm				
New Model File Date: 06/08/2017		Source Model File Date: 06/07/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Inventory_mass	\\DisposalUnits\\Vault_4	Changed logic to read data from element ModeledInventory  Also Changed logic to remove reference to UnitInventory_Switch Added element to identify the species number for Tc-99. An identical element was deleted from InventoryUncertainty. This element replaces it.	Y	None	N/A	Y
Tc99SpeciesNumber	\\GlobalModel_Input\\GeneralParameters	Deleted element. Logic in the other inventory selector is being revised so that the unit inventory option will be with the other inventory settings.	Y	None	N/A	Y
UnitInventory_Switch	\\User_Input	Element deleted. It is no longer used.	Y	None	N/A	Y
TankToFDCCRandomizer_Switch	\\User_Input	Input interface for <u>UnitInventory_Switch</u> was no longer needed. I deleted it.	Y	None	N/A	Y
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Element deleted. It is no longer used.	Y	None	N/A	Y
UnitInventory_Switch	Within submodel: \\InputData\\Miscellaneous	Element deleted. It is no longer used.	Y	None	N/A	Y



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Waste Disposal Authority

### Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.017.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.016.gsm				
<b>New Model File Date:</b> 06/08/2017		<b>Source Model File Date:</b> 06/07/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Inventory_mass	Within submodel: ISDUs	Changed logic to remove reference to UnitInventory_Switch Model was versioned to preserve changes.	Y	None	N/A	Y
	Model versioning		Y	None	N/A	Y
				Should "Vault2Inv_Mult_uncertai n" in the Submodel be renamed to "InventoryForSubModel" ?	Yes. This change should be incorporated into v5.020.	Y
If checker has no comments, check here. <input type="checkbox"/>						
Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  7/26/2017				
<b>Checker Name (print):</b> Jerry Mangold		<b>E-Signature (or sign/date/scan hardcopy):</b>  7/26/2017				

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SRS Saltstone v5.018.gsm Changed Model Check Form (8 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.018.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.017.gsm	
<b>New Model File Date:</b> 06/08/2017		<b>Source Model File Date:</b> 06/08/2017	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Updates to aquifer transport inputs and logic to allow alternative flow fields.			
SelectAquiferTransportField	\\User_Input	Added input element to enable users to pick an aquifer flow field to use.	Y
MeanSatZoneDarcyVel	\\Transport\\WaterTtransport	Deleted element. It does not link to anything.	Y
MeanSatZoneDarcyVel_FDC_infect	\\Transport\\WaterTtransport	Deleted element. It does not link to anything.	Y
RandomAquiferFlowField	\\Transport\\WaterTtransport	Added stochastic element to randomly sample the alternative aquifer flow fields.	Y
		None	Y
		None	Y
		None	Y
		[Note to checker: After versioning and saving the file I realized that I only have this element set up to sample flow fields 1 and 2. This should be expanded to include flow fields 3 and 4. This change should be captured in version v5.019. -SH]	Y
		Analyst Response	Checker Concur? Y,N

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.018.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.017.gsm				
<b>New Model File Date:</b> 06/08/2017		<b>Source Model File Date:</b> 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FlowField_1	\\Transport\\WaterT ransport	Added container and moved all of the inputs that were specific to the aquifer flow fields into it. I then localized this container and made copies of it so that each copy could be used to define a specific set of inputs for specific alternative flow fields.	Y	None	N/A	Y
MeanSatZoneDarcyVel _FDC	\\Transport\\WaterT ransport	Moved element into container: FlowField_1	Y	None	N/A	Y
BoundaryDarcyVel_FD C	\\Transport\\WaterT ransport	Moved element into container: FlowField_1	Y	None	N/A	Y
MeanSatZoneDarcyVel _V1	\\Transport\\WaterT ransport	Moved element into container: FlowField_1	Y	None	N/A	Y
BoundaryDarcyVel_V1	\\Transport\\WaterT ransport	Moved element into container: FlowField_1	Y	None	N/A	Y
MeanSatZoneDarcyVel _V4	\\Transport\\WaterT ransport	Moved element into container: FlowField_1	Y	None	N/A	Y
BoundaryDarcyVel_V4	\\Transport\\WaterT ransport	Moved element into container: FlowField_1	Y	None	N/A	Y
PathLengths	\\Transport\\WaterT ransport	Moved element into container: FlowField_1	Y	None	N/A	Y
SatThickness_determ	\\Transport\\WaterT ransport	Moved element into container: FlowField_1	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.018.gsm		Source Model ID (or filename): SRS Saltstone v5.017.gsm				
New Model File Date: 06/08/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WellDistance_1 [renamed to] PathLength_V1	\DisposalUnits\Vault1_data [moved to] \Transport\WaterTransport FlowField_1	Renamed from WellDistance_1 to PathLength_V1 then moved to \Transport\WaterTransport\ FlowField_1	Y	None	N/A	Y
WellDistance_4 [renamed to] PathLength_V4	\DisposalUnits\Vault4_data [moved to] \Transport\WaterTransport FlowField_1	Renamed from WellDistance_4 to PathLength_V4 then moved to \Transport\WaterTransport\ FlowField_1	Y	None	N/A	Y
FlowField_2	\Transport\WaterTransport	Created copy of localized container: FlowField_1 (including all contents). Later I intend to modify the values in these inputs to reflect specific flow fields.	Y	None	N/A	Y
FlowField_3	\Transport\WaterTransport	Created copy of localized container: FlowField_1 (including all contents). Later I intend to modify the values in these inputs to reflect specific flow fields.	Y	None	N/A	Y
FlowField_4	\Transport\WaterTransport	Created copy of localized container: FlowField_1 (including all contents). Later I intend to modify the values in these inputs to reflect specific flow fields.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.018.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.017.gsm				
<b>New Model File Date:</b> 06/08/2017		<b>Source Model File Date:</b> 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FlowField_Picked	\\Transport\\WaterT ransport	Added container. The added selectors within this container are conditional based on user setting defined by: SelectAquiferTransportField	Y	None	N/A	Y
FlowFieldPicker	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector to define the flow field selection.	Y	None	N/A	Y
SatThickness_determ	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element to choose the aquifer transport input value(s) that correspond(s) to the selected flow field.	Y	None	N/A	Y
MeanSatZoneDarcyVel _FDC	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element to choose the aquifer transport input value(s) that correspond(s) to the selected flow field.	Y	None	N/A	Y
MeanSatZoneDarcyVel _V1	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element to choose the aquifer transport input value(s) that correspond(s) to the selected flow field.	Y	None	N/A	Y
MeanSatZoneDarcyVel _V4	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element to choose the aquifer transport input value(s) that correspond(s) to the selected flow field.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.018.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.017.gsm			
<b>New Model File Date:</b> 06/08/2017			<b>Source Model File Date:</b> 06/08/2017			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
BoundaryDarcyVel_FD_C	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element to choose the aquifer transport input value(s) that correspond(s) to the selected flow field.	Y	None	N/A	Y
BoundaryDarcyVel_V1	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element to choose the aquifer transport input value(s) that correspond(s) to the selected flow field.	Y	None	N/A	Y
BoundaryDarcyVel_V4	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element to choose the aquifer transport input value(s) that correspond(s) to the selected flow field.	Y	None	N/A	Y
PathLengths	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element to choose the aquifer transport input value(s) that correspond(s) to the selected flow field.	Y	None	N/A	Y
WellDistance_1	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element to choose the aquifer transport input value(s) that correspond(s) to the selected flow field.	Y	Should this be renamed "PathLength_V1" to be consistent with the element in "FlowFieldX" containers? X = 1 - 4	Agreed. This change should be incorporated into v5.020.	Y
WellDistance_4	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element to choose the aquifer transport input value(s) that correspond(s) to the selected flow field.	Y	Should this be renamed "PathLength_V4" to be consistent with the element in "FlowFieldX" containers? X = 1 - 4	Agreed. This change should be incorporated into v5.020.	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.018.gsm		Source Model ID (or filename): SRS Saltstone v5.017.gsm				
New Model File Date: 06/08/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PlumeCalc_Sectors	\\DisposalUnits [moved to] \\Transport\\WaterT ransport	Moved the plume inputs and calculations from the DisposalUnit container into the more logical Transport\\WaterTransport container. No other changes made to these elements at this time.	Y	None	N/A	Y
WellDistance	\\DisposalUnits\\Va ult_4\\SiteGeometr y	Changed references from <a href="#">WellDistance_1</a> To <a href="#">WellDistance_4</a> When I created the selectors for the V1 and V4 path lengths (described above), I accidentally had the names flipped. So I swapped them back by renaming the selectors and then had to change the "Affected by" elements because that was easier than redoing the localized element links. So the element now appears as changed, but functionally there was no change.	Y	None	N/A	Y
LDisp	\\DisposalUnits\\Va ult_4\\NearWell	See previous entry description.	Y	None	N/A	Y
NearWellCellLength	\\DisposalUnits\\Va ult_4\\NearWell	See previous entry description.	Y	None	N/A	Y
NearWellCellVolume	\\DisposalUnits\\Va ult_4\\NearWell	See previous entry description.	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.018.gsm		Source Model ID (or filename): SRS Saltstone v5.017.gsm				
New Model File Date: 06/08/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
NearWellPipe	\\DisposalUnits\\Vault_1\\NearWell	See previous entry description.  Changed references from <b>WellDistance_4</b> To <b>WellDistance_1</b> . When I created the selectors for the V1 and V4 path lengths (described above), I accidentally had the names flipped. So I swapped them back by renaming the selectors and then had to change the "Affected by" elements because that was easier than redoing the localized element links. So the element now appears as changed, but functionally there was no change.	Y	None	N/A	Y
WellDistance	\\DisposalUnits\\Vault_1\\SiteGeometry		Y	None	N/A	Y
NearWellCellLength	\\DisposalUnits\\Vault_1\\NearWell	See previous entry description.	N	No "NearWellCellLength" element in this location and it's not mentioned in the versioning report.	Agreed. Analyst striked-out erroneous information.	Y
NearWellCellVolume	\\DisposalUnits\\Vault_1\\NearWell	See previous entry description.	Y	None	N/A	Y
NearWellPipe	\\DisposalUnits\\Vault_1\\NearWell	See previous entry description.	Y	None	N/A	Y
LDisp	\\DisposalUnits\\Vault_1\\NearWell	See previous entry description.		Added by Checker	Agreed	Y



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**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.018.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.017.gsm	
<b>New Model File Date:</b> 06/08/2017		<b>Source Model File Date:</b> 06/08/2017	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
	Model versioning	Model was versioned to preserve changes.	Y
If checker has no comments, check here. <input type="checkbox"/>		<b>Checker Comment</b>	<b>Analyst Response</b>
<b>Analyst Name (print):</b> Steve Hommel		None	N/A
<b>Checker Name (print):</b> Jerry Mangold		<b>E-Signature (or sign/date/scan hardcopy):</b>  7/26/2017	<b>Checker Concur? Y,N</b> Y
		<b>E-Signature (or sign/date/scan hardcopy):</b>  7/26/2017	

Add additional rows above, as needed.

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Additional updates to aquifer transport inputs and logic to allow alternative flow fields.						
RandomAquiferFlowField	\\Transport\\WaterT ransport	Modified stochastic element to increase the number of sampled flow fields.	Y	None	N/A	Y
CLDist_North	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ataMatrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y
CLDist_NorthAdd	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ataMatrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y
CLDist_South	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ataMatrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.019.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.018.gsm				
<b>New Model File Date:</b> 07/06/2017		<b>Source Model File Date:</b> 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLDist_SouthAdd	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ata\\Matrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y
CLOffset_North	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ata\\Matrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y
CLOffset_NorthAdd	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ata\\Matrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y
CLOffset_South	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ata\\Matrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.019.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.018.gsm				
<b>New Model File Date:</b> 07/06/2017		<b>Source Model File Date:</b> 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLOffset_SouthAdd	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ata\\Matrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y
PFMask_North	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ata\\Matrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y
PFMask_NorthAdd	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ata\\Matrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y
PFMask_South	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ata\\Matrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.019.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.018.gsm				
<b>New Model File Date:</b> 07/06/2017		<b>Source Model File Date:</b> 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PfMask_SouthAdd	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ata\\Matrices [moved to] \\Transport\\WaterT ransport\\FlowField _1	Moved Element to new location.	Y	None	N/A	Y
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _2	Copied centerline distance elements from FlowField_1 into FlowField_2  Then updated values to reflect plume data generated from the GSA 2016 Update with PEST.47 parameters (see Excel file: GSA2016_SDF_Measures_ Pathlengths.xlsx). For a description of PEST.47, see SRNL-STI-2017-00008, Rev. 0.	Y	Inputs are correct but there was an error in the spreadsheet inputs which when corrected changes the centerline distance from:  SDU 7 to well I2 (1,561 ft rather than 1,579 ft)  See Excel comments for more details.	Agreed. Excel file corrections made to address comments, then values are updated in v5.020 of the GoldSim model.	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.019.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.018.gsm				
<b>New Model File Date:</b> 07/06/2017		<b>Source Model File Date:</b> 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\\Transport\WaterT ransport\FlowField _2	Copied offset distance elements from FlowField_1 into FlowField_2  Then updated values to reflect plume data generated from the GSA 2016 Update with PEST.47 parameters (see Excel file: GSA2016_SDF_Measures_ Pathlengths.xlsx). For a description of PEST.47, see SRNL-STI-2017-000008, Rev. 0.	Y	Inputs are correct but there were a few errors in the spreadsheet inputs which when corrected changes the offset distance from:  SDU 1 to well B1 (12 ft rather than 6 ft)  SDU 9 to well K1 (85 ft rather than 159 ft)  SDU10 to well C2 (494 ft rather than 451 ft)  SDU2A to well K2 (24 ft rather than 25 ft)  SDU2B to well K2 (95 ft rather than 96 ft)  SDU2B to well L2 (46 ft rather than 45 ft)  See Excel comments for more details.	Agreed. Excel file corrections made to address comments, then values are updated in v5.020 of the GoldSim model.	Y

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New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PFMask_North PFMask_NorthAdd PFMask_South PFMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _2	Copied plume mask elements from FlowField_1 into FlowField_2  Then updated values to reflect plume data generated from the GSA 2016 Update with PEST.47 parameters (see Excel file: GSA2016_SDF_Measures_ Pathlengths.xlsx). For a description of PEST.47, see SRNL-STI-2017-00008, Rev. 0.	Y	None	N/A	Y
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _3	Copied centerline distance elements from FlowField_1 into FlowField_3	Y	None	N/A	Y
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _3	Copied offset distance elements from FlowField_1 into FlowField_3	Y	None	N/A	Y
PFMask_North PFMask_NorthAdd PFMask_South PFMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _3	Copied plume mask elements from FlowField_1 into FlowField_3	Y	None	N/A	Y
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _4	Copied centerline distance elements from FlowField_1 into FlowField_4	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _4	Copied offset distance elements from FlowField_1 into FlowField_4	Y	None	N/A	Y
PFMask_North PFMask_NorthAdd PFMask_South PFMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _4	Copied plume mask elements from FlowField_1 into FlowField_4	Y	None	N/A	Y
SatThickness_determ	\\Transport\\WaterT ransport\\FlowField _2	Saturated Zone thickness changed from 20 m to "20 m – 3.5 ft" to reflect smaller SZ thickness from the GSA 2016 Update with PEST 47 parameters (per Section 7.4 of SRNL-STI-2017-00008, Rev. 0).	Y	None	N/A	Y
MeanSatZoneDarcyVel _FDC	\\Transport\\WaterT ransport\\FlowField _2	Updated value(s) to reflect plume data generated from the GSA 2016 Update with PEST 47 parameters (see Excel file: GSA2016_SDF_Measures_ Pathlengths.xlsx). For a description of PEST 47, see SRNL-STI-2017-00008, Rev. 0.	Y	Inputs are correct but there were a few minor discrepancies with SDUs 3A, 3B, and SDU 7 between the checker's values and the analyst's values	Agreed. Excel file corrections made to address comments, then values are updated in v5.020 of the GoldSim model.	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.019.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.018.gsm				
<b>New Model File Date:</b> 07/06/2017		<b>Source Model File Date:</b> 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZoneDarcyVel_V1	\\Transport\\WaterT ransport\\FlowField _2	Updated value(s) to reflect plume data generated from the GSA 2016 Update with PEST 47 parameters (see Excel file: GSA2016_SDF_Measures_Pathlengths.xlsx). For a description of PEST.47, see SRNL-STI-2017-00008, Rev. 0.	Y	None	N/A	Y
MeanSatZoneDarcyVel_V4	\\Transport\\WaterT ransport\\FlowField _2	Updated value(s) to reflect plume data generated from the GSA 2016 Update with PEST.47 parameters (see Excel file: GSA2016_SDF_Measures_Pathlengths.xlsx). For a description of PEST.47, see SRNL-STI-2017-00008, Rev. 0.	Y	None	N/A	Y
BoundaryDarcyVel_FD_C	\\Transport\\WaterT ransport\\FlowField _2	Updated value(s) to reflect plume data generated from the GSA 2016 Update with PEST.47 parameters (see Excel file: GSA2016_SDF_Measures_Pathlengths.xlsx). For a description of PEST.47, see SRNL-STI-2017-00008, Rev. 0.	Y	Inputs are correct but there were a few minor discrepancies with SDUs 3A, 3B, and 10 between the checker's values and the analyst's values from the Excel Spreadsheet	Agreed. Excel file corrections made to address comments, then values are updated in v5.020 of the GoldSim model.	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
BoundaryDarcyVel_V1	\\Transport\\WaterT ransport\\FlowField _2	Updated value(s) to reflect plume data generated from the GSA 2016 Update with PEST.47 parameters (see Excel file: GSA2016_SDF_Measures_ Pathlengths.xlsx). For a description of PEST.47, see SRNL-STI-2017-00008, Rev. 0.	Y	None	N/A	Y
BoundaryDarcyVel_V4	\\Transport\\WaterT ransport\\FlowField _2	Updated value(s) to reflect plume data generated from the GSA 2016 Update with PEST.47 parameters (see Excel file: GSA2016_SDF_Measures_ Pathlengths.xlsx). For a description of PEST.47, see SRNL-STI-2017-00008, Rev. 0.	Y	Input is correct but there is a minor discrepancy between the checker's value and the analyst's value from the Excel Spreadsheet	Agreed. Excel file corrections made to address comments, then values are updated in v5.020 of the GoldSim model.	Y
PathLengths	\\Transport\\WaterT ransport\\FlowField _2	Updated value(s) to reflect plume data generated from the GSA 2016 Update with PEST.47 parameters (see Excel file: GSA2016_SDF_Measures_ Pathlengths.xlsx). For a description of PEST.47, see SRNL-STI-2017-00008, Rev. 0.	Y	Inputs are correct but there were a few minor discrepancies with SDUs 3A, 3B, 7, and 10 between the checker's values and the analyst's values from the Excel Spreadsheet	Agreed. Excel file corrections made to address comments, then values are updated in v5.020 of the GoldSim model.	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PathLength_V1	\\Transport\\WaterT ransport\\FlowField _2	Updated value(s) to reflect plume data generated from the GSA 2016 Update with PEST 47 parameters (see Excel file: GSA2016_SDF_Measures_ Pathlengths.xlsx). For a description of PEST.47, see SRNL-STI-2017-00008, Rev. 0.	Y	None	N/A	Y
PathLength_V4	\\Transport\\WaterT ransport\\FlowField _2	Updated value(s) to reflect plume data generated from the GSA 2016 Update with PEST 47 parameters (see Excel file: GSA2016_SDF_Measures_ Pathlengths.xlsx). For a description of PEST 47, see SRNL-STI-2017-00008, Rev. 0.	N	Value of 867.3 ft was input into GoldSim. This value agrees with the checker's value but differs from the value the analyst had in their Excel Spreadsheet of 875.6 ft.	Agreed. Excel file corrections made to address comments, then values are updated in v5.020 of the GoldSim model.	Y
SectorX_conc_1 (where X = A thru F)	\\Model_Concentra tions\\GoldSim100 m_Conc	Added element to calculate the concentration at the first set of wells in each southern sector (A thru F). Equation: Mult(SouthernVaults, Vector(SDUssouth,PlumeCorrecti onSouth(row,X))) SpeciesSpecific_Activity * Rn222Mask Where X = A thru F	Y	None	N/A	Y

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorX_conc_1 (where X = G thru L)	\\Model_Concentra tions\GoldSim100 m_Conc	Added element to calculate the concentration at the first set of wells in each northern sector (G thru L). Equation: Mult(NorthernVaults, Vector(SDUs\North,PlumeCorrecti onNorth(row,X))) * SpeciesSpecific_Activity * Rn222Mask Where X = G thru L	Y	None	N/A	Y
SectorX_conc_2 (where X = A thru F)	\\Model_Concentra tions\GoldSim100 m_Conc	Added element to calculate the concentration at the second set of wells in each southern sector (A thru F). Equation: Mult(SouthernVaults, Vector(SDUs\South,PlumeCorrecti onSouth(row,X))) * SpeciesSpecific_Activity * Rn222Mask Where X = A thru F	Y	None	N/A	Y
SectorX_conc_2 (where X = G thru L)	\\Model_Concentra tions\GoldSim100 m_Conc	Added element to calculate the concentration at the second set of wells in each northern sector (G thru L). Equation: Mult(NorthernVaults, Vector(SDUs\North,PlumeCorrecti onNorth(row,X))) * SpeciesSpecific_Activity * Rn222Mask Where X = G thru L	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorX_conc (where X = A thru L)	\\Model_Concentra tions\GoldSim100 m_Conc	Changed equation. It previously used the maximum plume correction factor for every SDU regardless of which well was being used. This approach was overly conservative and not realistic. The modeling approach was revised so that now the concentrations are calculated at each well (see the previous entries for SectorX_conc_1 and SectorX_conc_2), then this element now uses the concentration at whichever well is higher. Note that this change impacts the comparison of the Flow Field 1 results - which should match the FY2016 SDF SA results, but no longer do.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.019.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.018.gsm				
<b>New Model File Date:</b> 07/06/2017		<b>Source Model File Date:</b> 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PlumeFunction Matrices	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	With the above changes (see the previous entries for SectorX_conc_1, SectorX_conc_2, and SectorX_conc), the logic for the plume function matrices are now embedded within the sector concentration elements. As such, this container and its contents became dead ends. Container and dead end elements were deleted.	Y	None	N/A	Y
MaxBoundaryDilution	\\Transport\\WaterT ransport\\FlowField _1	Added element. This element defines a limit to the boundary dilution term. This was applied as a hard- wired value of 1 within other elements in previous modeling. This element will replace the hard-wired value in the respective down-stream elements. Note that with the SectorX_conc change (see entry above), it was found that a value of 1.5 provides a closer match to the results from the FY2016 SDF SA. Accordingly, the limit of 1 was conservatively increased to a limit of 1.5.	Y	None	N/A	Y

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MaxBoundaryDilution	\\Transport\\WaterT ransport\\FlowField _2	Added element. This element defines a limit to the boundary dilution term. This was applied as a hard-wired value of 1 within other elements in previous modeling. This element will replace the hard-wired value in the respective down-stream elements. For Flow Field 2, this is a value of 1.5.	Y	I don't think the dilution factors should be greater than 1.	Agreed. Excel file corrections made to address comments, then values are updated in v5.020 of the GoldSim model.	Y
MaxBoundaryDilution	\\Transport\\WaterT ransport\\FlowField _3	Added element. This element defines a limit to the boundary dilution term. This was applied as a hard-wired value of 1 within other elements in previous modeling. This element will replace the hard-wired value in the respective down-stream elements.	Y	None	N/A	Y
MaxBoundaryDilution	\\Transport\\WaterT ransport\\FlowField _4	Added element. This element defines a limit to the boundary dilution term. This was applied as a hard-wired value of 1 within other elements in previous modeling. This element will replace the hard-wired value in the respective down-stream elements.	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
BoundaryDilutionFactor_FDC BoundaryDilutionFactor_V1 BoundaryDilutionFactor_V4	TransportWaterTransport	MaxBoundaryDilution term was incorporated into the Boundary Dilution Factors.	Y	None	N/A	Y
Tc99ZeroInventory	Inventory	After testing the model, it was determined that the Tc-99 release data from the shrinking core model was not being read in because a non-zero Tc-99 inventory was being used. To prevent this, this element was added to impose a 0 multiplier for Tc99 and a 1 multiplier for all other species.	Y	None	N/A	Y
InventoryForSubModel	Inventory	Incorporated the Tc99ZeroInventory term as a multiplier	Y	None	N/A	Y
NominalInventory	Inventory	Element shows as changed in version report – but values were not changed.	Y	None	N/A	Y
Inventory_mass	DisposalUnits\Vault_1	Incorporated the Tc99ZeroInventory term as a multiplier	Y	None	N/A	Y
Inventory_mass	DisposalUnits\Vault_4	Incorporated the Tc99ZeroInventory term as a multiplier	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UsePORFLOWDispersivities	\\User_Input	Set to false to apply GoldSim dispersivity values.	Y	None	N/A	Y
	Model versioning	Model was versioned to preserve changes.	Y	None	N/A	Y
LengthDispRatio	\\Transport\\WaterTransport	After versioning the model, I revised this value to the assumed 10% dispersivity ratio.	Y	None	N/A	Y
LTDispRatio	\\Transport\\WaterTransport	After versioning the model, I revised this value to the assumed 10% dispersivity ratio.	Y	None	N/A	Y
LVDispRatio	\\Transport\\WaterTransport	After versioning the model, I revised this value to the assumed 10% dispersivity ratio.	N	Set to 100 not 10	Agreed. Values reflect PORFLOW inputs.	Y
SelectAquiferTransport Field	\\User_Input	After versioning the model, I alternated between a value of 1 and a value of 2 while testing the model results. Saved with a 2 value to reflect the PEST.47 GSA database.	Y	None	N/A	Y
CLDist_North CLDist_North_Add CLDist_South CLDist_SouthAdd	\\Transport\\WaterTransport\\FlowField_Picked	Added selector elements to allow GoldSim to select correct variables to use for plume function calcs based on the flow field selected by the user.		Added by checker	Agreed.	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.019.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.018.gsm				
<b>New Model File Date:</b> 07/06/2017		<b>Source Model File Date:</b> 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLOffset_North CLOffset_North_Add CLOffset_South CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector elements to allow GoldSim to select correct variables to use for plume function calcs based on the flow field selected by the user.		Added by checker	Agreed.	Y
PFMask_North PFMask_North_Add PFMask_South PFMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector elements to allow GoldSim to select correct variables to use for plume function calcs based on the flow field selected by the user.		Added by checker	Agreed.	Y
MaxBoundaryDilution	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector elements to allow GoldSim to select correct variables to use for plume function calcs based on the flow field selected by the user.		Added by checker	Agreed.	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
BoundaryDilutionFactor_FDC_a BoundaryDilutionFactor_V1_a BoundaryDilutionFactor_V4_a	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	Changed equation from MeanSatZoneDarcyVel_X /BoundaryDarcyVel_X To BoundaryDarcyVel_X/ MeanSatZoneDarcyVel_X X = FDC, V1, and V4		Added by checker. After talking with Barry Lester I think we should undo this change and leave the hard-wired value of 1 as the max dilution factor. The plume function is being multiplied by the dilution factor and we'd only expect the plume to become more dilute due to infiltration and not concentrated from evaporation based on the water table depth.	Agreed. Excel file corrections made to address comments, then equations are updated in v5.020 of the GoldSim model.	Y
PlumeCorrectionNorth	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	Changed path length used in plume function from PathLengthsMat_North+SatLeng thMat_North/2 to CLDist_North		Added by checker	Agreed.	Y
PlumeCorrectionSouth	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	Changed path length used in plume function from PathLengthsMat_South+SatLeng thMat_South/2 to CLDist_South		Added by checker	Agreed.	Y
PlumeCorrectionNorth_a	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	Multiplied plume function by BoundaryDilutionFactor_North		Added by checker	Agreed.	Y
PlumeCorrectionSouth_a	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	Multiplied plume function by BoundaryDilutionFactor_South		Added by checker	Agreed.	Y



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Waste Disposal Authority

### Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.019.gsm		Source Model ID (or filename): SRS Saltstone v5.018.gsm				
New Model File Date: 07/06/2017		Source Model File Date: 06/08/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PathLengthsMat_North	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ata\\Matrices	Changed first Then statement from CLDist_North to min(CLDist_North ,CLDist_North_Add)		Added by checker	Agreed.	Y
PathLengthsMat_South	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ata\\Matrices	Changed first Then statement from CLDist_South to min(CLDist_South ,CLDist_SouthAdd)		Added by checker	Agreed.	Y
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy):  7/26/2017				
Checker Name (print): Jerry Mangold		E-Signature (or sign/date/scan hardcopy):  7/26/2017				

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SRS Saltstone v5.020.gsm Changed Model Check Form (30 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.020.gsm		Source Model ID (or filename): SRS Saltstone v5.019.gsm				
New Model File Date: 08/1/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
<p>Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&amp;DV Form 4)?</p> <p>- If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&amp;DV Form 4) for this model.</p> <p><b>Objective:</b> This version was created to resolve concerns raised by the Checker, as documented in the Check Forms for v5.017 through v5.019. Also a number of element names were changed to apply updated naming conventions.</p>						
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _2	Values were updated after making corrections to Excel file. [This is in response to Checker comment in the Check Form for SRS Saltstone v5.019.gsm] Current plume measurements are presented in GSA2016_SDF_Measures_GW_Transport.xlsx in worksheet "PlumesforGoldSim"	Y	None	Agreed.	Y
MeanSatZoneDarcyVel_FDC	\\Transport\\WaterT ransport\\FlowField _2	Values were updated after making corrections to Excel file. [This is in response to Checker comment in the Check Form for SRS Saltstone v5.019.gsm] Note that in later entries within this form, these elements are renamed.	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.020.gsm		Source Model ID (or filename): SRS Saltstone v5.019.gsm				
New Model File Date: 08/11/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
BoundaryDarcyVel_FD C	\\Transport\\WaterT ransport\\FlowField _2	Values were updated after making corrections to Excel file. [This is in response to Checker comment in the Check Form for SRS Saltstone v5.019.gsm] Note that in later entries within this form, these elements are renamed.	Y	None	N/A	Y
BoundaryDarcyVel_V1	\\Transport\\WaterT ransport\\FlowField _2	Values were updated after making corrections to Excel file. [This is in response to Checker comment in the Check Form for SRS Saltstone v5.019.gsm] Note that in later entries within this form, these elements are renamed.	Y	None	N/A	Y
BoundaryDarcyVel_V4	\\Transport\\WaterT ransport\\FlowField _2	Values were updated after making corrections to Excel file. [This is in response to Checker comment in the Check Form for SRS Saltstone v5.019.gsm] Note that in later entries within this form, these elements are renamed.	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.020.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.019.gsm				
<b>New Model File Date:</b> 08/1/2017		<b>Source Model File Date:</b> 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PathLengths	\\Transport\\WaterT ransport\\FlowField _2	Values were updated after making corrections to Excel file. [This is in response to Checker comment in the Check Form for SRS Saltstone v5.019.gsm] <b>Note that in later entries within this form, these elements are renamed.</b>	Y	None	N/A	Y
PathLength_V4	\\Transport\\WaterT ransport\\FlowField _2	Values were updated after making corrections to Excel file. [This is in response to Checker comment in the Check Form for SRS Saltstone v5.019.gsm] <b>Note that in later entries within this form, these elements are renamed.</b>	Y	None	N/A	Y
MaxBoundaryDilution	\\Transport\\WaterT ransport\\FlowField _X <b>X = 1 - 2</b>	Values were updated after making corrections to Excel file. [This is in response to Checker comment in the Check Form for SRS Saltstone v5.019.gsm]	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.020.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.019.gsm				
<b>New Model File Date:</b> 08/11/2017		<b>Source Model File Date:</b> 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
BoundaryDilutionFactor_FDC_a BoundaryDilutionFactor_V1_a BoundaryDilutionFactor_V4_a	\\Transport\\WaterT ransport	Calcs were updated after making corrections to Excel file. [This is in response to Checker comment in the Check Form for SRS Saltstone v5.019.gsm] <b>Note that in later entries within this form, these elements are renamed.</b> I revised this value to the assumed 10% dispersivity ratio.	Y	None	N/A	Y
\\LengthDispRatio	\\Transport\\WaterT ransport	[This entry was copied and pasted from the Check Form for SRS Saltstone v5.019.gsm – because this change was made after v5.019 was versioned, I am including the entry here for the sake of completeness within the version documentation.]	Y	None	N/A	Y

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.020.gsm		Source Model ID (or filename): SRS Saltstone v5.019.gsm				
New Model File Date: 08/1/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
LTDispRatio	\\Transport\\WaterT ransport	I revised this value to the assumed 10% dispersivity ratio. [This entry was copied and pasted from the Check Form for SRS Saltstone v5.019.gsm – because this change was made after v5.019 was versioned, I am including the entry here for the sake of completeness within the version documentation.]	Y	None	N/A	Y
LVDispRatio	\\Transport\\WaterT ransport	I revised this value to the assumed 100% dispersivity ratio. [This entry was copied and pasted from the Check Form for SRS Saltstone v5.019.gsm – because this change was made after v5.019 was versioned, I am including the entry here for the sake of completeness within the version documentation.]	Y	None	N/A	Y

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New Model File Date: 08/1/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SelectAquiferTransport Field	\\User_Input	I alternated between a value of 1 and a value of 2 while testing the model results. Saved with a 2 value to reflect the PEST.47 GSA database. [This entry was copied and pasted from the Check Form for SRS Saltstone v5.019.gsm – because this change was made after v5.019 was versioned, I am including the entry here for the sake of completeness within the version documentation.]	Y	None	N/A	Y
ModeledInventory	\\Inventory	Modified element logic to allow Users to run a unit inventory simulation in deterministic mode. [This is in response to Checker comment in the Check Form for SRS Saltstone v5.017.gsm]	Y	None	N/A	Y
SDU_TransportSubmodel	Within Submodel: \\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop\\	Edited names of model interfaces to make consistent with updated naming conventions. For example: Vault or FDC all changed to SDU. No changes were made to actual definitions.	Y	Some of the inputs in the "Input Interface Definition" box were also reorganized to follow a more logical progression.	This is true.	Y

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New Model ID (or filename): SRS Saltstone v5.020.gsm		Source Model ID (or filename): SRS Saltstone v5.019.gsm				
New Model File Date: 08/1/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_TransportSubmodel	Within Submodel: \\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop\\	Edited "SDU" names of model interfaces to make more clear. Previously, "SDU2" was used for SDUs 2A, 2B, 3A, 3B, 5A, and 5B, which is confusing because 3 and 5 are not equal to 2. So instead I changed these to "SDU150" to indicate that this is the 150 ft diameter SDU design. Similarly, I changed "SDU6" to "SDU375". No changes were made to actual definitions.	Y	Some of the inputs in the "Input Interface Definition" box were also reorganized to follow a more logical progression.	This is true.	Y
Vault2Inv_Mult_uncertain - renamed to InventoryForSubModel	Within Submodel: \\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop\\ SDU_TransportSubmodel: \\InputData\\VaultData\\Inventory	Renamed element to indicate the elements role and to make consistent with upstream model changes. [This is in response to Checker comment in the Check Form for SRS Saltstone v5.017.gsm]	Y	Did you have to rename the element in the "Input Interface Definition" box for SDU_TransportSubmodel?	Yes. This was part of the previous entry when I "Edited" names of model interfaces to make consistent with updated naming conventions."	Y
WellDistance_1 - renamed to PathLength_SDU1	\\TransportWaterTransport\\FlowField_Picked	Renamed "PathLength_V1" to be consistent with the element in "FlowField_X" containers? X = 1 - 4 [This is in response to Checker comment in the Check Form for SRS Saltstone v5.018.gsm]	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
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New Model File Date: 08/11/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WellDistance_4 – renamed to PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _Picked	Renamed "PathLength_V4" to be consistent with the element in "FlowField_X" containers? X = 1 – 4 [This is in response to Checker comment in the Check Form for SRS Saltstone v5.018.gsm]	Y	None	N/A	Y
MeanSatZoneDarcyVel _FDC – renamed to MeanSatZoneDarcyVel _SDU	\\Transport\\WaterT ransport\\FlowField _X (X = 1 to 4)	Element renamed to make consistent with updated naming conventions. Also, for the instance in FlowField_2, I updated values to reflect data corrections identified during checking of v5.019.	Y	None	N/A	Y
MeanSatZoneDarcyVel _V1 – renamed to MeanSatZoneDarcyVel _SDU1	\\Transport\\WaterT ransport\\FlowField _X (X = 1 to 4)	Element renamed to make consistent with updated naming conventions. Also, for the instance in FlowField_2, I updated values to reflect data corrections identified during checking of v5.019.	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.020.gsm		Source Model ID (or filename): SRS Saltstone v5.019.gsm				
New Model File Date: 08/1/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZoneDarcyVel_V4 - renamed to MeanSatZoneDarcyVel_SD U4	\\Transport\\WaterT ransport\\FlowField _X (X = 1 to 4)	Element renamed to make consistent with updated naming conventions. Also, for the instance in FlowField_2, I updated values to reflect data corrections identified during checking of v5.019.	Y	None	N/A	Y
BoundaryDarcyVel_FD C - renamed to BoundaryDarcyVel_SD U	\\Transport\\WaterT ransport\\FlowField _X (X = 1 to 4)	Element renamed to make consistent with updated naming conventions. Also, for the instance in FlowField_2, I updated values to reflect data corrections identified during checking of v5.019.	Y	None	N/A	Y
BoundaryDarcyVel_V1 - renamed to BoundaryDarcyVel_SD U1	\\Transport\\WaterT ransport\\FlowField _X (X = 1 to 4)	Element renamed to make consistent with updated naming conventions. Also, for the instance in FlowField_2, I updated values to reflect data corrections identified during checking of v5.019.	Y	None	N/A	Y
BoundaryDarcyVel_V4 - renamed to BoundaryDarcyVel_SD U4	\\Transport\\WaterT ransport\\FlowField _X (X = 1 to 4)	Element renamed to make consistent with updated naming conventions. Also, for the instance in FlowField_2, I updated values to reflect data corrections identified during checking of v5.019.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PathLengths_V1 – renamed to PathLengths_SDU	\\Transport\\WaterT ransport\\FlowField _X (X = 1 to 4)	Element renamed to make consistent with updated naming conventions. Also, for the instance in FlowField_2, I updated values to reflect data corrections identified during checking of v5.019.	Y	None	N/A	Y
PathLengths_V1 – renamed to PathLengths_SDU1	\\Transport\\WaterT ransport\\FlowField _X (X = 1 to 4)	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
PathLengths_V4 – renamed to PathLengths_SDU4	\\Transport\\WaterT ransport\\FlowField _X (X = 1 to 4)	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
MeanSatZoneDarcyVel _FDC – renamed to MeanSatZoneDarcyVel SDU	\\Transport\\WaterT ransport\\FlowField _Picked	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
MeanSatZoneDarcyVel _V1 – renamed to MeanSatZoneDarcyVel SDU1	\\Transport\\WaterT ransport\\FlowField _Picked	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
MeanSatZoneDarcyVel _V4 – renamed to MeanSatZoneDarcyVel SDU4	\\Transport\\WaterT ransport\\FlowField _Picked	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y

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New Model File Date: 08/11/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
BoundaryDarcyVel_FD C - renamed to BoundaryDarcyVel_SD U	\\Transport\\WaterT ransport\\FlowField _Picked	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
BoundaryDarcyVel_V1 - renamed to BoundaryDarcyVel_SD U1	\\Transport\\WaterT ransport\\FlowField _Picked	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
BoundaryDarcyVel_V4 - renamed to BoundaryDarcyVel_SD U4	\\Transport\\WaterT ransport\\FlowField _Picked	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
PathLengths - renamed to PathLengths_SD SatZoneDarcyVelDist_F DC	\\Transport\\WaterT ransport\\FlowField _Picked	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
SatZoneDarcyVelDist_ SDU - renamed to SatZoneDarcyVelDist_ SDU	\\Transport\\WaterT ransport	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
BoundaryDilutionFactor _FDC_a - renamed to BoundaryDilutionFactor SDU_a	\\Transport\\WaterT ransport	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
BoundaryDilutionFactor _FDC - renamed to BoundaryDilutionFactor _SDU	\\Transport\\WaterT ransport	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y

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New Model File Date: 08/11/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SatZoneDarcyVelDist_ V1 - renamed to SatZoneDarcyVelDist_ SDU1	\\Transport\\WaterT ransport	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
BoundaryDilutionFactor _V1_a - renamed to BoundaryDilutionFactor SDU1_a	\\Transport\\WaterT ransport	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
BoundaryDilutionFactor _V1 - renamed to BoundaryDilutionFactor SDU1	\\Transport\\WaterT ransport	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
SatZoneDarcyVelDist_ V4 - renamed to SatZoneDarcyVelDist_ SDU4	\\Transport\\WaterT ransport	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
BoundaryDilutionFactor _V4_a - renamed to BoundaryDilutionFactor SDU4_a	\\Transport\\WaterT ransport	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
BoundaryDilutionFactor _V4 - renamed to BoundaryDilutionFactor SDU4	\\Transport\\WaterT ransport	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y

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New Model File Date: 08/11/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Vault1_FlowfaceArea - renamed to SDU1_FlowfaceArea	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
Vault2_FlowfaceArea - renamed to SDU150_FlowfaceArea	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
Vault4_FlowfaceArea - renamed to SDU4_FlowfaceArea	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
Vault6_FlowfaceArea - renamed to SDU375_FlowfaceArea	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
FDCsOnly - renamed to DeactivateRectangular SDUs	\\GlobalModel_Inp ut\\General\\Param eters	Element renamed to make consistent with updated naming conventions. Also, this element previously read input from "RunFDCsOnly" – which was a user setting to explicitly activate or deactivate the rectangular SDUs. This model logic was confusing, so I deleted "RunFDCsOnly" (see next entry) and modified the logic of this element to be based on a different selector	Y	See comment for next entry "RunFDCsOnly"	See response for next entry "RunFDCsOnly"	Y

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<b>New Model File Date:</b> 08/11/2017		<b>Source Model File Date:</b> 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
RunFDCsOnly	\\User_Input	Element deleted (see previous entry). If "FDC_Choice" (renamed to SDU_Choice in next entry) is set to something other than 1, the model will now automatically deactivate the rectangular SDUs.	Y	Doesn't "SDU_Choice" now deactivate the rectangular SDUs if SDU_Choice>0 AND SDU_Choice<14? So there is no longer an option to run all FDCs (i.e., all SDUs other than SDU1 and SDU4).	Yes. But I cannot imagine why we would run every SDU except 1 and 4. If we did, it would be such an obscure run that I can't justify leaving that option in the base model.	Y
FDC_Choice - renamed to SDU_Choice	\\User_Input	Element renamed to make consistent with updated naming conventions.  Also modified the in-model text description next to the element.	Y	None	N/A	Y
FDCSetSwitch - renamed to SDUSetSwitch	\\User_Input	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
FDCSet1 - renamed to SDUSet1	\\User_Input	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
FDCSet2 - renamed to SDUSet2	\\User_Input	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
FDCSet1_a - renamed to SDUSet1_a	\\User_Input	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
FDCSet2_a - renamed to SDUSet2_a	\\User_Input	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FDC_Output – renamed to SDU_Output	\\DisposalUnits	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
Vault_1 – renamed to SDU1	\\DisposalUnits	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
Vault_4 – renamed to SDU4	\\DisposalUnits	Element renamed to make consistent with updated naming conventions.	Y	None	N/A	Y
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _2	Updated values to reflect plume data corrections identified during checking of v5.019. <b>Current plume measurements are presented in GSA2016_SDF_Measures_ GW_Transport.xlsx in worksheet "PlumesforGoldSim"</b> .	Y	None	Agreed.	Y
BoundaryDilutionFactor _SDU_a BoundaryDilutionFactor SDU1_a BoundaryDilutionFactor SDU4_a	\\Transport\\WaterT ransport	Updated formula to reflect corrections identified during checking of v5.019.	Y	None	N/A	Y
RFFV1 – renamed to RFFSDU1	\\DisposalUnits\\SD U1\\Vault1\\POREL OWData\\ReadFlo wFieldFiles	Element renamed to make consistent with updated naming conventions. Description within element revised to remove reference to "FDC". [No functional change]	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.020.gsm		Source Model ID (or filename): SRS Saltstone v5.019.gsm				
New Model File Date: 08/11/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
REFV1 – renamed to RFFSDU1	\\DisposalUnits\\SD U1\\Vault1\\PORFL OWData\\ReadFlo wFieldFiles2	Element renamed to make consistent with updated naming conventions. Description within element revised to remove reference to "FDC". [No functional change]	Y	None	N/A	Y
REFV4 – renamed to RFFSDU4	\\DisposalUnits\\SD U4\\Vault4\\PORFL OWData\\ReadFlo wFieldFiles	Element renamed to make consistent with updated naming conventions. Description within element revised to remove reference to "FDC". [No functional change]	Y	None	N/A	Y
REFV4 – renamed to RFFSDU4	\\DisposalUnits\\SD U4\\Vault4\\PORFL OWData\\ReadFlo wFieldFiles2	Element renamed to make consistent with updated naming conventions. Description within element revised to remove reference to "FDC". [No functional change]	Y	None	N/A	Y

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New Model File Date: 08/1/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FDC_Conc_100ma FDC_Conc_100m FDC_Conc_1ma FDC_Conc_1m FDC_Fluxes_UZa FDC_Fluxes_UZ FDC_Fluxes_UZ_mpl - renamed to: SDU_Conc_100ma SDU_Conc_100m SDU_Conc_1ma SDU_Conc_1m SDU_Fluxes_UZa SDU_Fluxes_UZ SDU_Fluxes_UZ_mpl FDC_Conc_WellXXa FDC_Conc_WellXX - renamed to: SDU_Conc_WellXXa SDU_Conc_WellXX Where XX = 1 to 7	DisposalUnits\SD U_Output	Elements renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y
FDCJoint_DC - renamed to: SDUJoint_DC	Within Submodel: DisposalUnits\SD Units\OuterLoop\Inn erLoop SDU_TransportSu bmodel: InputData\SDUP ORFLOWData\Def f_SDUs\DiffusionC oeff_TS	Element renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y

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New Model File Date: 08/1/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FDCJoint_DCca – renamed to: SDUJoint_DCca	Within Submodel: \\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop\ SDU_TransportSu bmodel: \\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DiffusionC oefficientElements	Element renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y
DeffFDC_vec – renamed to: DeffSDU_vec	Within Submodel: \\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop\ SDU_TransportSu bmodel: \\InputData\\SDUP ORFLOWData\\Def f_SDUs	Element renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y
ReadDeffData	Within Submodel: \\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop\ SDU_TransportSu bmodel: \\InputData\\SDUP ORFLOWData\\Def f_SDUs	Description within element revised to remove reference to "FDC". [No functional change]	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.020.gsm		Source Model ID (or filename): SRS Saltstone v5.019.gsm				
New Model File Date: 08/11/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FluxToUZa_FDC-- renamed to: FluxToUZa_SDU	Within Submodel: \\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop\\ SDU_TransportSu bmodel: \\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\Flux ToUZElements	Element renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y
Tc99FluxToUZ_FDC -- renamed to: Tc99FluxToUZ_SDU	Within Submodel: \\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop\\ SDU_TransportSu bmodel: \\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs	Element renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y
RFFFDc -- renamed to: RFFSDU	Within Submodel: \\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop\\ SDU_TransportSu bmodel: \\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles	Element renamed to make consistent with updated naming conventions. Description within element revised to remove reference to "FDC". [No functional change]	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.020.gsm		Source Model ID (or filename): SRS Saltstone v5.019.gsm				
New Model File Date: 08/11/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
RFFDC – renamed to: RFFSDU	Within Submodel: DisposalUnits\SD UsiOuterLoop\Inn erLoop\ SDU_TransportSu bmodel: InputData\SDUP ORFLOWData\Re adFlowFieldFiles2	Element renamed to make consistent with updated naming conventions. Description within element revised to remove reference to "FDC". [No functional change]	Y	None	N/A	Y
Tc99FluxToUZ_FDC_1 Tc99FluxToUZ_FDC_a – renamed to: Tc99FluxToUZ_sDU_1 Tc99FluxToUZ_sDU_a	Within Submodel: DisposalUnits\SD UsiOuterLoop\Inn erLoop\ SDU_TransportSu bmodel: InputData\SDUP ORFLOWData	Elements renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y
NFDC_T2 – renamed to: NSDU150	Within Submodel: DisposalUnits\SD UsiOuterLoop\Inn erLoop\ SDU_TransportSu bmodel: InputData\VaultID ata\Geometry	Element renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.020.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.019.gsm				
<b>New Model File Date:</b> 08/11/2017		<b>Source Model File Date:</b> 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FDCInventoryGroup_Ci FDCGroupStructure – renamed to: SDUInventoryGroup_Ci SDUGroupStructure	Within Submodel: \\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop\\ SDU_TransportSu bmodel: \\InputData\\VaultD ata\\Inventory	Elements renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y
FDCFlows – renamed to: SDUFlows	Within Submodel: \\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop\\ SDU_TransportSu bmodel: \\SDUs	Element renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y
TSPProcFDCs – renamed to: TSPProcSDUs	\\DisposalUnits\\SD Us\\OuterLoop\\TS_ Proc_Vault2	Element renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y
FDCInventoryGroup_Ci _ByFDC FDCInventoryGroup_Ci _ByFDCa FDCInventoryGroup_Ci _ByFDCPVa – renamed to: SDUInventoryGroup_Ci _BySDU SDUInventoryGroup_Ci _BySDUa SDUInventoryGroup_Ci _BySDUPVa	\\DisposalUnits\\SD Us\\OuterLoop	Elements renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
NFDCa RunThisFDC – renamed to: NSDUa RunThisSDU	\\DisposalUnits\\SD Us	Elements renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y
FDCGroupStructure NFDC_Total NFDC_T2 NFDC_T6 NFDC_North NFDC_T6S JointFraction_V1 JointFraction_V4 – renamed to: SDUGroupStructure NSDU_Total NSDU150 NSDU375 NSDU_North NSDU_South JointFraction_SDU1 JointFraction_SDU4	\\GlobalModel_Inp ut\\GeneralPrame ters	Elements renamed to make consistent with updated naming conventions. [No functional change]	Y	None	N/A	Y
FDCOnOff – renamed to: SDUOnOff	Within Submodel: \\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop\\ SDU_TransportSu bmodel: \\InputData\\VaultD ata\\Inventory	Entry added by Checker: Elements renamed to make consistent with updated naming conventions. [No functional change]	Y	Entry added by Checker	Correct.	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.020.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.019.gsm				
<b>New Model File Date:</b> 08/11/2017		<b>Source Model File Date:</b> 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
	Model versioning	Model was versioned to preserve changes.	N	Model has not been versioned to v5.020 yet.	I have made additional changes (see entries below this line) and then I versioned/saved the model. [I will have you watch me version the final model once all of your checker comments are resolved.]	Y
PfMask_North PfMask_NorthAdd PfMask_South PfMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _2	Based on our discussions regarding the expanded approach for implementing the boundary dilution factor, these elements are now used to implement the boundary dilution factor on an SDU-to-well basis. The values have been updated to reflect these improvements, based on the data in the Excel file: GSA2016_SDF_Measures_GW_Transport.xlsx.	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.020.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.019.gsm				
<b>New Model File Date:</b> 08/1/2017		<b>Source Model File Date:</b> 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Porosity_of_PoreV	\\Transport\\WaterT ransport\\FlowField _X (X = 1 to 4)	PORFLOW velocities are reported as "pore velocity". Assuming a saturation of 1, to convert from pore velocity to Darcy Velocity, the PORFLOW pore velocities must be multiplied by the porosity value (i.e., 0.25 for aquifer transport). This element is added to support this function.	Y	None	N/A	Y
MeanSatZoneDarcyVel _SDU MeanSatZoneDarcyVel _SDU1 MeanSatZoneDarcyVel _SDU4	\\Transport\\WaterT ransport\\FlowField _Picked	Modified statements to multiply the pore velocities by the porosity to convert to Darcy Velocity.	Y	None	N/A	Y
BoundaryDarcyVel_SD U BoundaryDarcyVel_SD U1 BoundaryDarcyVel_SD U4 And MaxBoundaryDilution	\\Transport\\WaterT ransport\\FlowField _Picked	Deleted the boundary Darcy velocities. These are only used to calculate the boundary dilution factors, which are now being calculated in Excel, external to the model file. The boundary dilution factors are now being implemented through the "PFMask" elements (above); thus these inputs are no longer needed here.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.020.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.019.gsm				
<b>New Model File Date:</b> 08/11/2017		<b>Source Model File Date:</b> 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
BoundaryDarcyVel_SD U BoundaryDarcyVel_SD U1 BoundaryDarcyVel_SD U4 And MaxBoundaryDilution	\Transport\WaterT ransport\FlowField _X (X = 1 to 4)	Deleted the boundary Darcy velocities. These are only used to calculate the boundary dilution factors, which are now being calculated in Excel, external to the model file. The boundary dilution factors are now being implemented through the "PFMask" elements (above); thus these inputs are no longer needed here.	Y	None	N/A	Y
BoundaryDarcyVel_SD U_a BoundaryDarcyVel_SD U1_a BoundaryDarcyVel_SD U4_a	\Transport\WaterT ransport	Deleted the boundary Darcy velocities. These are only used to calculate the boundary dilution factors, which are now being calculated in Excel, external to the model file. The boundary dilution factors are now being implemented through the "PFMask" elements (above); thus these inputs are no longer needed here.	N	Elements deleted were named: BoundaryDilutionFactor_ SDU_a BoundaryDilutionFactor_ SDU1_a BoundaryDilutionFactor_ SDU4_a	Agreed. Thanks	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.020.gsm <b>New Model File Date:</b> 08/11/2017		<b>Source Model ID (or filename):</b> SRS Saltstone v5.019.gsm <b>Source Model File Date:</b> 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
BoundaryDilutionFactor _SDU BoundaryDilutionFactor _SDU _1 BoundaryDilutionFactor _SDU4	\\Transport\\WaterT ransport	Deleted the boundary dilution factors. The boundary dilution factors are now being implemented through the "PFMask" elements (above); thus these inputs are no longer needed here.	Y	None	N/A	Y
BoundaryDilutionFactor _South BoundaryDilutionFactor _North	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ataMatrices	Deleted the boundary dilution factors. The boundary dilution factors are now being implemented through the "PFMask" elements (above); thus these inputs are no longer needed here.	Y	None	N/A	Y
Porosity_of_PoreV	\\Transport\\WaterT ransport\\FlowField _Picked	PORFLOW velocities are reported as "pore velocity". Assuming a saturation of 1, to convert from pore velocity to Darcy Velocity, the PORFLOW pore velocities must be multiplied by the porosity value. This element is added to support this function.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.020.gsm		Source Model ID (or filename): SRS Saltstone v5.019.gsm				
New Model File Date: 08/11/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
LowerWaterTable	\\Transport\\WaterT ransport\\FlowField _Picked	Given the base water table level of 20m, this element is used to determine the change in the level of the water table as a function of the change to the thickness of the SZ. This will be used to modify the thickness of the vadose (or unsaturated) zone in order to conserve the thickness of the modeled system.	Y	Do we want to have a separate data element ("AssumedSatThick") where we input the assumed/base thickness of 20m? Might help to improve traceability in the model.	Will consider for v5.021	Y
UZThickness_table	\\DisposalUnits\\Va ultData	Added the lower water table value to the UZ thickness values to conserve the thickness of the modeled system.	Y	None	N/A	Y
UsePORFLOWDispersi vities PathLengthsMat_North PathLengthsMat_North _a PathLengthsMat_South PathLengthsMat_South _a PathCLDist LengthZero_North LegthZero_South	\\User_Input	Set to true for benchmarking purposes.	Y	None	N/A	Y
	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ataMatrices	Deleted. Elements were found to not link to any "down-stream" elements.	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.020.gsm		Source Model ID (or filename): SRS Saltstone v5.019.gsm				
New Model File Date: 08/1/2017		Source Model File Date: 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorX_100m Where X = A through L	Model_Concentra tions\PORFLOW_ Conc	Replaced elements with copies of elements from a model that had values to reflect data from thePORFLOW results (STAT file data) from the GSA 2016 run using PEST 47 parameterization. After replacing elements I verified the links.	Y	None	N/A	Y
IHL_1m_WellX Where X = 1 through 7	Model_Concentra tions\PORFLOW_ Conc	Replaced elements with copies of elements from a model that had values to reflect data from the PORFLOW results (STAT file data) from the GSA 2016 run using PEST 47 parameterization. After replacing elements I verified the links.	Y	None	N/A	Y
IHL_at_1m PORFLOW_SleepLine	Model_Concentra tions\PORFLOW_ Conc	Replaced elements with copies of elements from a model that had values to reflect data from the PORFLOW results (STAT file data) from the GSA 2016 run using PEST 47 parameterization. After replacing elements I verified the links.	N	These tables don't appear to be updated with the PEST 47 data.	Will be corrected in v5.021	Y
	Model versioning	Model was versioned to preserve changes.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.020.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.019.gsm				
<b>New Model File Date:</b> 08/1/2017		<b>Source Model File Date:</b> 07/06/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PlumeCorrectionNorth	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	No longer multiply the plume function by the element "BoundaryDilutionFactor_N orth" since dilution factor is taken into account using the "PFMask_North" element.	NA	Entry added by checker.	Agreed.	Y
PlumeCorrectionSouth	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	No longer multiply the plume function by the element "BoundaryDilutionFactor_S outh" since dilution factor is taken into account using the "PFMask_South" element.	NA	Entry added by checker.	Agreed.	Y
PlumeCorrectionNorth_ a	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	No longer multiply the plume function by the element "BoundaryDilutionFactor_N orth" since dilution factor is taken into account using the "PFMask_North_Add" element.	NA	Entry added by checker.	Agreed.	Y
PlumeCorrectionSouth_ a	\\Transport\\WaterT ransport\\PlumeCal c_Sectors	No longer multiply the plume function by the element "BoundaryDilutionFactor_S outh" since dilution factor is taken into account using the "PFMask_South_Add" element.	NA	Entry added by checker.	Agreed.	Y



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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.020.gsm		Source Model ID (or filename): SRS Saltstone v5.019.gsm	
New Model File Date: 08/1/2017		Source Model File Date: 07/06/2017	
Parameter or Element	Location	Change Description	Correct ? Y,N
If checker has no comments, check here. <input type="checkbox"/>		Checker Comment	Checker Concur? Y,N
Analyst Name (print): Steve Hommel		Analyst Response	
Checker Name (print): Jerry Mangold			
		Add additional rows above, as needed.	
E-Signature (or sign/date/scan hardcopy): 		E-Signature (or sign/date/scan hardcopy): 	
		8/2/2017	
		8/2/2017	

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SRS Saltstone v5.021.gsm Changed Model Check Form (33 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm	
<b>New Model File Date:</b> 08/16/2017		<b>Source Model File Date:</b> 08/1/2017	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> This version was created to resolve concerns raised by the Checker, as documented in the Check Forms for v5.020. Also a number of element names were changed to apply updated naming conventions.			
Array Labels			
SDUsSouth	Array Labels	Changed label names for "V1" and "V4" to SDU1 and SDU4, respectively.	Y
SDUVCells	Array Labels	Changed label names for "V1" and "V4" to SDU1 and SDU4, respectively.	Y
SDU_Types	Array Labels	Changed label names for "Vault1" and "Vault4" to SDU1 and SDU4, respectively.	Y
TankIndex	Array Labels	Removed from model. This array label is not used anywhere in the model.	Y
TankNumber	Array Labels	Removed from model. This array label is not used anywhere in the model.	Y
\GlobalModel_Input			
Ones_vaulttype	\GlobalModel_Inp utMiscellaneous	Renamed to be consistent with updated naming convention used.	Y
\Transport\WaterTransport			
<b>Renamed to:</b> Ones_SDUtype		N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm				
<b>New Model File Date:</b> 08/16/2017		<b>Source Model File Date:</b> 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PathLengths_SDU	\\Transport\\WaterT ransport\\FlowField _X X = 1 - 4	Added description to the element	Y	None	N/A	Y
PathLength_SDU1	\\Transport\\WaterT ransport\\FlowField _X X = 1 - 4	Edited element's description.	Y	None	N/A	Y
PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _X X = 1 - 4	Edited element's description.	Y	None	N/A	Y
\\Model_Concentrations						
SDF_PA_Drill_Cutting_I nv <b>Renamed to:</b> Drill_Cutting_Inv NorthernVaults	\\Model_Concentra tions	Renamed element and used a more general naming convention	Y	None	N/A	Y
<b>Renamed to:</b> NorthernSDUs	\\Model_Concentra tions\\GoldSim100 m_Conc	Renamed element and used a more general naming convention	Y	None	N/A	Y
<b>Renamed to:</b> SouthernVaults	\\Model_Concentra tions\\GoldSim100 m_Conc	Renamed element and used a more general naming convention	Y	None	N/A	Y

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model ID (or filename): SRS Saltstone v5.020.gsm				
New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PORFLOW_SeeLine	\\Model_Concentra tions\\PORFLOW_ Conc	<p>Updated values in this table to reflect data from the PORFLOW results (STAT file data) from the GSA 2016 run using PEST 47 parameterization.</p> <p>For the "PORFLOW_SeeLine" time series element, the concentrations presented in STATMQB999999.csv and STATUTR999999.csv were compared and the max value was taken for each species at each time step. Files are located here:  <a href="#">\\godzilla-01\\hpc_project\\projwork7\\srr17\\Saltstone\\GSA_2016_impact\\AquiferGSA\\Transport\\Case_C\\All</a>  <a href="#">\\godzilla-01\\hpc_project\\projwork7\\srr17\\Saltstone\\GSA_2016_impact\\AquiferGSA\\Transport\\Case_C\\All</a></p> <p>Updated the description of the element to better capture where the input data came from.</p>	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm				
<b>New Model File Date:</b> 08/16/2017		<b>Source Model File Date:</b> 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_at_1m	\\Model_Concentra tions\\P0RFLOW_ Conc	Updated values in this table to reflect data from the P0RFLOW results (STAT file data) from the GSA 2016 run using PEST 47 parameterization.  For the "IHL_at_1m" time series element, the concentrations presented in STAT1m999999.csv were used. File is located here: \\godzilla- 01\\hpc_project\\projwork71\\ srr17\\Saltstone\\GSA_2016 Impact\\AquiferZ_Alt2_1m\\ Transport\\Case_CVal\\	Y	None	N/A	Y
\\Dose_Results						
FY2014_SDF_SA_Well <b>X</b> _Dose <b>Renamed to:</b> IHL_WellX_Dose <b>X</b> = 1 - 7	\\Dose_Results	Renamed containers and used a more general naming convention	Y	None	N/A	Y

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model ID (or filename): SRS Saltstone v5.020.gsm				
New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FY2014_SDF_SA_Sect <del>X</del> _100m_Dose <b>Renamed to:</b> Sect <del>X</del> _100m_Dose <del>X</del> = A through L	\Dose_Results	Renamed containers and used a more general naming convention	Y	None	N/A	Y
FY2014_SDF_SA_IHL_ 1mBoundary <b>Renamed to:</b> IHL_1mBoundary	\Dose_Results	Renamed element and used a more general naming convention	Y	None	N/A	Y
FY2014_SDF_SA_SL_ Dose <b>Renamed to:</b> SL_Dose	\Dose_Results	Renamed element and used a more general naming convention	Y	None	N/A	Y
FY2014_SDF_SA_IHL_ Doses <b>Renamed to:</b> IHL_Doses	\Dose_Results	Renamed element and used a more general naming convention	Y	None	N/A	Y
FY2014_SDF_SA_MO P_Doses <b>Renamed to:</b> MOP_Doses	\Dose_Results	Renamed element and used a more general naming convention	Y	None	N/A	Y
MOP_Dose_Result	\Dose_Results	Changed label for plot from "FY2014_SDF_SA_MOP_D oses" to "MOP_Doses"	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm				
<b>New Model File Date:</b> 08/16/2017		<b>Source Model File Date:</b> 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHI_Dose_Result	\\Dose_Results	Changed label for plot from "FY2014_SDF_SA_IHI_Do ses" to "IHI_Doses"	Y	None	N/A	Y
Materials						
Vault_2_Concrete <b>Renamed to:</b> SDU_2_Concrete	\\Materials	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Vault_1_4_FloorWall <b>Renamed to:</b> SDU1_SDU4_FloorWall	\\Materials	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Vault_1_2_4_FastZone <b>Renamed to:</b> SDU4_FastZone	\\Materials\\SDU1_SDU4_FloorWall	Changed text in text boxes from using "Vault" to "SDU".	Y	None	N/A	Y
DryBulkDensity_FastZone_V1_4 <b>Renamed to:</b> DryBulkDensity_FastZone_SDU4	\\Materials	Renamed to be consistent with updated naming convention used. Since the contents of this container only affect SDU4, SDUs 1 and 2 were dropped from the name.	Y	None	N/A	Y
DryBulkDensity_FastZone_V1_4 <b>Renamed to:</b> DryBulkDensity_FastZone_SDU4	\\Materials\\SDU4_FastZone	Renamed to be consistent with updated naming convention used. Element name was at the max number of characters so the "SDU" couldn't be added before the 4.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm				
<b>New Model File Date:</b> 08/16/2017		<b>Source Model File Date:</b> 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Porosity_FastZone_V1_4 <b>Renamed to:</b> Porosity_FastZone_SD U4	Materials\SDU4_FastZone	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
DisposalUnits						
VaultData <b>Renamed to:</b> SDU_Data	DisposalUnits	Renamed element and used a more general naming convention	Y	None	N/A	Y
U7Thickness_table Vault1_data <b>Renamed to:</b> SDU1_data	DisposalUnits\SDU_Data	Changed text in Description from using "Vault" to "SDU". Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Vault_1_XXXX <b>Renamed to:</b> SDU1_XXXX XXXX = Height, Width, Length, Area, xy	DisposalUnits\SDU_Data\SDU1_data	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Vault1_SatWidth <b>Renamed to:</b> SDU1_SatWidth	DisposalUnits\SDU_Data\SDU1_data	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm				
<b>New Model File Date:</b> 08/16/2017		<b>Source Model File Date:</b> 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Vault4_data <b>Renamed to:</b> SDU4_data	\\DisposalUnits\\SD U_Data	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Vault_4_XXXX <b>Renamed to:</b> SDU4_XXXX XXXX = Height, Width, Length, Area, xy	\\DisposalUnits\\SD U_Data\\SDU4_dat a	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Vault4_SatWidth <b>Renamed to:</b> SDU4_SatWidth	\\DisposalUnits\\SD U_Data\\SDU4_dat a	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
TS_Proc_Vault2 <b>Renamed to:</b> TS_Proc_SDU2	\\DisposalUnits\\SD Us\\OuterLoop	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
\\DisposalUnits\\SDU1						
VaultFlows <b>Renamed to:</b> SDU1Flows	\\DisposalUnits\\SD U1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
DefVault1 <b>Renamed to:</b> DefSDU1	\\DisposalUnits\\SD U1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model ID (or filename): SRS Saltstone v5.020.gsm				
New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Vault1PORFLOWData Renamed to: SDU1PORFLOWData	DisposalUnits\SD U1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
ConceptualModelVault1 Renamed to: ConceptualModelSDU1	DisposalUnits\SD U1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V1_4_concrete_Wall Renamed to: SDU1_SDU4_concrete _Wall	DisposalUnits\SD U1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V1_4_concrete_Floor Renamed to: SDU1_SDU4_concrete _Floor	DisposalUnits\SD U1	Renamed to be consistent with updated naming convention used. Updated description of element by replacing "Vault" with "SDU".	Y	None	N/A	Y
Vault Renamed to: SDU	DisposalUnits\SD U1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultIndex Renamed to: SDUIndex	DisposalUnits\SD U1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
	DisposalUnits\SD U1	Changed text in text boxes from using "Vault" or "Tank" to "SDU".	N	"VaultIndex" in text box between elements: SDU and DeflSDU1 should be "SDUIndex"	Agreed. Fixed.	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model ID (or filename): SRS Saltstone v5.020.gsm				
New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
VaultArea <b>Renamed to:</b> SDU_Area	\\DisposalUnits\\SDU1\\SiteGeometry	Renamed to be consistent with updated naming convention used. Updated description to use "SDU" rather than "vault"	Y	None	N/A	Y
FloorVolume	\\DisposalUnits\\SDU1\\SiteGeometry	Changed description of element from "Vault 2" to "SDU 1 floor volume"	Y	None	N/A	Y
	\\DisposalUnits\\SDU1\\SiteGeometry	Changed text in text boxes from using "Vault" or "Tank" to "SDU"	Y	None	N/A	Y
V1SatOutConc <b>Renamed to:</b> SDU1_SatOutConc	\\DisposalUnits\\SDU1\\NearWell	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
SaturatedZonePipeElement_IXv1 <b>Renamed to:</b> SZPipe_IX_SDU1 <b>X</b> = 1 - 7	\\DisposalUnits\\SDU1\\NearWell\\IntruderWells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Concentration_IXv1 <b>Renamed to:</b> Concentration_IX_SDU1 <b>X</b> = 1 - 7	\\DisposalUnits\\SDU1\\NearWell\\IntruderWells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Diffusivity_WaterWallV1 <b>Renamed to:</b> Diffusivity_WaterWall_S DU1	\\DisposalUnits\\SD U1\\DefFSDU1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Diffusivity_WaterCrack V1 <b>Renamed to:</b> Diffusivity_WaterCrack_ SDU1	\\DisposalUnits\\SD U1\\DefFSDU1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Diffusivity_WaterSSV1 <b>Renamed to:</b> Diffusivity_WaterSS_S DU1	\\DisposalUnits\\SD U1\\DefFSDU1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
DefF_FillV1 <b>Renamed to:</b> DefF_Fill_SDU1	\\DisposalUnits\\SD U1\\DefFSDU1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
DefF_Vault1 <b>Renamed to:</b> DefF_SDU1	\\DisposalUnits\\SD U1\\SDU1PORFLO WData	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
DLLData_V1 <b>Renamed to:</b> DLLData_SDU1	\\DisposalUnits\\SD U1\\SDU1PORFLO WData\\ReadFlow FieldFiles	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
DLLData_V1 <b>Renamed to:</b> DLLData_SDU1	\\DisposalUnits\\SD U1\\SDU1PORFLO WData\\ReadFlow FieldFiles2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model ID (or filename): SRS Saltstone v5.020.gsm				
New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DeffVault1_vec <b>Renamed to:</b> Deff_SDU1_vec	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WDdata\\Deff_SDU1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
readPFdata	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WDdata\\Deff_SDU1	Changed description of element from using "Vault1" to "SDU1" to keep naming convention consistent throughout the model.	Y	None	N/A	Y
V1UZoutconc <b>Renamed to:</b> SDU1_UZoutconc	\\DisposalUnits\\SDU1\\UnsatZone	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V1_XXXXpltt <b>Renamed to:</b> SDU1_XXXXpltt XXXX = I129, Np237, Tc99, Ra226, Cs135	\\DisposalUnits\\SDU1\\UnsatZone\\Be nchmarking	Renamed to be consistent with updated naming convention used.	Y	Note: In some instances the "pltt" part of the element name is not included. This is probably not an issue, although we should consider making the element names consistent.	Agreed. Fixed so that all time history result elements in question read: SDU1_XXXX XXXX = I129, Np237, Tc99, Ra226, Cs135	Y
V1data <b>Renamed to:</b> SDU1_data	\\DisposalUnits\\SDU1\\UnsatZone\\Be nchmarking	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V1Cs135data <b>Renamed to:</b> SDU1_Cs135data	\\DisposalUnits\\SDU1\\UnsatZone\\Be nchmarking	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model ID (or filename): SRS Saltstone v5.020.gsm				
New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
V1datacompare Renamed to: SDU1_datacompare	\\DisposalUnits\\SDU1\\UnsatZone\\Benchmarking	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Vault1_Mass Renamed to: SDU1_Mass	\\DisposalUnits\\SDU1\\Waste	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultCells Renamed to: SDU1_Cells	\\DisposalUnits\\SDU1\\Waste	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
ConcreteThickness	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells	Updated description of element by replacing "Vault" with "SDU".	Y	None	N/A	Y
VaultWallArea Renamed to: SDU_WallArea	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultFloor1 Renamed to: SDU_Floor1	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX Renamed to: SDU_FX	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
X = 1 - 10						

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New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
VaultArea Renamed to: SDU_Area	\\DisposalUnits\\SD U1\\Waste\\SDU_C ells\\SDU\\Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFADDopt Renamed to: SDU_FADD_opt	\\DisposalUnits\\SD U1\\Waste\\SDU_C ells\\SDU\\Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFADD Renamed to: SDU_FADD	\\DisposalUnits\\SD U1\\Waste\\SDU_C ells\\SDU\\Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX Renamed to: SDU_FX	\\DisposalUnits\\SD U1\\Waste\\SDU_C ells\\SDU\\Floor1\\S DU_FADD	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
X = 1 - 10 VaultFloor2 Renamed to: SDU\\Floor2	\\DisposalUnits\\SD U1\\Waste\\SDU_C ells\\SDU\\Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX Renamed to: SDU_FX	\\DisposalUnits\\SD U1\\Waste\\SDU_C ells\\SDU\\Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
X = 1 - 10 VaultArea Renamed to: SDU_Area	\\DisposalUnits\\SD U1\\Waste\\SDU_C ells\\SDU\\Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
VFADDopt Renamed to: SDU_FADD_opt	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFADD Renamed to: SDU_FADD	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX Renamed to: SDU_FX X = 1 - 10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2\\SDU_FADD	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultFloorFastZone Renamed to: SDUFloorFastZone	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX Renamed to: SDU_FX X = 1 - 10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorFastZone	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultArea Renamed to: SDU_Area	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorFastZone	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
V1_4_concrete_Floor Renamed to: SDU1_SDU4_concrete floor	DisposalUnits\SD U1\Waste\SDU_C ells\SDU\FloorFast Zone	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFADDopt Renamed to: SDU_FADD_opt	DisposalUnits\SD U1\Waste\SDU_C ells\SDU\FloorFast Zone	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFADD Renamed to: SDU_FADD	DisposalUnits\SD U1\Waste\SDU_C ells\SDU\FloorFast Zone	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX Renamed to: SDU_FX X = 1 - 10	DisposalUnits\SD U1\Waste\SDU_C ells\SDU\FloorFast Zone\SDU_FADD	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V1_4_concrete_Floor Renamed to: SDU1_SDU4_concrete floor	DisposalUnits\SD U1\Waste\SDU_C ells\Wall\Floor	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
DisposalUnits\SDU4						
VaultFlows Renamed to: SDU4Flows	DisposalUnits\SD U4	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DefVault4 <b>Renamed to:</b> DefSDU4	\\DisposalUnits\\SD U4	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Vault4PORFLOWData <b>Renamed to:</b> SDU4PORFLOWData	\\DisposalUnits\\SD U4	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
ConceptualModelVault4 <b>Renamed to:</b> ConceptualModelSDU4	\\DisposalUnits\\SD U4	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V1_4_concrete_Wall <b>Renamed to:</b> SDU1_SDU4_concrete Wall	\\DisposalUnits\\SD U4	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V1_4_concrete_Floor <b>Renamed to:</b> SDU1_SDU4_concrete _Floor	\\DisposalUnits\\SD U4	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Vault <b>Renamed to:</b> SDU	\\DisposalUnits\\SD U4	Renamed to be consistent with updated naming convention used. Changed text in Description from using "Vault" to "SDU".	Y	None	N/A	Y
VaultIndex <b>Renamed to:</b> SDUIndex	\\DisposalUnits\\SD U4	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Vault4_Mass	\\DisposalUnits\\SDU4	Changed text in text boxes from using "Vault" or "Tank" to "SDU".	Y	None	N/A	Y
Renamed to: SDU4_Mass	\\DisposalUnits\\SDU4\\Waste	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultCells	\\DisposalUnits\\SDU4\\Waste	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Renamed to: SDU_Cells	\\DisposalUnits\\SDU4\\Waste	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultWallArea	\\DisposalUnits\\SDU4\\Waste	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Renamed to: SDU_WallArea	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultFloor1	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Renamed to: SDU_Floor1	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Renamed to: SDU_FX	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
X = 1 - 10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultArea	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Renamed to: SDU_Area	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
VaultCellVolume Renamed to: SDU_CellVolume	\\DisposalUnits\SD U4\Waste\SDU_C ells\SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultCellMass Renamed to: SDU_CellMass	\\DisposalUnits\SD U4\Waste\SDU_C ells\SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFADD Renamed to: SDU_FADD	\\DisposalUnits\SD U4\Waste\SDU_C ells\SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX Renamed to: SDU_FX X = 1 - 10	\\DisposalUnits\SD U4\Waste\SDU_C ells\SDU_Floor1\SD DU_FADD	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultFloor2 Renamed to: SDU_Floor2	\\DisposalUnits\SD U4\Waste\SDU_C ells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
ConcreteThickness VFX	\\DisposalUnits\SD U4\Waste\SDU_C ells	Changed text in Description from using "Vault" to "SDU".	Y	None	N/A	Y
Renamed to: SDU_FX X = 1 - 10	\\DisposalUnits\SD U4\Waste\SDU_C ells\SDU_Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm				
<b>New Model File Date:</b> 08/16/2017		<b>Source Model File Date:</b> 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
VaultArea <b>Renamed to:</b> SDU_Area	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultCellVolume <b>Renamed to:</b> SDU_CellVolume	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultCellMass <b>Renamed to:</b> SDU_CellMass	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFADD <b>Renamed to:</b> SDU_FADD	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX <b>Renamed to:</b> SDU_FX X = 1 - 10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2\\SDU_FADD	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V1_4_concrete_Wall <b>Renamed to:</b> SDU1_SDU4_concrete_wall	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor1	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the wall"	Y	None	N/A	Y

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New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
V1_4_concrete_Wall  Renamed to: SDU1_SDU4_concrete _wall	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\Wall\\Floor2	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the wall"	Y	None	N/A	Y
V1_4_concrete_Wall  Renamed to: SDU1_SDU4_concrete _wall	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_YY\\Wall\\XXXXZone YY = 01 – 20 XXXX = Inner, Outer	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the wall"	Y	None	N/A	Y
V4_XXXXplt  Renamed to: SDU4_XXXXplt  XXXX = I129, Np237, Tc99, Ra226, Cs135, Nb93m	\\DisposalUnits\\SDU4\\UnsatZone\\Bechnmarking	Renamed to be consistent with updated naming convention used.	Y	None	Changed to be consistent with other SDUs (removed "plt" suffix from element name).	Y
V4data  Renamed to: SDU4_data	\\DisposalUnits\\SDU4\\UnsatZone\\Bechnmarking	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V4Cs135data  Renamed to: SDU4_Cs135data	\\DisposalUnits\\SDU4\\UnsatZone\\Bechnmarking	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm				
<b>New Model File Date:</b> 08/16/2017		<b>Source Model File Date:</b> 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
V4_Nb93mdata <b>Renamed to:</b> SDU4_Nb93mdata	\\DisposalUnits\\SDU4\\UnsatZone\\Benchmarking	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V4datacompare <b>Renamed to:</b> SDU4_datacompare	\\DisposalUnits\\SDU4\\UnsatZone\\Benchmarking	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
SaturatedZonePipeElement_IXv4 <b>Renamed to:</b> SZPipe_IX_SDU4	\\DisposalUnits\\SDU4\\NearWell\\IntruderWells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Concentration_IXv4 <b>Renamed to:</b> Concentration_IX_SDU4	\\DisposalUnits\\SDU4\\NearWell\\IntruderWells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultArea <b>Renamed to:</b> SDU_Area	\\DisposalUnits\\SDU4\\SiteGeometry	Renamed to be consistent with updated naming convention used. Changed description from using the word "vault" to using the word "SDU"	Y	None	N/A	Y
FloorVolume	\\DisposalUnits\\SDU4\\SiteGeometry	Changed description of element from "Vault 4" to "SDU 4 floor volume"	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
	\\DisposalUnits\\SDU4\\SiteGeometry	Changed text in text boxes from using "Vault" or "Tank" to "SDU".	Y	None	N/A	Y
Deff_Vault4 <b>Renamed to:</b> Deff_SDU4	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
DeffVault4_vec <b>Renamed to:</b> Deff_SDU4_vec	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\Deff_SDU4	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
readPFdata	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\Deff_SDU4	Changed description of element from using the word "Vault" to using the word "SDU".	Y	None	N/A	Y
Tc99FluxToUZ_V4 <b>Renamed to:</b> Tc99FluxToUZ_SDU4	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\PORFLO\\WFluxToUZ	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Tc99FluxToUz_V4 <b>Renamed to:</b> Tc99FluxToUza_SDU4	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\PORFLO\\WFluxToUZ	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
\\DisposalUnits\\Tc99Input						
readPFFluxdata	\\DisposalUnits\\Tc99Input\\FluxToUZ_SDU1	Changed element's description from using "Vault1" to "SDU1".	Y	None	N/A	Y
FluxToUZ_Vault1 <b>Renamed to:</b> FluxToUZ_SDU1	\\DisposalUnits\\Tc99Input	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm				
<b>New Model File Date:</b> 08/16/2017		<b>Source Model File Date:</b> 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FluxToUzA_V1 <b>Renamed to:</b> FluxToUzA_SDUI1	\\DisposalUnits\\Tc9 9Input\\FluxToUz SDUI1\\FluxToUZEI ements	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
FluxToUz_Vault4 <b>Renamed to:</b> FluxToUz_SDUI4	\\DisposalUnits\\Tc9 9Input	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
FluxToUzA_V4 <b>Renamed to:</b> FluxToUzA_SDUI4	\\DisposalUnits\\Tc9 9Input\\FluxToUz SDUI4\\FluxToUZEI ements	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
readPFFluxdata	\\DisposalUnits\\Tc9 9Input\\FluxToUz_ SDUI4	Changed element's description from using "Vault1" to "SDUI4"	Y	None	N/A	Y
SDU_TransportSubmodel						
VaultData <b>Renamed to:</b> SDU_Data Vault	\\InputData	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
<b>Renamed to:</b> SDU VaultIndex	\\SDUs	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
<b>Renamed to:</b> SDU_Index	\\SDUs	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model ID (or filename): SRS Saltstone v5.020.gsm				
New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ConceptualModelVault2 <b>Renamed to:</b> ConceptualModel SDU 2	SDUs	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultCells <b>Renamed to:</b> SDU_Cells	SDUs	Changed text in text boxes from using "Vault" or "Tank" to "SDU".	Y	None	N/A	Y
VaultCells <b>Renamed to:</b> SDU_Cells	SDUs\Engineered Barrier	Renamed to be consistent with updated naming convention used.	Y	Note: We may also consider changing "EngineeredBarrier" to "Waste" to make consistent with SDU 1 and 4	Agreed. Fixed.	Y
VaultWallArea_a <b>Renamed to:</b> SDU_WallArea a	SDUs\Engineered Barrier\SDU_Cells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultWallArea <b>Renamed to:</b> SDU_WallArea	SDUs\Engineered Barrier\SDU_Cells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultFloor1 <b>Renamed to:</b> SDU_Floor1	SDUs\Engineered Barrier\SDU_Cells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX <b>Renamed to:</b> SDU_FX	SDUs\Engineered Barrier\SDU_Cells SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
X = 1 - 10	SDUs\Engineered Barrier\SDU_Cells SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model ID (or filename): SRS Saltstone v5.020.gsm				
New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
VaultArea Renamed to: SDU_Area	\SDUs\Engineered Barrier\SDU_Cells \SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
PorosityVaultFloor1 Renamed to: PorositySDU_Floor1	\SDUs\Engineered Barrier\SDU_Cells \SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V2_concrete_floor Renamed to: SDU_concrete_floor	\SDUs\Engineered Barrier\SDU_Cells \SDU_Floor1	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the wall"	Y	None	N/A	Y
VFUMM Renamed to: SDU_FUMM	\SDUs\Engineered Barrier\SDU_Cells \SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX Renamed to: SDU_FX X = 1 - 5	\SDUs\Engineered Barrier\SDU_Cells \SDU_Floor1\SDU _FUMM	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
PorosityVaultFloor1 Renamed to: PorositySDU_Floor1	\SDUs\Engineered Barrier\SDU_Cells \SDU_Floor1\SDU _FUMM	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm			
<b>New Model File Date:</b> 08/16/2017			<b>Source Model File Date:</b> 08/11/2017			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
V2_concrete_floor <b>Renamed to:</b> SDU_concrete_floor	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor1\\SDU _FLMM	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the wall"	Y	None	N/A	Y
VFLMM <b>Renamed to:</b> SDU_FLMM <b>VFX</b>	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor1	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
<b>Renamed to:</b> SDU_FX <b>X = 6 - 10</b>	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor1\\SDU _FLMM	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
Porsity\\VaultFloor1 <b>Renamed to:</b> PorositySDU_Floor1	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor1\\SDU _FLMM	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V2_concrete_floor <b>Renamed to:</b> SDU_concrete_floor	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor1\\SDU _FLMM	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the wall"	Y	None	N/A	Y
VaultFloor2 <b>Renamed to:</b> SDU_Floor2	\\SDUs\\Engineered Barrier\\SDU_Cells	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model ID (or filename): SRS Saltstone v5.020.gsm				
New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
VFX Renamed to: SDU_FX X = 1 - 10	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VaultArea Renamed to: SDU_Area	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
PorosityVaultFloor2 Renamed to: PorositySDU_Floor2	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V2_concrete_floor Renamed to: SDU_concrete_floor	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the floor"	Y	None	N/A	Y
VFUMM Renamed to: SDU_FUMM	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
VFX Renamed to: SDU_FX X = 1 - 5	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2\\SDU _FUMM	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model ID (or filename): SRS Saltstone v5.020.gsm				
New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PorosityVaultFloor2 <b>Renamed to:</b> PorositySDU_Floor2	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2\\SDU _FUMM	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V2_concrete_floor <b>Renamed to:</b> SDU_concrete_floor	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2\\SDU _FUMM	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the floor"	Y	None	N/A	Y
VFLMM <b>Renamed to:</b> SDU_FLMM VFX	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
<b>Renamed to:</b> SDU_FX X = 6 - 10	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2\\SDU _FLMM	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
PorosityVaultFloor1 <b>Renamed to:</b> PorositySDU_Floor1	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2\\SDU _FLMM	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
V2_concrete_floor <b>Renamed to:</b> SDU_concrete_floor	\\SDUs\\Engineered Barrier\\SDU_Cells \\SDU_Floor2\\SDU _FLMM	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the floor"	Y	None	N/A	Y

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Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model ID (or filename): SRS Saltstone v5.020.gsm				
New Model File Date: 08/16/2017		Source Model File Date: 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
V2_concrete_floor Renamed to: SDU_concrete_floor	SDUs\Engineered Barrier\SDU_Cells Wall\Floor	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the floor"	Y	None	N/A	Y
V2_concrete_floor Renamed to: SDU_concrete_floor	SDUs\Engineered Barrier\SDU_Cells Wall\Floor\WFUM M	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the floor"	Y	None	N/A	Y
V2_concrete_floor Renamed to: SDU_concrete_floor	SDUs\Engineered Barrier\SDU_Cells Wall\Floor\WFLM M	Renamed to be consistent with updated naming convention used. Also updated description from "Concrete used in the concrete" to "Concrete used in the floor"	Y	None	N/A	Y
V2_XXXX\plt Renamed to: SDU_XXXX\plt XXXX = I129, Np237, Tc99, Ra226, Cs135	SDUs\UnsatZone\ Benchmarking	Renamed to be consistent with updated naming convention used.	Y	Note: In some instances the "plt" part of the element name is not included. This is probably not an issue, although we should consider making the element names consistent.	Agreed. Fixed so that all time history result elements in question read: SDU_XXXX XXXX = I129, Np237, Tc99, Ra226, Cs135	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm				
<b>New Model File Date:</b> 08/16/2017		<b>Source Model File Date:</b> 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
V2data						
<b>Renamed to:</b> SDU_data	SDUs\UnsatZone\Benchmarking	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
<b>Renamed to:</b> VaultArea	SDUs\SiteGeometry	Renamed to be consistent with updated naming convention used.	Y	None	N/A	Y
<b>WellDistance</b>	SDUs\SiteGeometry	Updated the element's description to "longest distance from a SDU (150-ft or 375-ft cylindrical SDUs) to the 100 m facility boundary"	Y	None	N/A	Y
End Submodel						
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	No changes made to element.	Y	None	N/A	Y
Added by Checker:						
CLOffset_SouthAdd	Transport\WaterTransportFlowField_3	One or more of the element's attributes was changed.		Agreed. No change was made. Just opened element and then closed.	Agreed	Y
MeanSatZoneDarcyVel_SDU	Transport\WaterTransportFlowField_3	One or more of the element's attributes was changed.		Agreed. No change was made. Just opened element and then closed.	Agreed	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.020.gsm				
<b>New Model File Date:</b> 08/16/2017		<b>Source Model File Date:</b> 08/11/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ParticleDensity_Concrete	\\Materials\SDU1_SDU4_FloorWall	One or more of the element's attributes was changed.		Agreed. No change was made. Just opened element and then closed.	Agreed	Y
DryBulkDensity_Clayey Soil	\\Materials\ClayeySoil\Properties	One or more of the element's attributes was changed.		Agreed. No change was made. Just opened element and then closed.	Agreed	Y
Inventory_mass	\\DisposalUnits\SDU1	One or more of the element's attributes was changed.		Agreed. No change was made. Just opened element and then closed.	Agreed	Y
Inventory_mass	\\DisposalUnits\SDU4	One or more of the element's attributes was changed.		Agreed. No change was made. Just opened element and then closed.	Agreed	Y
UZThickness	\\DisposalUnits\SDU1\SiteGeometry	One or more of the element's attributes was changed.		Agreed. No change was made. Just opened element and then closed.	Agreed	Y
NinnerLoop	\\DisposalUnits\SDU1\OuterLoop	One or more of the element's attributes was changed.		Agreed. No change was made. Just opened element and then closed.	Agreed	Y
		Model should be versioned to v5.021 to match the filename.			Agreed. Versioned	Y

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**Changed Model Check Form**

Waste Disposal Authority		Source Model ID (or filename): SRS Saltstone v5.020.gsm	
New Model ID (or filename): SRS Saltstone v5.021.gsm		Source Model File Date: 08/1/2017	
New Model File Date: 08/16/2017			
Parameter or Element	Location	Change Description	Correct ? Y,N
If checker has no comments, check here. <input type="checkbox"/>		Checker Comment	Analyst Response
Analyst Name (print): Jerry Mangold		Checker Concur? Y,N	
Checker Name (print): Steve Hommel		Add additional rows above, as needed.	
E-Signature (or sign/date/scan hardcopy): 		E-Signature (or sign/date/scan hardcopy): 	
		8/16/2017	
		8/16/2017	

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SRS Saltstone v5.022.gsm Changed Model Check Form (14 Pages)

Waste Disposal Authority

**Changed Model Check Form**

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<b>New Model ID (or filename):</b> SRS Saltstone v5.022.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.021.gsm		<b>Checker</b> Y,N	
<b>New Model File Date:</b> 08/30/2017		<b>Source Model File Date:</b> 08/16/2017			
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>	<b>Checker Comment</b>	<b>Analyst Response</b> (QA&DV Form 4)?
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.					
<b>Objective:</b> Incorporated plume inputs for PEST.51 and updated stochastic element descriptions.					
Rename Mask Elements to Indicate Application of Dilution Factors					
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\Transport\WaterT ransport\FlowField _1	Elements were renamed. They used to be named: "PFMask_[suffix]" Since these elements now apply the dilution factor, instead of just being a mask, a more meaningful name was appropriate.	Y	I suggest that the flowfield associated names reflect their origin (FY16)	Agreed. Will rename the container for these elements in v5.023.
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\Transport\WaterT ransport\FlowField _2	Elements were renamed. They used to be named: "PFMask_[suffix]" Since these elements now apply the dilution factor, instead of just being a mask, a more meaningful name was appropriate.	Y	I suggest that the flowfield associated names reflect their origin (Pest 47)	Agreed. Will rename the container for these elements in v5.023.

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<b>New Model ID (or filename):</b> SRS Saltstone v5.022.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.021.gsm				
<b>New Model File Date:</b> 08/30/2017		<b>Source Model File Date:</b> 08/16/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _3	Elements were renamed. They used to be named: "PFMask_[suffix]" Since these elements now apply the dilution factor, instead of just being a mask, a more meaningful name was appropriate. *Note: There is another entry for these elements (below) for when the values were changed.	Y	I suggest that the flowfield associated names reflect their origin (Pest.51)	Agreed. Will rename the container for these elements in v5.023.	Y
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _4	Elements were renamed. They used to be named: "PFMask_[suffix]" Since these elements now apply the dilution factor, instead of just being a mask, a more meaningful name was appropriate.	Y	I suggest that the flowfield associated names reflect their origin (Pest.52?)	Will rename the container for these elements in a later version, once the inputs for alternative flow fields have been developed.	Y
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _Picked	Elements were renamed. They used to be named: "PFMask_[suffix]" Since these elements now apply the dilution factor, instead of just being a mask, a more meaningful name was appropriate.	Y	None	N/A	Y
Flow Field Data for PEST.51 runs						

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New Model ID (or filename): SRS Saltstone v5.022.gsm		Source Model ID (or filename): SRS Saltstone v5.021.gsm				
New Model File Date: 08/30/2017		Source Model File Date: 08/16/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FlowField_3	\\Transport\\WaterT ransport	Container description revised to indicate new flow field.	Y	None	N/A	Y
MeanSatZoneDarcyVel _SDU MeanSatZoneDarcyVel _SDU1 MeanSatZoneDarcyVel _SDU4	\\Transport\\WaterT ransport\\FlowField _3	Value(s) updated to reflect information in GSA2016_SDF_Measures_ GW_Transport_PEST.51.xl sx	N	Values do not match referenced Excel file. The element names should reflect that these are average port velocities	Values were still under development when this model file was versioned. Values and element names will be updated in model version 5.023 to match the final numbers.	Y
PathLengths_SDU PathLength_SDU1 PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _3	Value(s) updated to reflect information in GSA2016_SDF_Measures_ GW_Transport_PEST.51.xl sx	N	Values do not match referenced Excel file.	Values were still under development when this model file was versioned. Values will be updated in model version 5.023 to match the final numbers.	Y
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _3	Value(s) updated to reflect information in GSA2016_SDF_Measures_ GW_Transport_PEST.51.xl sx	N	Values do not match referenced Excel file.	Values were still under development when this model file was versioned. Values will be updated in model version 5.023 to match the final numbers.	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.022.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.021.gsm				
<b>New Model File Date:</b> 08/30/2017		<b>Source Model File Date:</b> 08/16/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _3	Value(s) updated to reflect information in GSA2016_SDF_Measures_ GW_Transport_PEST.51.xl sx	N	Values do not match referenced Excel file.	Values were still under development when this model file was versioned. Values will be updated in model version 5.023 to match the final numbers.	Y
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _3	Value(s) updated to reflect information in GSA2016_SDF_Measures_ GW_Transport_PEST.51.xl sx *Note: There is another entry for these elements (above) for when the elements were renamed.	N	Values do not match referenced Excel file.	Values were still under development when this model file was versioned. Values will be updated in model version 5.023 to match the final numbers.	Y
SatThickness_determ	\\Transport\\WaterT ransport\\FlowField _3	Saturated Zone thickness changed from 20 m to "20 m - 3.5 ft" to reflect smaller SZ thickness from the GSA 2016 Update with PEST.51 parameters (per Section 7.4 of SRNL-STI-2017-00008).	Y	None	N/A	Y
User Setting						

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<b>New Model ID (or filename):</b> SRS Saltstone v5.022.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.021.gsm				
<b>New Model File Date:</b> 08/30/2017		<b>Source Model File Date:</b> 08/16/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SelectAquiferTransport Field	\\User_Input	Changed value to 3 so model will run PEST 51 flow fields. Also updated the description.	Y	Description under element is incomplete	Agreed. Will revise in version 5.023. Will add to the description as additional flow field input sets are incorporated into the model.	Y
SDU Data Stochastic Element Descriptions						
SDU1_SatWidth	\\DisposalUnits\\SD U_Data\\SDU1_dat a	Added reference info to stochastic element description.	Y	None	N/A	Y
SDU2_SatWidth	\\DisposalUnits\\SD U_Data\\SDU2Typ e_data	Added reference info to stochastic element description.	Y	None	N/A	Y
SDU4_SatWidth	\\DisposalUnits\\SD U_Data\\SDU4_dat a	Added reference info to stochastic element description.	Y	None	N/A	Y
SDU6_SatWidth	\\DisposalUnits\\SD U_Data\\SDU6Typ e_data	Added reference info to stochastic element description.	Y	None	N/A	Y
SDUalt_SatWidth	\\DisposalUnits\\SD U_Data\\SDUAltTy pe_data	Added reference info to stochastic element description.	Y	None	N/A	Y
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel shows as changed because time was modified during test runs, but then modified back to 50,000 years.	Y	None	N/A	Y
Dose Parameter Stochastic Element Descriptions						

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<b>New Model ID (or filename):</b> SRS Saltstone v5.022.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.021.gsm				
<b>New Model File Date:</b> 08/30/2017		<b>Source Model File Date:</b> 08/16/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SoilToPlant_Ratio_Uncert	\\Dose_Parameter_Calculations\DoseParameters\TransferFactors	Added reference info to stochastic element description.	Y	None	N/A	Y
TransferFactorFish_Uncert	\\Dose_Parameter_Calculations\DoseParameters\TransferFactors	Added reference info to stochastic element description.	Y	None	N/A	Y
TransferFactorMeat_Uncert	\\Dose_Parameter_Calculations\DoseParameters\TransferFactors	Added reference info to stochastic element description.	Y	None	N/A	Y
TransferFactorMilk_Uncert	\\Dose_Parameter_Calculations\DoseParameters\TransferFactors	Added reference info to stochastic element description.	Y	None	N/A	Y
Inventory Uncertainty Stochastic Element Descriptions						
InventoryUncertainty_SDU1	\\Inventory\SDU_InventoryUncertainties	Added reference info to stochastic element description.	N	The reference SRR-CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y
InventoryUncertainty_SDU2A	\\Inventory\SDU_InventoryUncertainties	Added reference info to stochastic element description.	N	The reference SRR-CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
InventoryUncertainty_S DU2B	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y
InventoryUncertainty_S DU3A	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y
InventoryUncertainty_S DU3B	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y
InventoryUncertainty_S DU4	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
InventoryUncertainty_S DU5A	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y
InventoryUncertainty_S DU5B	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y
InventoryUncertainty_S DU6	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y
InventoryUncertainty_S DU7	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
InventoryUncertainty_S DU8	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y
InventoryUncertainty_S DU9	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y
InventoryUncertainty_S DU10	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y
InventoryUncertainty_S DU11	\\Inventory\SDU_In ventoryUncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
InventoryUncertainty_S DU12	\\Inventory\\SDU_In ventory\\Uncertainti es	Added reference info to stochastic element description.	N	The reference SRR- CWDA-2014-00006, Rev. 2, Section 5.6.3.2 does not reflect the data in this element	Will update the description and/or the input values once an appropriate reference is identified and/or developed.	Y
Material Properties Stochastic Element Descriptions						
Kd_Dist	\\Materials\\ClayeyS oilKds	Added reference info to stochastic element description.	Y	None	N/A	Y
Kd_Dist	\\Materials\\ClayeyS oilKds_Leachatel mpacted	Added reference info to stochastic element description.	Y	None	N/A	Y
Kd_Dist	\\Materials\\SandyS oilKds	Added reference info to stochastic element description.	Y	None	N/A	Y
Kd_Dist	\\Materials\\SandyS oilKds_Leachatel mpacted	Added reference info to stochastic element description.	Y	None	N/A	Y
Kd_Dist	\\Materials\\Concret e_Kds_Oxidizingly oung_concrete_kd s_ox	Added reference info to stochastic element description.	Y	None	N/A	Y
Kd_Dist	\\Materials\\Concret e_Kds_Oxidizing\\ middle_concrete_ kds_ox	Added reference info to stochastic element description.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist	Materials\Concrete_Kds_Oxidizing\old_concrete_kds_ox	Added reference info to stochastic element description.	Y	None	N/A	Y
Kd_Dist	Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Added reference info to stochastic element description.	Y	None	N/A	Y
Kd_Dist	Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Added reference info to stochastic element description.	Y	None	N/A	Y
Kd_Dist	Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Added reference info to stochastic element description.	Y	None	N/A	Y
ParticleDensity_Joint	Materials\Joint	Added reference info to stochastic element description.	N	This data is from the PORFLOW material palette data for gravel and comes from the PORFLOW model data. It is the equivalent to the Case B and C data for the sheet drain in SRR-CWDA-2011-00178, Table 4.5-7. This info should also be added for Porosity_Joint	Agreed. Will add additional text to the description next to these elements in v5.023.	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ParticleDensity_Concrete	Materials\SDU_2_Concrete	Added reference info to stochastic element description.	Y	None	N/A	Y
ParticleDensity_LMM	Materials\SDU_2_Concrete	Added reference info to stochastic element description.	Y	None	N/A	Y
ParticleDensity_UMM	Materials\SDU_2_Concrete	Added reference info to stochastic element description.	Y	None	N/A	Y
Porosity_Concrete	Materials\SDU_2_Concrete	Added reference info to stochastic element description.	N	This reference should be "Particle density for Concrete from SRR-CWDA-2011-00178, Table 4.5-7" which is the same as for the particle density. It is not in the referenced in WSRC-STI-2006-00198, Table 6-47.	Agreed. Will revise in version 5.023.	Y
Porosity_LMM	Materials\SDU_2_Concrete	Added reference info to stochastic element description.	Y	None	N/A	Y
Porosity_UMM	Materials\SDU_2_Concrete	Added reference info to stochastic element description.	Y	None	N/A	Y
Other Changes						

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SatZoneDarcyVelDist	\\Transport\\WaterT ransport	Added reference info to stochastic element description.	Y	The element name should be changed to reflect the fact that this is an average pore velocity multiplier	Partially disagree. This element is used in the element SatZoneDarcyVelDi st_SDU, where it is applied as a multiplier to MeanSatZoneDarcyVel_ SDU, which has already been converted from the pore velocity into the Darcy velocity. So the name of the element identified for this entry is appropriate. But, in v5.023 I will update the names of the elements wherein the pore velocities are input into the model, and I will add a description to MeanSatZoneDarcyVel_ SDU to indicate that this element converts pore velocities into Darcy velocities.	Y
[not applicable]	[not applicable]	Versioned model to 5.022.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Reviewer Comments				All other velocity elements (not mentioned explicitly) should be renamed to reflect Darcy versus average pore velocity.	Agreed. Will revise in version 5.023.	Y
FlowField_xx XX=1-4	TransportWaterT ransport			I suggest that the flowfield containers associated names reflect their origin	Agreed. Will revise in version 5.023.	Y
If checker has no comments, check here. <input type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments) <i>Steve Hommel</i> 9/28/2017				
<b>Checker Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Barry Lester</i> 9/28/2017				

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
GSD_Pick	\\Materials\SandyS oilKds_Leachatel impacted	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y
GSD_Pick	\\Materials\Concret e_Kds_Oxidizing\ middle_concrete_ kds_ox	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y
GSD_Pick	\\Materials\Concret e_Kds_Reducing\ middle_concrete_ kds_red	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y
GSD_Pick	\\Materials\ClayeyS oilKds	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y
GSD_Pick	\\Materials\SandyS oilKds	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y
GSD_Pick_Sr	\\Materials\Concret e_Kds_Oxidizingly oung_concrete_kd s_ox	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
GSD_Pick_Sr	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y
GSD_Pick_Sr	\\Materials\\Concrete_Kds_Oxidizing\\middle_concrete_kds_ox	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y
GSD_Pick_Sr	\\Materials\\Concrete_Kds_Reducing\\middle_concrete_kds_red	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y
GSD_Pick_Tc	\\Materials\\Concrete_Kds_Oxidizing\\young_concrete_kds_ox	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y
GSD_Pick_Tc	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y
GSD_Pick_Tc	\\Materials\\Concrete_Kds_Oxidizing\\middle_concrete_kds_ox	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
GSD_Pick_Tc	\\Materials\\Concrete_Kds_Reducing\\middle_concrete_kds_red	Added additional information to the Description to indicate that this formula is based on the 95 <sup>th</sup> confidence interval.	Y	None	N/A	Y
Material Properties Changes						
Porosity_Concrete'	\\Materials\\SDU_2_Concrete\\	Modified description to reference SRR-CWDA-2011-00178, Table 4.5-7	Y	Description reads "Particle density for Concrete from SRR-CWDA-2011-00178, Table 4.5-7" but don't we want to ref the porosity not particle density from Table 4.5-7?	Agreed. Will modify the description in v5.024.	Y
New Flow Field Container						
FlowField_PEST53	\\Transport\\WaterTransport	Copied one of the other flow field containers (and its contents) and renamed the container to indicate that this one will be used for PEST 53 inputs. Note that the data within this container has not yet been updated. These elements within this container are currently placeholders.	Y	None	N/A	Y
Linking to additional Flow Field Container						

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLDist_North CLDist_North_Add CLDist_South CLDist_South_Add	\\Transport\\WaterT ransport\\FlowField _Picked	Added link to the new flow field container (FlowField_PEST53). Changed the FlowFieldPicker in the "If" statements to use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1.	Y	"CLDist_North_Add" name differs (underscore between North_Add) from the convention used in the flow field containers "CLDist_NorthAdd"	Agreed. Will make element names consistent in v5.024.	Y
CLOffset_North CLOffset_North_Add CLOffset_South CLOffset_South_Add	\\Transport\\WaterT ransport\\FlowField _Picked	Added link to the new flow field container (FlowField_PEST53). Changed the FlowFieldPicker in the "If" statements to use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1.	Y	"CLOffset_North_Add" name differs (underscore between North_Add) from the convention used in the flow field containers "CLOffset_NorthAdd"	Agreed. Will make element names consistent in v5.024.	Y
DilutionMask_North DilutionMask_North_Ad d DilutionMask_South DilutionMask_South_Ad d	\\Transport\\WaterT ransport\\FlowField _Picked	Added link to the new flow field container (FlowField_PEST53). Changed the FlowFieldPicker in the "If" statements to use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1.	Y	"DilutionMask_North_Ad d" name differs (underscore between North_Add) from the convention used in the flow field containers "DilutionMask_NorthAdd "	Agreed. Will make element names consistent in v5.024.	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZoneDarcyVel _SDU	\\Transport\\WaterT ransport\\FlowField _Picked	Added link to the new flow field container (FlowField_PEST53). Changed the FlowFieldPicker in the "If" statements to use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1. Also added a description.	Y	None	N/A	Y
MeanSatZoneDarcyVel _SDU1	\\Transport\\WaterT ransport\\FlowField _Picked	Added link to the new flow field container (FlowField_PEST53). Changed the FlowFieldPicker in the "If" statements to use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1. Also added a description.	N	All logic is correct but no description was added for the element.	Agreed. Will add description in v5.024.	Y
MeanSatZoneDarcyVel _SDU4	\\Transport\\WaterT ransport\\FlowField _Picked	Added link to the new flow field container (FlowField_PEST53). Changed the FlowFieldPicker in the "If" statements to use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1. Also added a description.	N	All logic is correct but no description was added for the element.	Agreed. Will add description in v5.024.	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PathLength_SDU1	\\Transport\\WaterT ransport\\FlowField _Picked	Added link to the new flow field container (FlowField_PEST53). Changed the FlowFieldPicker in the "If" statements to use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1.	Y	None	N/A	Y
PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _Picked	Added link to the new flow field container (FlowField_PEST53). Changed the FlowFieldPicker in the "If" statements to use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1.	Y	None	N/A	Y
PathLengths_SDU	\\Transport\\WaterT ransport\\FlowField _Picked	Added link to the new flow field container (FlowField_PEST53). Changed the FlowFieldPicker in the "If" statements to use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Porosity_of_PoreV	\\Transport\\WaterT ransport\\FlowField _Picked	Added link to the new flow field container (FlowField_PEST53). Changed the FlowFieldPicker in the "If" statements to use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1.	Y	None	N/A	Y
SatThickness_determ	\\Transport\\WaterT ransport\\FlowField _Picked	Added link to the new flow field container (FlowField_PEST53). Changed the FlowFieldPicker in the "If" statements to use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1.	Y	None	N/A	Y
RandomAquiferFlowFiel d	\\Transport\\WaterT ransport	Changed discrete parameters so default value would be 51 (for PEST.51 from SRNL-STI-2017- 00008) and the discrete values use values based the flow field ID (e.g., PEST.51 = 51) rather than using a count starting at 1.	Y	None	N/A	Y
Rename other Flow Field containers						
FlowField_FY16	\\Transport\\WaterT ransport	Renamed this container. Previous name was FlowField_1	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FlowField_PEST47	\\Transport\\WaterT ransport	Renamed this container. Previous name was FlowField_2	Y	None	N/A	Y
FlowField_PEST51	\\Transport\\WaterT ransport	Renamed this container. Previous name was FlowField_3	Y	None	N/A	Y
FlowField_PEST52	\\Transport\\WaterT ransport	Renamed this container. Previous name was FlowField_4	Y	Also changed element's description to "Alternative flow field based on PEST.52 from SRNL-STI-2017-00008"	Agreed.	Y
Array Label changes						
SDUsSouth	Model → Array Labels	Changed label names for SDU1 and SDU4 to SDU1_Central and SDU4_Central, respectively. This change is being done to support adding additional stream lines for SDUs 1 and 4. Because they are 600 feet wide and positioned approximately perpendicular to the direction of flow, this change will allow for a better estimate of real world conditions.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.023.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.022.gsm				
<b>New Model File Date:</b> 09/28/2017		<b>Source Model File Date:</b> 09/30/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDUsSouth	Model → Array Labels	Added new entries within this array: SDU1_North (for the northern-most edge of SDU 1), SDU1_South (for the southern-most edge of SDU 1), SDU4_North (for the northern-most edge of SDU 4), and SDU4_South (for the southern-most edge of SDU 4). This change is being done to support adding additional stream lines for SDUs 1 and 4. Because they are 600 feet wide and positioned approximately perpendicular to the direction of flow, this change will allow for a better estimate of real world conditions.	Y	None	N/A	Y
CLDist_South	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Viewed element data when investigating whether or not to modify the "SectorsSouth" array – Model shows this as changed, but no data was changed.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
Other Flow Field Changes						

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.023.gsm		Source Model ID (or filename): SRS Saltstone v5.022.gsm				
New Model File Date: 09/28/2017		Source Model File Date: 08/30/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZonePoreVel_ SDU	\\Transport\\WaterT ransport\\FlowField _FY16\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
MeanSatZonePoreVel_ SDU	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
MeanSatZonePoreVel_ SDU	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
MeanSatZonePoreVel_ SDU	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.023.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.022.gsm				
<b>New Model File Date:</b> 09/28/2017		<b>Source Model File Date:</b> 09/30/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZonePoreVel_ SDU	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	Rename not captured in versioning report. "MeanSatZonePoreVel_ SDU" listed as the element added when PEST53 container was created.	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s). Also – Agree with Checker comment.	Y
MeanSatZonePoreVel_ SDU1	\\Transport\\WaterT ransport\\FlowField _FY16\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U1 which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
MeanSatZonePoreVel_ SDU1	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U1 which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.023.gsm	<b>Source Model ID (or filename):</b> SRS Saltstone v5.022.gsm					
<b>New Model File Date:</b> 09/28/2017	<b>Source Model File Date:</b> 08/30/2017					
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZonePoreVel_ SDU1	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U1 which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
MeanSatZonePoreVel_ SDU1	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U1 which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
MeanSatZonePoreVel_ SDU1	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U1 which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	Rename not captured in versioning report. "MeanSatZonePoreVel_ SDU1" listed as the element added when PEST53 container was created.	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s). Also – Agree with Checker comment.	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.023.gsm		Source Model ID (or filename): SRS Saltstone v5.022.gsm				
New Model File Date: 09/28/2017		Source Model File Date: 08/30/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _FY16\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U4 which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U4 which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U4 which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U4 which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.023.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.022.gsm				
<b>New Model File Date:</b> 09/28/2017		<b>Source Model File Date:</b> 09/30/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Element was renamed . It used to be: MeanSatZoneDarcyVel_SD U4 which was incorrect because the data was a pore velocity, not a Darcy velocity value.	Y	Rename not captured in versioning report. "MeanSatZonePoreVel_ SDU4" listed as the element added when PEST53 container was created.	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s). Also – Agree with Checker comment.	Y
Updating for PEST.51 flow field inputs						
MeanSatZonePoreVel_ SDU1 MeanSatZonePoreVel_ SD4	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Value(s) updated to reflect information in GSA2016_SDF_Measures_ GW_Transport_PEST.51.xl sx	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
PathLength_SDU1 PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Value(s) updated to reflect information in GSA2016_SDF_Measures_ GW_Transport_PEST.51.xl sx	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.023.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.022.gsm				
<b>New Model File Date:</b> 09/28/2017		<b>Source Model File Date:</b> 09/30/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Value(s) updated to reflect information in GSA2016_SDF_Measures_ GW_Transport_PEST.51.xl sx	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Value(s) updated to reflect information in GSA2016_SDF_Measures_ GW_Transport_PEST.51.xl sx	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Value(s) updated to reflect information in GSA2016_SDF_Measures_ GW_Transport_PEST.51.xl sx *Note: There is another entry for these elements (above) for when the elements were renamed.	Y	None	Note to checker: This input will be updated/changed in v5.024, based on updated plume measures. You do not need to check the value(s).	Y
User Input						



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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.023.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.022.gsm				
<b>New Model File Date:</b> 09/28/2017		<b>Source Model File Date:</b> 08/30/2017				
Parameter or Element	Location	Change Description	Correct Y, N	Checker Comment	Analyst/Response	Checker Concur? Y, N
Select/Aquifer/Transport Field	\\User_Input\	Changed value (from 3 to 51) and modified the description and the in-model text to better describe which values apply to which flow fields.	Y	None	N/A	Y
Other						
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Modified timing (for faster test runs) then changed back to 20 yr steps for 50Kyr.	Y	None	N/A	Y
Model timing	Run → Simulation Settings	Modified timing (for faster test runs) then changed back to 20 yr steps for 50Kyr.	Y	None	N/A	Y
[not applicable]	[not applicable]	Versioned model to 5.023.	Y	None	N/A	Y
If checker has no comments, check here. <input type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  10/25/2017				
<b>Checker Name (print):</b> Jerry Mangold		<b>E-Signature (or sign/date/scan hardcopy):</b>  10/25/2017				

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SRS Saltstone v5.024.gsm Changed Model Check Form (8 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.024.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.023.gsm	
<b>New Model File Date:</b> 11/7/2017		<b>Source Model File Date:</b> 09/28/2017	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective: <span style="color: red;">Revise plume inputs</span></b>			
Material Properties Changes			
Porosity_Concrete	Materials\SDU_2_Concrete\	Modified description to indicate that this is a porosity input, not a density input. This is in response to a Checker comment from v5.023.	Y
		None	N/A
			Y
Updating Flow Field Picker Elements			
CLDist_North_Add	Transport\WaterTransport\FlowField_Picked	Changed element name to remove underscore (" ") before "Add". This is in response to a Checker comment from v5.023.	Y
		Element is renamed from "CLDist_North_Add" to "CLDist_NorthAdd"	Agreed
CLOffset_North_Add	Transport\WaterTransport\FlowField_Picked	Changed element name to remove underscore (" ") before "Add". This is in response to a Checker comment from v5.023.	Y
		Element is renamed from "CLOffset_North_Add" to "CLOffset_NorthAdd"	Agreed
DilutionMask_North_Add	Transport\WaterTransport\FlowField_Picked	Changed element name to remove underscore (" ") before "Add". This is in response to a Checker comment from v5.023.	Y
		Element is renamed from "DilutionMask_North_Add" to "DilutionMask_NorthAdd"	Agreed
MeanSatZoneDarcyVel_SDU1	Transport\WaterTransport\FlowField_Picked	Added element description. This is in response to a Checker comment from v5.023.	Y
MeanSatZoneDarcyVel_SDU4	Transport\WaterTransport\FlowField_Picked	Added element description. This is in response to a Checker comment from v5.023.	Y
		None	N/A
			Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.024.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.023.gsm				
<b>New Model File Date:</b> 11/7/2017		<b>Source Model File Date:</b> 09/28/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Flow Field Input Value Changes (PEST.47)						
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Values updated to reflect latest plume/stream trace measures.	N/A	Not checked here since stream trace data has been updated since model creation date of 11/7/2017. Updated stream trace values from 1/3/2018 were input into v5.025 of the model and will be checked with that version.	N/A	N/A
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Values updated to reflect latest plume/stream trace measures.				
MeanSatZonePoreVel_ SDU MeanSatZonePoreVel_ SDU1 MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Values updated to reflect latest plume/stream trace measures.				
PathLengths_SDU PathLength_SDU1 PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Values updated to reflect latest plume/stream trace measures.				

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.024.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.023.gsm				
<b>New Model File Date:</b> 11/7/2017		<b>Source Model File Date:</b> 09/28/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Flow Field Input Value Changes (PEST.51)						
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Values updated to reflect latest plume/stream trace measures.	N/A	Not checked here since stream trace data has been updated since model creation date of 11/7/2017. Updated stream trace values from 1/3/2018 were input into v5.025 of the model and will be checked with that version.	N/A	N/A
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Values updated to reflect latest plume/stream trace measures.				
MeanSatZonePoreVel_ SDU MeanSatZonePoreVel_ SDU1 MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Values updated to reflect latest plume/stream trace measures.				
PathLengths_SDU PathLength_SDU1 PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Values updated to reflect latest plume/stream trace measures.				

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<b>New Model ID (or filename):</b> SRS Saltstone v5.024.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.023.gsm				
<b>New Model File Date:</b> 11/7/2017		<b>Source Model File Date:</b> 09/28/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Flow Field Input Value Changes (PEST.52)						
CLDist_North	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.	N/A	Not checked here since stream trace data has been updated since model creation date of 11/7/2017. Updated stream trace values from 1/3/2018 were input into v5.025 of the model and will be checked with that version.	N/A	N/A
CLDist_NorthAdd	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
CLDist_South	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_North	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_NorthAdd	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_South	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_North	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_NorthAdd	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_South	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
MeanSatZonePoreVel_ SDU	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
MeanSatZonePoreVel_ SDU1	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
PathLengths_SDU	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.				
PathLength_SDU1	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Saturated Zone thickness changed from 20 m to "20 m - 3.5 ft" to reflect smaller SZ thickness from the GSA 2016 Update with PEST.51 parameters (per Section 7.4 of SRNL-STI-2017-00008).	Y	None	N/A	Y
PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _PEST52\\					
SatThickness_determ	\\Transport\\WaterT ransport\\FlowField _PEST52\\					

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.024.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.023.gsm				
<b>New Model File Date:</b> 11/7/2017		<b>Source Model File Date:</b> 09/28/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Flow Field Input Value Changes (PEST.53)						
CLDist_North	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.	N/A	Not checked here since stream trace data has been updated since model creation date of 11/7/2017. Updated stream trace values from 1/3/2018 were input into v5.025 of the model and will be checked with that version.	N/A	N/A
CLDist_NorthAdd	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
CLDist_South	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_North	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_NorthAdd	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_South	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_North	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_NorthAdd	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_South	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
MeanSatZonePoreVel_ SDU	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
MeanSatZonePoreVel_ SDU1	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
PathLengths_SDU	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
PathLength_SDU1	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Values updated to reflect latest plume/stream trace measures.				
SatThickness_determ	\\Transport\\WaterT ransport\\FlowField _PEST53\\	Saturated Zone thickness changed from 20 m to "20 m - 3.5 ft" to reflect smaller SZ thickness from the GSA 2016 Update with PEST.51 parameters (per Section 7.4 of SRNL-STI-2017-00008).	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.024.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.023.gsm				
<b>New Model File Date:</b> 11/7/2017		<b>Source Model File Date:</b> 09/28/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Flow Field Input Value Changes (FY2016 SDF SA)						
CLDist_North	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	N/A	Not checked here since stream trace data has been updated since model creation date of 11/7/2017. Updated stream trace values from 1/3/2018 were input into v5.025 of the model and will be checked with that version.	N/A	N/A
CLDist_NorthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
CLDist_South	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_North	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_NorthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_South	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_North	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_NorthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_South	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
MeanSatZonePoreVel_ SDU	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
MeanSatZonePoreVel_ SDU1	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
PathLengths_SDU	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
PathLength_SDU1	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.				
Seepage Ratio						
SeepToWellRatio	\\User_Input	Changed value to 0.195 and added description to reference SRR-CWDA- 2017-00077.	N	Seepage value is changed to 0.195 but no description was added to the element.	Reference will be added to description in V5.026	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.024.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.023.gsm				
<b>New Model File Date:</b> 11/7/2017		<b>Source Model File Date:</b> 09/28/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Available_Seepline_Data	\\Model_Concentra tions\\PÖRFLOW_ Conc	Updated to reflect the "short list" of radionuclides used to update the seepline ratio. This list is: Cs-135, I-129, K-40, Pb-210, Pu-238, Ra- 226, Rn-222, Tc-99, Th- 230, and U-234.	Y	None	N/A	Y
Unavailable_Seepline_ Data	\\Model_Concentra tions\\PÖRFLOW_ Conc	Updated to reflect the "short list" of radionuclides used to update the seepline ratio. This list is: Cs-135, I-129, K-40, Pb-210, Pu-238, Ra- 226, Rn-222, Tc-99, Th- 230, and U-234.	Y	None	N/A	Y
Other						
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Modified timing (for faster test runs) then changed back to 20 yr steps for 50Kyr.	Y	None	N/A	Y
Model timing	Run → Simulation Settings	Modified timing (for faster test runs) then changed back to 20 yr steps for 50Kyr.	Y	None	N/A	Y
[not applicable]	[not applicable]	Versioned model to 5.024.	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.024.gsm		Source Model ID (or filename): SRS Saltstone v5.023.gsm				
New Model File Date: 11/7/2017		Source Model File Date: 09/28/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
If checker has no comments, check here. <input type="checkbox"/>						
Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy):  1/10/2018				
Checker Name (print): Jeremiah Mangold		E-Signature (or sign/date/scan hardcopy):  1/10/2018				

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SRS Saltstone v5.025.gsm Changed Model Check Form (5 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.025.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.024.gsm	
<b>New Model File Date:</b> 1/3/2018		<b>Source Model File Date:</b> 11/7/2017	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective: Revised plume inputs</b>			
Flow Field Input Value Changes (PEST.47)			
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Values updated to reflect latest plume/stream trace measures.	Y
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Values updated to reflect latest plume/stream trace measures.	Y
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Values updated to reflect latest plume/stream trace measures.	Y
MeanSatZonePoreVel_ SDU MeanSatZonePoreVel_ SDU1 MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Values updated to reflect latest plume/stream trace measures.	Y
PathLengths_SDU PathLength_SDU1 PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _PEST47\\	Values updated to reflect latest plume/stream trace measures.	Y
Flow Field Input Value Changes (PEST.51)			
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Values updated to reflect latest plume/stream trace measures.	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.025.gsm		Source Model ID (or filename): SRS Saltstone v5.024.gsm				
New Model File Date: 1/3/2018		Source Model File Date: 11/7/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU1 MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
PathLengths_SDU1 PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _PEST51\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
Flow Field Input Value Changes (PEST.52)						
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _PEST52\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.025.gsm		Source Model ID (or filename): SRS Saltstone v5.024.gsm				
New Model File Date: 1/3/2018		Source Model File Date: 11/7/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZonePoreVel_ SDU	\Transport\WaterT ransport\FlowField _PEST52\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU1						
MeanSatZonePoreVel_ SDU4						
PathLengths_SDU PathLength_SDU1 PathLength_SDU4						
Flow Field Input Value Changes (PEST.53)						
CLDist_North CLDist_NorthAdd CLDist_South CLDist_SouthAdd	\Transport\WaterT ransport\FlowField _PEST53\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
CLOffset_North CLOffset_NorthAdd CLOffset_South CLOffset_SouthAdd	\Transport\WaterT ransport\FlowField _PEST53\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
DilutionMask_North DilutionMask_NorthAdd DilutionMask_South DilutionMask_SouthAdd	\Transport\WaterT ransport\FlowField _PEST53\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU	\Transport\WaterT ransport\FlowField _PEST53\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU1						
MeanSatZonePoreVel_ SDU4						
PathLengths_SDU PathLength_SDU1 PathLength_SDU4						

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Waste Disposal Authority

### Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.025.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.024.gsm				
<b>New Model File Date:</b> 1/3/2018		<b>Source Model File Date:</b> 11/7/2017				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Flow Field Input Value Changes (FY2016 SDF SA)						
CLDist_North	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
CLDist_NorthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
CLDist_South	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	N	All values are updated correctly except for SDU 6 values.	Corrected in v5.026	Y
CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	N	Value for SDU6 should be 24.82 m/yr but is listed in GoldSim as 2.44 m/yr.	Corrected in v5.026	Y
CLOffset_North	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
CLOffset_NorthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
CLOffset_South	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
DilutionMask_North	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
DilutionMask_NorthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
DilutionMask_South	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU1	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU4	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
PathLengths_SDU	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
PathLength_SDU1	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
PathLength_SDU4	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
Other						
[not applicable]	[not applicable]	Versioned model to 5.025.	Y	None	N/A	Y
If checker has no comments, check here. <input type="checkbox"/>						
Add additional rows above, as needed.						

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Waste Disposal Authority

**Changed Model Check Form**



<b>New Model ID (or filename):</b> SRS Saltstone v5.025.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.024.gsm	
<b>New Model File Date:</b> 1/3/2018		<b>Source Model File Date:</b> 11/7/2017	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
<b>Analyst Name (print):</b> Sieve Hommel		<b>Checker Comment</b>	<b>Checker Concur? Y,N</b>
		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Sieve Hommel</i> 1/10/2018	<b>Analyst Response</b> (Not required if no comments)
<b>Checker Name (print):</b> Jeremiah Mangold		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Jeremiah Mangold</i> 1/10/2018	

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SRS Saltstone v5.026.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.026.gsm		Source Model ID (or filename): SRS Saltstone v5.025.gsm				
New Model File Date: 1/10/2018		Source Model File Date: 1/03/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Revised to address checker comments from v5.024 and 5.025.						
SeepToWellRatio	\\User_Input	Added description to reference SRR-CWDA-2017-00077.	Y	None	N/A	Y
DilutionMask_North DilutionMask_NorthAdd	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU	\\Transport\\WaterT ransport\\FlowField _FY16\\	Values updated to reflect latest plume/stream trace measures.	Y	None	N/A	Y
[not applicable]	[not applicable]	Versioned model to 5.026.	Y	None	N/A	Y
If checker has no comments, check here. <input type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  1/10/2018				
<b>Checker Name (print):</b> Jeremiah Mangold		<b>E-Signature (or sign/date/scan hardcopy):</b>  1/10/2018				

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SRS Saltstone v5.027.gsm Changed Model Check Form (22 Pages)

Waste Disposal Authority					
Changed Model Check Form					
New Model ID (or filename): SRS Saltstone v5.027.gsm		Source Model ID (or filename): SRS Saltstone v5.026.gsm			
New Model File Date: 8/28/2018		Source Model File Date: 1/10/2018			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response (QA&DV Form 4)?
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.					
<b>Objective:</b> Updated the Species element and ChemElements, then updated inventory inputs, Kd inputs, and made some preliminary changes to prepare the model for incorporating the new dose calculations.					
Species	Materials	<p>Updated radioactive species list to (mostly) reflect the list from SRR-CWDA-2018-00044. The differences are:</p> <ul style="list-style-type: none"> <li>Rn-222 kept as it connects Ra-226 to Pb-210 and radon is needed for performance objectives.</li> <li>Added Cm-248 to connect Cf-252 to Pu-244.</li> </ul> <p><b>Note:</b> I obtained the branching fractions from: <a href="https://rais.ornl.gov/tools/cchain.php">https://rais.ornl.gov/tools/cchain.php</a></p> <p>Also, updated all atomic weights so the values now match data from SRR-CWDA-2018-00018.</p>	Y	<p>You also added Cm-242</p> <p>Unless you are expecting some change in inventory, I would rule out Cf-252 (and its daughter Cm-248) and Bk-249 and probably remove them from the model.</p>	<p>I have asked L. Wooten to revise the SDF inventory screening document (SRR-CWDA-2018-00044) to address this concern. The draft shows that Cm-242, Bk-249, <del>Cf-252</del> and Cf-252 may be screened out as the daughters of these radionuclides have significantly more inventory such that the influence of any ingrowth would be negligible.</p> <p>Removing Cf-252 also allows us to remove Cm-248 as it is only added to connect Cf-252 to Pu-244. These changes will be incorporated in v5.028.</p> <p><del>Cf-251 added for v5.029.</del></p>
<p>Checker Concur? Y,N</p> <p>10/3/2018</p>					

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.027.gsm		Source Model ID (or filename): SRS Saltstone v5.026.gsm				
New Model File Date: 8/28/2018		Source Model File Date: 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
HalfLives	Materials	Updated all half-lives so the values now match data from SRR-CWDA-2018-00018.	N	The half-lives for Bk-249 and Cm-248 are reversed. It should be Bk-249 = 9.0311E-01 yr and Cm-248 = 3.4857E+05 yr (not Bk-249 = 3.4857E+05 yr and Cm-248 = 9.0311E-01 yr).	As described above, Bk-249 and Cm-248 will be removed from the model in v5.028.	Y
Model Array: ChemElements	Model → Array Labels → ChemElements	Added Ag, As, B, Ba, Mn, PO4, SO4, and Zn in case we incorporate the chemicals into GoldSim. Added Bk to support new species: Bk-249. Deleted Gd because it is no longer needed.	Y	None	N/A	Y
Inventory Changes						
Inventory_Realistic	Inventory	Added element to input values from SRR-CWDA-2018-00044, Table 4	Y	None	N/A	Y
Inventory_Compliance	Inventory	Added element to input values from SRR-CWDA-2018-00044, Table 5	Y	None	N/A	Y
Inventory_Defensible	Inventory	Added element to input values from SRR-CWDA-2018-00044, Table 6	Y	None	N/A	Y
ModeledInventory	Inventory	Updated logic to choose appropriate inventory input.	Y	None	N/A	Y
NominalInventory	Inventory	Data element deleted. It is no longer used.	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.027.gsm		Source Model ID (or filename): SRS Saltstone v5.026.gsm				
New Model File Date: 8/28/2018		Source Model File Date: 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd Changes						

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SRS Saltstone v5.027\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	Materials\ClayeyS oilKds	Updated Kd values to match data in: WDA_Kds_for_PA_201808 02.xlsx	Almost Y	Why does the NO2 and NO3 in the code differ from "N" in the source file (which has no NO2 and NO3)? What about a reference for B, PO4 and SO4. Please also note the sheet name "Current"	I used a lookup function to match the values. Because the Excel file did not have an entry that was explicitly NO2 or NO3, these were missed. These entries (NO2, NO3) will all be updated in v5.028. For B, PO4, and SO4, there is no reference. In the HTF PA (SRR- CWDA-2010-00128, Table 4.2-25 and 4.2-29), these species were assigned a zero value; however, because the dose calculation uses Kds in the soil build-up formula, a zero value leads to a divide by zero error. So instead of zero, we assign it a very small non-zero value ( <i>Epsilon</i> ).	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.027.gsm		Source Model ID (or filename): SRS Saltstone v5.026.gsm				
New Model File Date: 8/28/2018		Source Model File Date: 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd	Materials\ClayeyS oilKds	Fixed links based on changes to Model Array: ChemElements	Y	None	N/A	Y
Kd_Median	Materials\ClayeyS oilKds_Leachatel mpacted	Updated Kd values to match data in: WDA_Kds_for_PA_201808 02.xlsx	Almost Y	Why does the NO2 and NO3 in the code differ from "N" in the source file (which has no NO2 and NO3)? What about a reference for B, PO4 and SO4. Please also note the sheet name "Current"	The entries for NO2, NO3 will be updated in v5.028.  For B, PO4, and SO4, there is no reference. In the HTF PA (SRR- CWDA-2010-00128, Table 4.2-25 and 4.2-29), these species were assigned a zero value; however, because the dose calculation uses Kds in the soil build-up formula, a zero value leads to a divide by zero error. So instead of zero, we assign it a very small non-zero value (Epsilon).	Y
Kd	Materials\ClayeyS oilKds_Leachatel mpacted	Fixed links based on changes to Model Array: ChemElements	Y	None	N/A	Y

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SRS Saltstone v5.027\_Check



Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Updated Kd values to match data in: WDA_Kds_for_PA_20180802.xlsx	Almost Y	What about a reference for B, PO4 and SO4. Please also note the sheet name "Current"  Do we document why the Kds for Ba and Ra from Table 20 in SRNL-STI-2009-00473, Rev. 1 are not used for Saltstone_Kd?	For B, PO4, and SO4, there is no reference. In the HTF PA (SRR-CWDA-2010-00128, Table 4.2-25 and 4.2-29), these species were assigned a zero value; however, to be consistent with the approach for the soil Kds, we assign a very small non-zero value ( <i>Epsilon</i> ).  I will update Saltstone_Kd in v5.028.	Y
Concrete_Kd	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Fixed links based on changes to Model Array: ChemElements	Y	None	N/A	Y

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10/3/2018

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Saltstone_Kd	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	No changes made	N	The rows for Sr-90 and Tc-99 must be updated or delete Saltstone_Kd, make a copy of Concrete_Kd, rename it to Saltstone_Kd, and replace Sr-90 and Tc-99 values with SaltstoneKd_Dist_Sr and SaltstoneKd_Dist_Tc, respectively. If you choose the second option, check the downstream connections and fix if needed..	I will update Saltstone_Kd in v5.028.	Y

SRS Saltstone v5.027\_Check

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10/3/2018

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	\\Materials\Concrete_Kds_Oxidizing\lo ld_concrete_kds_ ox	Updated Kd values to match data in: WDA_Kds_for_PA_201808 02.xlsx	Almost Y	What about a reference for B, PO4 and SO4. Please also note the sheet name "Current"  Do we document why the Kds for Ba and Ra from Table 20 in SRNL- STI-2009-00473, Rev. 1 are not used for Saltstone_Kd?	For B, PO4, and SO4, there is no reference. In the HTF PA (SRR- CWDA-2010-00128, Table 4.2-25 and 4.2-29), these species were assigned a zero value; however, to be consistent with the approach for the soil Kds, we assign a very small non- zero value ( <i>Epsilon</i> ).  I will update Saltstone_Kd in v5.028.	Y
YConcrete_Kd	\\Materials\Concrete_Kds_Oxidizing\lo ld_concrete_kds_ ox	Fixed links based on changes to Model Array: ChemElements	Y	None	N/A	Y

SRS Saltstone v5.027\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.027.gsm		Source Model ID (or filename): SRS Saltstone v5.026.gsm				
New Model File Date: 8/28/2018		Source Model File Date: 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	\\Materials\Concrete_Kds_Oxidizingly oung_concrete_kd s_ox	Updated Kd values to match data in: WDA_Kds_for_PA_201808 02.xlsx	Almost Y	What about a reference for B, PO4 and SO4. Please also note the sheet name "Current"  Do we document why the Kds for Ba and Ra from Table 20 in SRNL- STI-2009-00473, Rev. 1 are not used for Saltstone_Kd?	For B, PO4, and SO4, there is no reference. In the HTF PA (SRR- CWDA-2010-00128, Table 4.2-25 and 4.2-29), these species were assigned a zero value; however, to be consistent with the approach for the soil Kds, we assign a very small non- zero value ( <i>Epsilon</i> ).  I will update Saltstone_Kd in v5.028.	Y
Concrete_Kd	\\Materials\Concrete_Kds_Oxidizingly oung_concrete_kd s_ox	Fixed links based on changes to Model Array: ChemElements	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Saltstone_Kd	Materials\Concrete_Kds_Oxidizing_oung_concrete_kd_s_ox	No changes made	N	The rows for Sr-90 and Tc-99 must be updated or delete Saltstone_Kd, make a copy of Concrete_Kd, rename it to Saltstone_Kd, and replace Sr-90 and Tc-99 values with SaltstoneKd_Dist_Sr and SaltstoneKd_Dist_Tc, respectively. If you choose the second option, check the downstream connections and fix if needed.	I will update Saltstone_Kd in v5.028.	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Updated Kd values to match data in: WDA_Kds_for_PA_20180802.xlsx	Almost Y	What about the value of 0.71 mL/g from SRR-CWDA-2018-00045?  What about a reference for B, PO4 and SO4. Please also note the sheet name "Current"	For B, PO4, and SO4, there is no reference. In the HTF PA (SRR-CWDA-2010-00128, Table 4.2-25 and 4.2-29), these species were assigned a zero value; however, to be consistent with the approach for the soil Kds, we assign a very small non-zero value ( <i>Epsilon</i> ).  I will update the saltstone iodine value based on SRR-CWDA-2018-00045 in v5.028.	Y
Concrete_Kd	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Fixed links based on changes to Model Array: ChemElements	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Saltstone_Kd	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	No changes made	N	The rows for Sr-90 and Tc-99 must be updated or delete Saltstone_Kd, make a copy of Concrete_Kd, rename it to Saltstone_Kd, and replace Sr-90 and Tc-99 values with SaltstoneKd_Dist_Sr and SaltstoneKd_Dist_Tc, respectively. If you choose the second option, check the downstream connections and fix if needed.	I will update Saltstone_Kd in v5.028.	Y
Concrete_Kd_Grout	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Fixed links based on changes to Model Array: ChemElements	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.027.gsm		Source Model ID (or filename): SRS Saltstone v5.026.gsm				
New Model File Date: 8/28/2018		Source Model File Date: 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Updated Kd values to match data in: WDA_Kds_for_PA_20180802.xlsx	Almost Y	What about the value of 0.71 mL/g from SRR-CWDA-2018-00045?  What about a reference for B, PO4 and SO4. Please also note the sheet name "Current"	For B, PO4, and SO4, there is no reference. In the HTF PA (SRR-CWDA-2010-00128, Table 4.2-25 and 4.2-29), these species were assigned a zero value; however, to be consistent with the approach for the soil Kds, we assign a very small non-zero value ( <i>Epsilon</i> ).  I will update the saltstone iodine value based on SRR-CWDA-2018-00045 in v5.028.	Y
Concrete_Kd	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Fixed links based on changes to Model Array: ChemElements	Y	None	N/A	Y

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Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.027.gsm		Source Model ID (or filename): SRS Saltstone v5.026.gsm				
New Model File Date: 8/28/2018		Source Model File Date: 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Updated Kd values to match data in: WDA_Kds_for_PA_20180802.xlsx	Almost Y	What about the value of 0.07 mL/g from SRR-CWDA-2018-00045?  What about a reference for B, PO4 and SO4. Please also note the sheet name "Current"	For B, PO4, and SO4, there is no reference. In the HTF PA (SRR-CWDA-2010-00128, Table 4.2-25 and 4.2-29), these species were assigned a zero value; however, to be consistent with the approach for the soil Kds, we assign a very small non-zero value ( <i>Epsilon</i> ).  I will update the saltstone iodine value based on SRR-CWDA-2018-00045 in v5.028.	Y
Concrete_Kd	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Fixed links based on changes to Model Array: ChemElements	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Saltstone_Kd	Materials\Concrete_Kds_Reducing\young_concrete_kds_red	No changes made	N	The rows for Sr-90 and Tc-99 must be updated or delete Saltstone_Kd, make a copy of Concrete_Kd, rename it to Saltstone_Kd, and replace Sr-90 and Tc-99 values with SaltstoneKd_Dist_Sr and SaltstoneKd_Dist_Tc, respectively. If you choose the second option, check the downstream connections and fix if needed.	I will update Saltstone_Kd in v5.028.	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	Materials\SandyS oilKds	Updated Kd values to match data in: WDA_Kds_for_PA_201808 02.xlsx	Almost Y	Why does the NO2 and NO3 in the code differ from "N" in the source file (which has no NO2 and NO3)? What about a reference for B, PO4 and SO4. Please also note the sheet name "Current"	The entries for NO2, NO3 will be updated in v5.028.  For B, PO4, and SO4, there is no reference. In the HTF PA (SRR- CWDA-2010-00128, Table 4.2-25 and 4.2-29), these species were assigned a zero value; however, to be consistent with the approach for the other soil Kds, we assign a very small non-zero value ( <i>Epsilon</i> ).	Y
Kd	Materials\SandyS oilKds	Fixed links based on changes to Model Array: ChemElements	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	\\Materials\SandyS oilKds_Leachatel mpacted	Updated Kd values to match data in: WDA_Kds_for_PA_201808 02.xlsx	Almost Y	Why does the NO2 and NO3 in the code differ from "N" in the source file (which has no NO2 and NO3)? What about a reference for B, PO4 and SO4. Please also note the sheet name "Current"	The entries for NO2, NO3 will be updated in v5.028.  For B, PO4, and SO4, there is no reference. In the HTF PA (SRR- CWDA-2010-00128, Table 4.2-25 and 4.2-29), these species were assigned a zero value; however, to be consistent with the approach for the other soil Kds, we assign a very small non-zero value ( <i>Epsilon</i> ).	Y
Kd	\\Materials\SandyS oilKds_Leachatel mpacted	Fixed links based on changes to Model Array: ChemElements	Y	None	N/A	Y
Preliminary Changes to support the update of the Dose Calculations						

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.027.gsm		Source Model ID (or filename): SRS Saltstone v5.026.gsm				
New Model File Date: 8/28/2018		Source Model File Date: 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
AgeOfReceptor	\\User_Input	Deleted element. The clarified definition of the human receptor establishes that the human receptor is always an adult (see Section 1.1 of SRR-CWDA-2013-00058, Rev. 2). All uptake parameters are based on this assumption; therefore, there is no need to provide an age option for users.	Y	Note: Reference not yet available so it was not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
InputSetSelector	\\User_Input	Added element to allow users to select from three possible input values: 1 = realistic (best estimate) values 2 = most probable and defensible (compliance) values 3 = defense-in-depth (conservative) values	Y	None	N/A	Y
DCFIngestion	\\Dose_Parameter Calculations\\DoseParameters\\DoseConversionFactor s	Updated logic of switch to always select Adult-specific values.	Y	None	N/A	Y
DCFInhalation	\\Dose_Parameter Calculations\\DoseParameters\\DoseConversionFactor s	Updated logic of switch to always select Adult-specific values.	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.027.gsm		Source Model ID (or filename): SRS Saltstone v5.026.gsm				
New Model File Date: 8/28/2018		Source Model File Date: 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DCFExposureSoil	\\Dose_Parameter _Calculations\Dose Parameters\Dose ConversionFactor s	Updated logic of switch to always select Adult-specific values.	Y	None	N/A	Y
DCFExposureWater	\\Dose_Parameter _Calculations\Dose Parameters\Dose ConversionFactor s	Updated logic of switch to always select Adult-specific values.	Y	None	N/A	Y
DCFExposureSoil_RefP erson RENAME to DCFExposureSoil_Adul t	\\Dose_Parameter _Calculations\Dose Parameters\Dose ConversionFactor s	Renamed element. Note: Values still need to be updated per SRR-CWDA- 2013-00058, Rev. 2	Y	Note: Values need to be updated and reference not yet available, so they were not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
DCFExposureWater_R efPerson RENAME to DCFExposureWater_Ad ult	\\Dose_Parameter _Calculations\Dose Parameters\Dose ConversionFactor s	Renamed element. Note: Values still need to be updated per SRR-CWDA- 2013-00058, Rev. 2	Y	Note: Values need to be updated and reference not yet available, so they were not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
DCFIngestion_Infant DCFIngestion_Child DCFIngestion_RefPers on	\\Dose_Parameter _Calculations\Dose Parameters\Dose ConversionFactor s	Deleted element. These are no longer needed.	Y	None	N/A	Y
DCFInhalation_Infant DCFInhalation_Child DCFInhalation_RefPers on	\\Dose_Parameter _Calculations\Dose Parameters\Dose ConversionFactor s	Deleted element. These are no longer needed.	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.027.gsm		Source Model ID (or filename): SRS Saltstone v5.026.gsm				
New Model File Date: 8/28/2018		Source Model File Date: 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FractionShowering	\\Dose_Parameter _Calculations\\Dose Parameters\\Expo sureAndInhalation Params	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
FractionSwimming	\\Dose_Parameter _Calculations\\Dose Parameters\\Expo sureAndInhalation Params	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
HumanUptakeofWater	\\Dose_Parameter _Calculations\\Dose Parameters\\Human UptakeParameters	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
HumanUptakeofSoil	\\Dose_Parameter _Calculations\\Dose Parameters\\Human UptakeParameters	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
HumanUptakeofProduce	\\Dose_Parameter _Calculations\\Dose Parameters\\Human UptakeParameters	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
HumanUptakeoffMeat	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
HumanBreathingRate	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
HumanUptakeoffMilk	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
HumanUptakeoffPoultry	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
HumanUptakeoffEgg	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y

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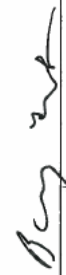


Performance Assessment for the Saltstone  
Disposal Facility at the Savannah River Site:  
Quality Assurance Report

SRR-CWDA-2018-00068  
Revision 2  
January 2020

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.027.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.026.gsm				
<b>New Model File Date:</b> 8/28/2018		<b>Source Model File Date:</b> 1/10/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
HumanUptakeofFish	\\Dose_Parameter_Calculations\\DoseParameters\\HumanUptakeParameters	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
HumanUptakeofFish	\\Dose_Parameter_Calculations\\DoseParameters\\HumanUptakeParameters	Updated logic of switch to always select Adult-specific values. Note: Values still need to be updated per SRR-CWDA-2013-00058, Rev. 2	Y	Note: Value needs to be updated and reference not yet available, so not checked.	The Checker's note is acknowledged. This is future work that is planned for a later version of the model.	Y
InventoryChooser_switch	\\User_Input	GoldSim Version Difference.txt indicates that this was changed (set to 1)	N	Not on checklist.	Agreed. Thanks for the input.	Y
If checker has no comments, check here. <input type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  9/6/18				
<b>Checker Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b>  9/6/18				

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SRS Saltstone v5.028.gsm Changed Model Check Form (18 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.028.gsm		Source Model ID (or filename): SRS Saltstone v5.027.gsm				
New Model File Date: 9/07/2018		Source Model File Date: 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Updated model to address checker comments from v5.027. Most changes performed to support updates saltstone Kds.						
HalfLives	Materials	Updated the half-life of Cm-248 but in the next entry (below) Cm-248 was deleted from the Species list. As such, this element shows as changed, but the change was over-come by the change to the Species list.	Y	None	N/A	Y
Species	Materials	Deleted: Cm-242, Cm-248, Bk-249, Cf-251, and Cf-252.  The SDF inventory screening document (SRR-CWDA-2018-00044) is being revised. The latest draft shows that these radionuclides may all be screened out as their daughters have significantly more inventory such that the influence of any ingrowth would be negligible.	N	Why was Cf-251 removed? See latest version of SRR-CWDA-2018-00044.	This was done in error. Will be corrected in the next version (5.029) of the model.	Y

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.028.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.027.gsm			
<b>New Model File Date:</b> 9/07/2018			<b>Source Model File Date:</b> 8/28/2018			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	Materials\ClayeySoilKds	Updated Kd values for NO2, NO3 to match data for N in SRNL-STI-2009-00473, Rev. 1, Table 14.	Y*	*B, PO4, and SO4 are not in Table 14	For the few species not listed in table 14 a very small, non-very value ( <i>Epsilon</i> ) is assumed.	Y
Kd_Median	Materials\ClayeySoilKds_LeachateImpacted	Updated Kd values for NO2, NO3, B, PO4, and SO4 to match data in SRNL-STI-2009-00473, Rev. 1, Table 14.	Y*	*B, PO4, and SO4 are not in Table 14	For the few species not listed in table 14 a very small, non-very value ( <i>Epsilon</i> ) is assumed.	Y
Ba_Kd_Saltstone	Materials\SaltstoneSpecificKds	Deleted Element. Will create a new element to replace this. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Sr_Kd_Saltstone	Materials\SaltstoneSpecificKds	Deleted Element. Will create a new element to replace this. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Tc_Kd_Saltstone	Materials\SaltstoneSpecificKds	Deleted Element. Because Tc release is now based on the shrinking core model, this element is no longer used.	Y	None	N/A	Y
Ba_Kd_Saltstone_I	Materials\SaltstoneSpecificKds	Added element to input value from SRNL-STI-2009-00473, Rev. 1, Table 20. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.028.gsm			Source Model ID (or filename): SRS Saltstone v5.027.gsm			
New Model File Date: 9/07/2018			Source Model File Date: 8/28/2018			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Ba_Kd_Saltstone_II	\\Materials\\Saltston eSpecificKds	Added element to input value from SRNL-STI-2009- 00473, Rev. 1, Table 20. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Ba_Kd_Saltstone_III	\\Materials\\Saltston eSpecificKds	Added element to input value from SRNL-STI-2009- 00473, Rev. 1, Table 20. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Ra_Kd_Saltstone_I	\\Materials\\Saltston eSpecificKds	Added element to input value from SRNL-STI-2009- 00473, Rev. 1, Table 20. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Ra_Kd_Saltstone_II	\\Materials\\Saltston eSpecificKds	Added element to input value from SRNL-STI-2009- 00473, Rev. 1, Table 20. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Ra_Kd_Saltstone_III	\\Materials\\Saltston eSpecificKds	Added element to input value from SRNL-STI-2009- 00473, Rev. 1, Table 20. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.028.gsm		Source Model ID (or filename): SRS Saltstone v5.027.gsm				
New Model File Date: 9/07/2018		Source Model File Date: 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Sr_Kd_Saltstone_I	\\Materials\\Saltstone eSpecificKds	Added element to input value from SRNL-STI-2009- 00473, Rev. 1, Table 20. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Sr_Kd_Saltstone_II	\\Materials\\Saltstone eSpecificKds	Added element to input value from SRNL-STI-2009- 00473, Rev. 1, Table 20. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Sr_Kd_Saltstone_III	\\Materials\\Saltstone eSpecificKds	Added element to input value from SRNL-STI-2009- 00473, Rev. 1, Table 20. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
I_Kd_Saltstone_Rel	\\Materials\\Saltstone eSpecificKds	Added element to input value from SRR-CWDA- 2018-00045. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
I_Kd_Saltstone_RelII	\\Materials\\Saltstone eSpecificKds	Added element to input value from SRR-CWDA- 2018-00045. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.028.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.027.gsm				
<b>New Model File Date:</b> 9/07/2018		<b>Source Model File Date:</b> 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
I_Kd_Saltstone_RelII	\\Materials\\SaltstoneSpecific\\Kds	Added element to input value from SRR-CWDA-2018-00045. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
GSD_Pick_Tc	\\Materials\\Concrete_Kds_Oxidizing\\middle_concrete_kds_ox	Deleted Element. Because Tc release is now based on the shrinking core model, this element is no longer used.	Y	None	N/A	Y
SaltstoneKd_Dist_Tc	\\Materials\\Concrete_Kds_Oxidizing\\middle_concrete_kds_ox	Deleted Element. Because Tc release is now based on the shrinking core model, this element is no longer used.	Y	None	N/A	Y
GSD_Pick_Ba	\\Materials\\Concrete_Kds_Oxidizing\\middle_concrete_kds_ox	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.028.gsm		Source Model ID (or filename): SRS Saltstone v5.027.gsm				
New Model File Date: 9/07/2018		Source Model File Date: 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba	\\Materials\\Concret e_Kds_Oxidizing\\ middle_concrete_ kds_ox	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y
GSD_Pick_Ra	\\Materials\\Concret e_Kds_Oxidizing\\ middle_concrete_ kds_ox	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
SaltstoneKd_Dist_Ra	\\Materials\\Concret e_Kds_Oxidizing\\ middle_concrete_ kds_ox	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
GSD_Pick_Sr	\\Materials\\Concret e_Kds_Oxidizing\\ middle_concrete_ kds_ox	Updated element to link to Sr_Kd_Saltstone_II	Y	None	N/A	Y
SaltstoneKd_Dist_Sr	\\Materials\\Concret e_Kds_Oxidizing\\ middle_concrete_ kds_ox	Updated element to link to Sr_Kd_Saltstone_II	Y	None	N/A	Y
Saltstone_Kd	\\Materials\\Concret e_Kds_Oxidizing\\ middle_concrete_ kds_ox	Added element based on Concrete_Kd and named it Saltstone_Kd. Then, replaced Sr-90 and Ra-226 and Ra-228 values with SaltstoneKd_Dist_Sr, and SaltstoneKd_Dist_Ra.	Y	None	N/A	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.028.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.027.gsm				
<b>New Model File Date:</b> 9/07/2018		<b>Source Model File Date:</b> 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
GSD_Pick_Ba	Materials\Concrete_Kds_oxidizing\lo Id_concrete_kds_ox	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y
SaltstoneKd_Dist_Ba	Materials\Concrete_Kds_oxidizing\lo Id_concrete_kds_ox	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y
GSD_Pick_Ra	Materials\Concrete_Kds_oxidizing\lo Id_concrete_kds_ox	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
SaltstoneKd_Dist_Ra	Materials\Concrete_Kds_oxidizing\lo Id_concrete_kds_ox	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
GSD_Pick_Sr	Materials\Concrete_Kds_oxidizing\lo Id_concrete_kds_ox	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.028.gsm		Source Model ID (or filename): SRS Saltstone v5.027.gsm				
New Model File Date: 9/07/2018		Source Model File Date: 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Sr	Materials\Concrete_Kds_ox	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Saltstone_Kd	Materials\Concrete_Kds_ox	Added element based on Concrete_Kd and named it Saltstone_Kd. Then, replaced Sr-90 and Ra-226 and Ra-228 values with SaltstoneKd_Dist_Sr, and SaltstoneKd_Dist_Ra.	Y	None	N/A	Y
GSD_Pick_Tc	Materials\Concrete_Kds_Oxidizing_s_ox	Deleted Element. Because Tc release is now based on the shrinking core model, this element is no longer used.	Y	None	N/A	Y
SaltstoneKd_Dist_Tc	Materials\Concrete_Kds_Oxidizing_s_ox	Deleted Element. Because Tc release is now based on the shrinking core model, this element is no longer used.	Y	None	N/A	Y
GSD_Pick_Ba	Materials\Concrete_Kds_Oxidizing_s_ox	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.028.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.027.gsm				
<b>New Model File Date:</b> 9/07/2018		<b>Source Model File Date:</b> 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba	\\Materials\\Concrete_Kds_Oxidizing_oung_concrete_kd_s_ox	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y
GSD_Pick_Ra	\\Materials\\Concrete_Kds_Oxidizing_oung_concrete_kd_s_ox	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
SaltstoneKd_Dist_Ra	\\Materials\\Concrete_Kds_Oxidizing_oung_concrete_kd_s_ox	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
GSD_Pick_Sr	\\Materials\\Concrete_Kds_Oxidizing_oung_concrete_kd_s_ox	Updated element to link to Sr_Kd_Saltstone_II	Y	The change is correct but the Change Description is wrong and should be Sr_Kd_Saltstone_I	Agreed.	Y
SaltstoneKd_Dist_Sr	\\Materials\\Concrete_Kds_Oxidizing_oung_concrete_kd_s_ox	Updated element to link to Sr_Kd_Saltstone_II	Y	The change is correct but the Change Description is wrong and should be Sr_Kd_Saltstone_I	Agreed.	Y

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New Model ID (or filename): SRS Saltstone v5.028.gsm		Source Model ID (or filename): SRS Saltstone v5.027.gsm				
New Model File Date: 9/07/2018		Source Model File Date: 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Saltstone_Kd	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kd_s_ox	Deleted Saltstone_Kd, then made a copy of Concrete_Kd and renamed it to Saltstone_Kd. Then, replaced Sr-90 and Ra-226 and Ra-228 values with SaltstoneKd_Dist_Sr, and SaltstoneKd_Dist_Ra.	Y	None	N/A	Y
GSD_Pick_Tc	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Deleted Element. Because Tc release is now based on the shrinking core model, this element is no longer used.	Y	None	N/A	Y
SaltstoneKd_Dist_Tc	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Deleted Element. Because Tc release is now based on the shrinking core model, this element is no longer used.	Y	None	N/A	Y
GSD_Pick_Ba	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.028.gsm		Source Model ID (or filename): SRS Saltstone v5.027.gsm				
New Model File Date: 9/07/2018		Source Model File Date: 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba	\\Materials\\Concret e_Kds_Reducing\\ middle_concrete_ kds_red	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y
GSD_Pick_Ra	\\Materials\\Concret e_Kds_Reducing\\ middle_concrete_ kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
SaltstoneKd_Dist_Ra	\\Materials\\Concret e_Kds_Reducing\\ middle_concrete_ kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
GSD_Pick_Sr	\\Materials\\Concret e_Kds_Reducing\\ middle_concrete_ kds_red	Updated element to link to Sr_Kd_Saltstone_II	Y	None	N/A	Y
SaltstoneKd_Dist_Sr	\\Materials\\Concret e_Kds_Reducing\\ middle_concrete_ kds_red	Updated element to link to Sr_Kd_Saltstone_II	Y	None	N/A	Y
GSD_Pick_I	\\Materials\\Concret e_Kds_Reducing\\ middle_concrete_ kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.028.gsm		Source Model ID (or filename): SRS Saltstone v5.027.gsm				
New Model File Date: 9/07/2018		Source Model File Date: 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_I	\\Materials\Concret e_Kds_Reducing\ middle_concrete_ kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Saltstone_Kd	\\Materials\Concret e_Kds_Reducing\ middle_concrete_ kds_red	Deleted Saltstone_Kd, then made a copy of Concrete_Kd and renamed it to Saltstone_Kd. Then, replaced I-129, Sr-90 and Ra-226 and Ra-228 values with SaltstoneKd_Dist_I, SaltstoneKd_Dist_Sr, and SaltstoneKd_Dist_Ra.	Y	None	N/A	Y
Kd_Median	\\Materials\Concret e_Kds_Reducing\ middle_concrete_ kds_red	Updated Kd value for iodine (0.71 mL/g) to match data in SRR-CWDA-2018- 00045. Then changed it back because this is only for saltstone. Value is set to 2.0 mL/g (per SRNL-STI- 2009-00473, Rev. 1, Table 15). Iodine value is implemented via Saltstone_Kd.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.028.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.027.gsm				
<b>New Model File Date:</b> 9/07/2018		<b>Source Model File Date:</b> 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
GSD_Pick_Ba	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y
SaltstoneKd_Dist_Ba	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y
GSD_Pick_Ra	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
SaltstoneKd_Dist_Ra	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
GSD_Pick_Sr	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.028.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.027.gsm				
<b>New Model File Date:</b> 9/07/2018		<b>Source Model File Date:</b> 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Sr	\\Materials\\Concrete_Kds_Reducing\\old_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
GSD_Pick_I	\\Materials\\Concrete_Kds_Reducing\\old_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
SaltstoneKd_Dist_I	\\Materials\\Concrete_Kds_Reducing\\old_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Saltstone_Kd	\\Materials\\Concrete_Kds_Reducing\\old_concrete_kds_red	Added element based on Concrete_Kd and named it Saltstone_Kd. Then, replaced I-129, Sr-90 and Ra-226 and Ra-228 values with SaltstoneKd_Dist_I, SaltstoneKd_Dist_Sr, and SaltstoneKd_Dist Ra.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.028.gsm		Source Model ID (or filename): SRS Saltstone v5.027.gsm				
New Model File Date: 9/07/2018		Source Model File Date: 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	\\Materials\Concret e_Kds_Reducing\ old_concrete_kds _red	Updated Kd value for iodine (0.71 mL/g) to match data in SRR-CWDA-2018-00045. Then changed it back, because this is only for saltstone. SRNL-STI-2009-00473, Rev. 1, Table 15 recommends a value of 0 mL/g, but set to a very small value ( <i>Epsilon</i> ) to be consistent with Kd approach.	Y	None	N/A	Y
GSD_Pick_Tc	\\Materials\Concret e_Kds_Reducing\ young_concrete_k ds_red	Deleted Element. Because Tc release is now based on the shrinking core model, this element is no longer used.	Y	None	N/A	Y
SaltstoneKd_Dist_Tc	\\Materials\Concret e_Kds_Reducing\ young_concrete_k ds_red	Deleted Element. Because Tc release is now based on the shrinking core model, this element is no longer used.	Y	None	N/A	Y
GSD_Pick_Ba	\\Materials\Concret e_Kds_Reducing\ young_concrete_k ds_red	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.028.gsm		Source Model ID (or filename): SRS Saltstone v5.027.gsm				
New Model File Date: 9/07/2018		Source Model File Date: 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements. Note that the current list of contaminants does not include Ba, so this element only a place holder for future use should Ba be included.	Y	None	N/A	Y
GSD_Pick_Ra	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
SaltstoneKd_Dist_Ra	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
GSD_Pick_Sr	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Updated element to link to Sr_Kd_Saltstone_J	Y	None	N/A	Y
SaltstoneKd_Dist_Sr	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Updated element to link to Sr_Kd_Saltstone_J	Y	None	N/A	Y
GSD_Pick_J	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.028.gsm		Source Model ID (or filename): SRS Saltstone v5.027.gsm				
New Model File Date: 9/07/2018		Source Model File Date: 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_I	\\Materials\\Concret e_Kds_Reducing\\ young_concrete_k ds_red	Added element. This change supports an update to the Saltstone_Kd elements.	Y	None	N/A	Y
Saltstone_Kd	\\Materials\\Concret e_Kds_Reducing\\ young_concrete_k ds_red	Added element based on Concrete_Kd and named it Saltstone_Kd. Then, replaced I-129, Sr-90 and Ra-226 and Ra-228 values with SaltstoneKd_Dist_I, SaltstoneKd_Dist_Sr, and SaltstoneKd_Dist Ra.	Y	None	N/A	Y
Kd_Median	\\Materials\\Concret e_Kds_Reducing\\ young_concrete_k ds_red	Updated Kd value for iodine (0.07 mL/g) to match data in SRR-CWDA-2018- 00045. Then changed it back, because this is only for saltstone. SRNL-STI- 2009-00473, Rev. 1, Table 15 recommends a value of 0 mL/g, but set to a very small value ( <i>Epsilon</i> ) to be consistent with Kd approach.	Y	None	N/A	Y
Kd_Median	\\Materials\\SandyS oilKds	Updated Kd values for NO2, NO3 to match data for N in SRNL-STI-2009- 00473, Rev. 1, Table 14.	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.028.gsm		Source Model ID (or filename): SRS Saltstone v5.027.gsm				
New Model File Date: 9/07/2018		Source Model File Date: 8/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Median	Materials\SandyS oilKds_Leachatel impacted	Updated Kd values for NO2, NO3 to match data for N in SRNL-STI-2009- 00473, Rev. 1, Table 14.	Y	None	N/A	Y
Saltstone_Kds	DisposalUnits\SD U1\ConcreteDegra dation	Updated links for saltstone Kds.	Y	None	N/A	Y
Saltstone_Kds	DisposalUnits\SD U4\ConcreteDegra dation	Updated links for saltstone Kds.	Y	None	N/A	Y
SDU_TransportSubmod el	DisposalUnits\SD Us\OuterLoop\Inn erLoop	Added saltstone Kd for Ox III to input interface for submodel.	Y	None	N/A	Y
Saltstone_Kd_Old_Ox	SUBMODEL: InputData\Material Kds	Added element.	Y	None	N/A	Y
Saltstone_Kds	SUBMODEL: SDUs\ConcreteD egradation	Updated links to Saltstone Kds.	Y	None	N/A	Y
[not applicable]	[not applicable]	Versioned model to 5.028.	Y	None	N/A	Y
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments) <i>SEP/18 9/17/2018</i>				
Checker Name (print): Barry Lester		E-Signature (or sign/date/scan hardcopy): <i>By me 9/19/2018</i>				

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SRS Saltstone v5.029.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.029.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.028.gsm				
<b>New Model File Date:</b> 9/13/2018		<b>Source Model File Date:</b> 9/07/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Added Cf-251 to Species list.						
Species	Materials	Added: Cf-251 Atomic weight is from SRR-CWDA-2018-00018. Decays into Cm-247 based on information at: <a href="https://rais.ornl.gov/tools/chain.php">https://rais.ornl.gov/tools/chain.php</a> (Note: The website did not properly display Cf-251, so I searched for Fm-255, a parent to Cf-251) Updated the half-life of Cf-251 from SRR-CWDA-2018-00018.	Y	None	N/A	Y
HalfLives	Materials	Updated the half-life of Cf-251 from SRR-CWDA-2018-00018.	Y	None	N/A	Y
Kd_Median	Materials\ClayeyS oilKds	Set Kd value of Cf-251 to be <a href="#">Kd_Dist[Cf]</a>	Y	Kd_Median in Column 1 should be Kd.	Agreed	Y
Kd_Median	Materials\ClayeyS oilKds_LeachateImpacted	Set Kd value of Cf-251 to be <a href="#">Kd_Dist[Cf]</a>	Y	Kd_Median in Column 1 should be Kd.	Agreed	Y
Concrete_Kd	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Set Kd value of Cf-251 to be <a href="#">Kd_Dist[Cf]</a>	Y	None	N/A	Y
Saltstone_Kd	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Set Kd value of Cf-251 to be <a href="#">Kd_Dist[Cf]</a>	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.029.gsm		Source Model ID (or filename): SRS Saltstone v5.028.gsm				
New Model File Date: 9/13/2018		Source Model File Date: 9/07/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Concrete_Kd	Materials\Concrete_Kds_oxidizing\old_concrete_kds_ox	Set Kd value of Cf-251 to be <b>Kd_Dist[Cf]</b>	Y	None	N/A	Y
Saltstone_Kd	Materials\Concrete_Kds_oxidizing\old_concrete_kds_ox	Set Kd value of Cf-251 to be <b>Kd_Dist[Cf]</b>	Y	None	N/A	Y
Concrete_Kd	Materials\Concrete_Kds_oxidizing\old_concrete_kds_ox	Set Kd value of Cf-251 to be <b>Kd_Dist[Cf]</b>	Y	None	N/A	Y
Saltstone_Kd	Materials\Concrete_Kds_oxidizing\old_concrete_kds_ox	Set Kd value of Cf-251 to be <b>Kd_Dist[Cf]</b>	Y	None	N/A	Y
Concrete_Kd	Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Set Kd value of Cf-251 to be <b>Kd_Dist[Cf]</b>	N	Kd not set	<b>Will be corrected in v5.030.</b>	Y
<b>Concrete_Kd_Grout</b>	Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Set Kd value of Cf-251 to be <b>Kd_Dist[Cf]</b>	<b>Y</b>	<b>Change not declared</b>	Agreed. Thanks.	Y
Saltstone_Kd	Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Set Kd value of Cf-251 to be <b>Kd_Dist[Cf]</b>	Y	None	N/A	Y
Concrete_Kd	Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Set Kd value of Cf-251 to be <b>Kd_Dist[Cf]</b>	Y	None	N/A	Y

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### Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.029.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.028.gsm				
<b>New Model File Date:</b> 9/13/2018		<b>Source Model File Date:</b> 9/07/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Saltstone_Kd	Materials\Concrete_Kds_Reducing\ old_concrete_kds_red	Set Kd value of Cf-251 to be Kd_Dist[Cf]	Y	None	N/A	Y
Concrete_Kd	Materials\Concrete_Kds_Reducing\ young_concrete_kds_red	Set Kd value of Cf-251 to be Kd_Dist[Cf]	Y	None	N/A	Y
Saltstone_Kd	Materials\Concrete_Kds_Reducing\ young_concrete_kds_red	Set Kd value of Cf-251 to be Kd_Dist[Cf]	Y	None	N/A	Y
Kd_Median	Materials\SandyS_oilKds	Set Kd value of Cf-251 to be Kd_Dist[Cf]	Y	Kd_Median in Column 1 should be Kd.	Agreed	Y
Kd_Median	Materials\SandyS_oilKds_LeachateImpacted	Set Kd value of Cf-251 to be Kd_Dist[Cf]	Y	Kd_Median in Column 1 should be Kd.	Agreed	Y
[not applicable]	[not applicable]	Versioned model to 5.029.	Y	None	N/A	Y
If checker has no comments, check here. <input type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Steve Hommel</i> 9/19/2018				
<b>Checker Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Barry Lester</i> 9/19/2018				

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SRS Saltstone v5.030.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						Changed Model Check Form		
New Model ID (or filename): SRS Saltstone v5.030.gsm			Source Model ID (or filename): SRS Saltstone v5.029.gsm					
New Model File Date: 9/13/2018			Source Model File Date: 9/13/2018					
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N		
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.								
<b>Objective:</b> Minor correction based on checking of previous version.								
Concrete_Kd	\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Set Kd value of Cf-251 to be Kd_Dist(Cf)	Y	None	N/A	Y		
Species	\Materials	In the definition window, I reselected the "Species set ordering" to "Alphabetical" to put Cf251 with Cf249. This does not show as a change.	Y	None	N/A	Y		
[not applicable]	[not applicable]	Versioned model to 5.030.	Y	None	N/A	Y		
If checker has no comments, check here. <input checked="" type="checkbox"/>								
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): <i>Steve Hommel</i> 9/19/2018					
Checker Name (print): Barry Lester			E-Signature (or sign/date/scan hardcopy): <i>Barry Lester</i> 9/19/2018					

SRS Saltstone v5.031.gsm Changed Model Check Form (17 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Revise model with Revision 2 of SRR-CWDA-2013-00058						
ARF, AirWaterContent, AirMassLoadingSoil, ShowerAirWaterContent	\\Dose_Parameter _Calculations\\Dose Parameters\\Expo sureAndInhalation Params	Updated description to SRR-CWDA-2013- 00058_Rev2, Table 10.1-1	Y	None	N/A	Y
FractionSwimming	\\Dose_Parameter _Calculations\\Dose Parameters\\Expo sureAndInhalation Params	Updated sectors to both select 1.7E-3 and description to SRR-CWDA- 2013-00058_Rev2, Table 10.1-1	N	The value is supposed to be 4.1E-03. This is corrected in v5.032.	Confirmed.	Y
FractionShowering	\\Dose_Parameter _Calculations\\Dose Parameters\\Expo sureAndInhalation Params			Element shows as changed, but was not entered into checklist. Entry added by checker. Value is correct.	Agreed, thanks.	Y
ARF_Uncert	\\Dose_Parameter _Calculations\\Dose Parameters\\Expo sureAndInhalation Params\\ARF_Unc ert	Changed distribution to discrete and updated sectors to both select 1.7E- 3 and description to SRR- CWDA-2013-00058_Rev2, Table 10.1-1	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.031.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.030.gsm				
<b>New Model File Date:</b> 9/26/2018		<b>Source Model File Date:</b> 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
AirMassLoadingSoil_Uncert	\\Dose_Parameter_Calculations\\DoseParameters\\ExposureAndInhalationParams\\AirMassLoadingSoil_Uncert	Changed distribution to discrete and updated description to SRR-CWDA-2013-00058_Rev2, Table 10.1-1	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y
FractionUncertShower	\\Dose_Parameter_Calculations\\DoseParameters\\ExposureAndInhalationParams\\FractionUncertShower	Changed distribution to discrete and updated description to SRR-CWDA-2013-00058_Rev2, Table 10.1-1	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y
FractionUncertSwimming	\\Dose_Parameter_Calculations\\DoseParameters\\ExposureAndInhalationParams\\FractionUncertSwimming	Changed distribution to discrete and updated description to SRR-CWDA-2013-00058_Rev2, Table 10.1-1	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
AnnualBoating	\\Dose_Parameter Calculations\\Dos eParameters\\Expo sureAndInhalation Params\\AnnualBo ating	Updated data definition to 7.3E-03 and description to SRR-CWDA-2013- 00058_Rev2, Table 10.1-1	Y	None	N/A	Y
ShowerGF SwimmingGF BoatingGF FractionDrilling	\\Dose_Parameter Calculations\\Dos eParameters\\Expo sureAndInhalation Params	Updated description to SRR-CWDA-2013- 00058_Rev2, Table 10.1-1	Y	None	N/A	Y
FractionInGarden	\\Dose_Parameter Calculations\\Dos eParameters\\Expo sureAndInhalation Params\\FractionIn Garden	Updated selector inputs to 2.17E-01 from 2.7E-2 and updated the description to SRR-CWDA-2013- 00058_Rev2, Table 10.1-1	Y	None	N/A	Y
FractionUncertGarden	\\Dose_Parameter Calculations\\Dos eParameters\\Expo sureAndInhalation Params\\FractionU ncertGarden	Changed distribution to discrete and updated description to SRR-CWDA- 2013-00058_Rev2, Table 10.1-1	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y

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Waste Disposal Authority

### Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FractionUncertDrilling	\\Dose_Parameter _Calculations\\Dos eParameters\\Expo sureAndInhalation Params\\FractionU ncertDrilling	Changed distribution to discrete and updated description to SRR-CWDA- 2013-00058_Rev2, Table 10.1-1	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y
RateChooser_switch	\\User_Input\\RateC hooser_switch	Created data properties to determine the probabilistic runs outcome for uptake rates	Y	To provide greater clarity, v5.032 shows additional explanation and renamed element to HumanUptakeChooser	Confirmed improvement to the element.	Y
UncertMultiplier_Water Uptake UncertMultiplier_Produc eUptake UncertMultiplier_MeatU ptake UncertMultiplier_FishUp take	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	For all stochastic - updated the description to SRR-CWDA-2013- 00058_Rev2, Table 8.1-1 and the distribution and values according to Table 8.1-1, for those with no stochastics the distribution was set to discrete	Y	None	N/A	Y
UncertMultiplier_AirUpt ake UncertMultiplier_SoilUpt ake UncertMultiplier_MilkUp take	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	For all stochastic - updated the description to SRR-CWDA-2013- 00058_Rev2, Table 8.1-1 and the distribution and values according to Table 8.1-1, for those with no stochastics the distribution was set to discrete	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Milk_Density	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers\\Milk_Density	Updated the description to SRR-CWDA-2013- 00058_Rev2, Table 8.1-1	Y	None	N/A	Y
HumanUptakeofWater	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers\\HumanUptake ofWater	Updated description to SRR-CWDA-2013- 00058_Rev2, Section 8.1.1.8 and added switches referencing RateChooser_switch and selector values from Section 8.1.1.8	Y	None	N/A	Y
HumanUptakeofSoil	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers\\HumanUptake ofSoil	Updated selector inputs and description with SRR- CWDA-2013-00058_Rev2, Table 8.1-1	Y	None	N/A	Y
HumanUptakeofProduce	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers\\HumanUptake ofProduce	Updated description to SRR-CWDA-2013- 00058_Rev2, Section 8.1.3.3 and added switches referencing RateChooser_switch and selector values from Section 8.1.3.3	N	Conservative value was input as 564 kg/yr. Per report, this should be 546 kg/yr. Value corrected in V5.032.	Confirmed.	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
HumanUptakeofMeat	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers\\HumanUptake ofMeat	Updated description to SRR-CWDA-2013- 00058_Rev2, Section 8.1.4.3 and added switches referencing RateChooser_switch and selector values from Section 8.1.4.3	Y	None	N/A	Y
HumanBreathingRate	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers\\HumanBreathi ngRate	Updated description to SRR-CWDA-2013- 00058_Rev2, Section 8.1.9 and added switches referencing RateChooser_switch and selector values from Section 8.1.9	Y	None	N/A	Y
HumanUptakeofMilk	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers\\HumanUptake ofMilk	Updated description to SRR-CWDA-2013- 00058_Rev2, Section 8.1.5.2 and added switches referencing RateChooser_switch and selector values from Section 8.1.5.2	Y	None	N/A	Y
HumanUptakeofPoultry	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers\\HumanUptake ofPoultry	Updated description to SRR-CWDA-2013- 00058_Rev2, Section 8.1.6.2 and added switches referencing RateChooser_switch and selector values from Section 8.1.6.2	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
HumanUptakeofEgg	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers\\HumanUptake ofEgg	Updated description to SRR-CWDA-2013- 00058_Rev2, Section 8.1.7.2 and added switches referencing RateChooser_switch and selector values from Section 8.1.7.2	Y	None	N/A	Y
HumanUptakeofFish	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers\\HumanUptake ofFish	Updated description to SRR-CWDA-2013- 00058_Rev2, Section 8.1.8 and added switches referencing RateChooser_switch and selector values from Section 8.1.8	Y	None	N/A	Y
WellDepth_Uncert	\\Dose_Parameter _Calculations\\Dos eParameters\\Well DepthParameters\\ WellDepth_Uncert	Updated description to SRR-CWDA-2013- 00058_Rev2, Table 10.2-3, set display units as feet, changed the distribution to log normal and added parameter values from Table 10.2-3	N	Unit needs to be defined. This is corrected in v5.032.	Agreed, thanks.	Y
WellDepth	\\Dose_Parameter _Calculations\\Dos eParameters\\Well DepthParameters\\ WellDepth	Updated description to SRR-CWDA-2013- 00058_Rev2, Table 10.2-3	Y	None	N/A	Y
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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WashingFactor, ProduceCropYield, FracLeafyProduce, FracNonLeafyProduce, GardenSize, GardenSizeUncert, FracLeafyRetention, RetentionUncert, TillDepth, TillDepthUncert, CropIrrigationTime, & CropIrrigationTimeUncert	\\Dose_Parameter _Calculations\Dose Parameters\Crop Parameters	Updated description to SRR-CWDA-2013- 00058_Rev2, Table 10.2-2	Y	None	N/A	Y
FracLeafyProduce_det	\\Dose_Parameter _Calculations\Dose Parameters\Crop Parameters\FracL eafyProduce_det	Updated description to SRR-CWDA-2013- 00058_Rev2, Table 10.2-2 and updated selector value	Y	None	N/A	Y
YieldUncert	\\Dose_Parameter _Calculations\Dose Parameters\Crop Parameters\Yield Uncert	Updated description to SRR-CWDA-2013- 00058_Rev2, Table 10.2-2 and changed distribution to discrete	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y
SoilToPlantRatio_0	\\Dose_Parameter _Calculations\Dose Parameters\Tran sferFactors\SoilTo PlantRatio_0	Updated description to SRR-CWDA-2013- 00058_Rev2, Table 9.2-1 and edited data	N	The value for Carbon is wrong. This is corrected in v5.032.	Confirmed correction.	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SoilToPlant_Ratio_Uncert	\\Dose_Parameter_Calculations\DoseParameters\TransferFactors\SoilToPlant_Ratio_Uncert	Updated description to SRR-CWDA-2013-00058_Rev2, Section 9.2 and distribution to discrete	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y
WellConcRatio	\\Dose_Parameter_Calculations\DoseParameters\WellDepthParameters\WellConcRatio	Updated description to include SRR-CWDA-2013-00058 Rev 2, Section 10.2.3.1 from SRS-REG-2007-00002 Rev1, Table 5.6-5 and modified selector inputs to match text values	N	Selector logic won't work with the way that WellDepth_Uncert is now set up. I correct this in v5.032.	Confirmed addition of switch with If Realization = 0 then 1.	Y
TransferFactorMeat_Uncert	\\Dose_Parameter_Calculations\DoseParameters\TransferFactors\TransferFactorMeat_Uncert	Updated description to SRR-CWDA-2013-00058_Rev2, Section 9.3 and distribution to discrete	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y
TransferFactorMeat_0	\\Dose_Parameter_Calculations\DoseParameters\TransferFactors\TransferFactorMeat_0	Updated description to SRR-CWDA-2013-00058_Rev2, Table 9.3-1 and edited data	N	The value for Carbon is wrong. This is corrected in v5.032.	Confirmed correction.	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
TransferFactorMilk_Unc ert	\\Dose_Parameter _Calculations\\Dos eParameters\\Tran sferFactors\\Transf erFactorMilk_Unc ert	Updated description to SRR-CWDA-2013- 00058_Rev2, Section 9.4 and distribution to discrete	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y
TransferFactorMilk_0	\\Dose_Parameter _Calculations\\Dos eParameters\\Tran sferFactors\\Transf erFactorMilk_0	Updated description to SRR-CWDA-2013- 00058_Rev2, Table 9.4-1 and edited data	N	The value for Carbon is wrong. This is corrected in v5.032.	Confirmed correction.	Y
TransferFactorPoultry_ 0	\\Dose_Parameter _Calculations\\Dos eParameters\\Tran sferFactors\\Transf erFactorPoultry_0	Updated description to SRR-CWDA-2013- 00058_Rev2, Table 9.5-1 and edited data	N	The value for Carbon is wrong. This is corrected in v5.032.	Confirmed correction.	Y
TransferFactorEgg_0	\\Dose_Parameter _Calculations\\Dos eParameters\\Tran sferFactors\\Transf erFactorEgg_0	Updated description to SRR-CWDA-2013-00058 Rev2, Table 9.6-1 and edited data	N	The value for Carbon is wrong. This is corrected in v5.032.	Confirmed correction.	Y
TransferFactorFish_0	\\Dose_Parameter _Calculations\\Dos eParameters\\Tran sferFactors\\Transf erFactorFish_0	Updated description to SRR-CWDA-2013-00058 Rev2, Table 9.7-1 and edited data	N	The value for Carbon is wrong. This is corrected in v5.032.	Confirmed correction.	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
TransferFactorFish_Uncert	\\Dose_Parameter_Calculations\DoseParameters\TransferFactorFish_Uncert	Updated description to SRR-CWDA-2013-00058_Rev2, Section 9.7 and distribution to discrete	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y
LeachRate	\\Dose_Parameter_Calculations\DoseParameters\IntermediateParameterCalcs\LeachRate	Added description: SRR-CWDA-2013-00058 Rev2, Equation 3.1-3c	Y	None	N/A	Y
EffirregRate	\\Dose_Parameter_Calculations\DoseParameters\IntermediateParameterCalcs\EffirregRate	Added description: SRR-CWDA-2013-00058 Rev2, Equation 3.1-3d	Y	None	N/A	Y
SOILBuildUp	\\Dose_Parameter_Calculations\DoseParameters\IntermediateParameterCalcs\SOILBuildUp	Added description: SRR-CWDA-2013-00058 Rev2, Equation 3.1-3b	Y	None	N/A	Y

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SRS Saltstone v5.031\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WeatherAndRadDecay Constant	\\Dose_Parameter _Calculations\\Dos eParameters\\Inter mediateParameter Calcs\\WeatherAnd RadDecayConsta nt	Added description: SRR- CWDA-2013-00058 Rev2, Equation 3.1-4e	Y	None	N/A	Y
ROOT_Leafy	\\Dose_Parameter _Calculations\\Dos eParameters\\Inter mediateParameter Calcs\\ROOT_Leaf y	Added description: SRR- CWDA-2013-00058 Rev2, Equation 3.1-4d	Y	None	N/A	Y
ROOT_nonLeafy	\\Dose_Parameter _Calculations\\Dos eParameters\\Inter mediateParameter Calcs\\ROOT_non Leafy	Added description: SRR- CWDA-2013-00058 Rev2, Equation 3.1-4d	Y	None	N/A	Y
LEAF_pre	\\Dose_Parameter _Calculations\\Dos eParameters\\Inter mediateParameter Calcs\\LEAF_pre	Added description: SRR- CWDA-2013-00058 Rev2, Equation 3.1-4c	Y	None	N/A	Y
LEAF	\\Dose_Parameter _Calculations\\Dos eParameters\\Inter mediateParameter Calcs\\LEAF	Added description: SRR- CWDA-2013-00058 Rev2, Equation 3.1-4c and Table 10.2-2 Added formulas for Cf-251 and Rn-222	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PLANT_Uptake	\\Dose_Parameter _Calculations\Dose Parameters\Inter mediateParameter Calcs\PLANT_Upt ake	Added description: SRR- CWDA-2013-00058 Rev2, Equation 3.1-4b	Y	None	N/A	Y
Fodder	\\Dose_Parameter _Calculations\Dose Parameters\Inter mediateParameter Calcs\Fodder	Added description: SRR- CWDA-2013-00058 Rev2, Equation 3.1-5b	Y	None	N/A	Y
SoilBuildupTime, SurfaceDensity_Sandy Soil, PrecipRate, EvapTransRate, IrrigationRate, IrrigationRateUncert, WeatheringDecayConst	\\Dose_Parameter _Calculations\Dose Parameters\SoilB uildupParameters	Added description: SRR- CWDA-2013-00058 Rev2, Table 10.2-1	Y	None	N/A	Y
WeatheringDecayConst Uncert, SoilMoistureContent	\\Dose_Parameter _Calculations\Dose Parameters\SoilB uildupParameters	Added description: SRR- CWDA-2013-00058 Rev2, Table 10.2-1 and updated the distribution parameters	Y	None	N/A	Y

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SRS Saltstone v5.031\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DCFIngestion_Adult, DCFInhalation_Adult, DCFExposureSoil_Adult, DCFExposureWater_Adult	\\Dose_Parameter Calculations\\Dose Parameters\\Dose ConversionFactor s	Added description: SRR- CWDA-2013-00057 Rev2, Table 7.1-1, converted in File:DCF_Summary_2018_ Sept11.xlsx, updated data with values from table 7.1-1	N	For DCFIngestion_Adult the value for Pb-210 looks like you might have entered the value for Pb-209. Ra228 looks like it has the Ra226 data. I corrected the values in v5.032. All others were correct.	Agreed, confirmed correction. Thanks.	Y
Uptake_WatertoXYZ, Uptake_FodderXYZ, Uptake_SoiltoXYZ XYZ = MEAT and MILK and EGG and POULTRY	\\Dose_Parameter Calculations\\Dose Parameters\\Other UptakerParameters	Updated description SRR- CWDA-2013-00057 Rev 2, Table 8.2-1	Y	None	N/A	Y
UncertMultiplier_Watert oXYZ, UncertMultiplier_XYZFo ddertoXYZ	\\Dose_Parameter Calculations\\Dose Parameters\\Other UptakerParameters	Updated description SRR- CWDA-2013-00057 Rev 2, Table 8.2-1 and changed distributions to discrete	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed all.	Y
XYZFodderFraction And XYZSoilFraction Where XYZ = Meat and Milk and Egg and Poultry	\\Dose_Parameter Calculations\\Dose Parameters\\Other UptakerParameters	Updated description SRR- CWDA-2013-00057 Rev 2, Table 8.2-2 and modified data definition to 1	Y	None	N/A	Y

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### Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UncertMult_MEATFodderFraction, UncertMult_MILKFodderFraction	\\Dose_ParameterCalculations\\DoseParameters\\OtherUptakeParameters	Updated description SRR-CWDA-2013-00057 Rev 2, Table 8.2-2 and changes distribution to discrete	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Confirmed.	Y
FracLocalWater, FracLocalXYZ_MOP_det, FracLocalXYZ_IHI_det, FracLocalXYZ_MOP, FracLocalXYZ_IHI FracLocalFished FracLocalFished_det	\\Dose_ParameterCalculations\\DoseParameters\\LocalFractionParameters	Updated description SRR-CWDA-2013-00057 Rev 2, Table 10.3-1	N	Based on Eq 10.3-1, FracLocalPlants_MOP_det and FracLocalPlants_IHI_det Should be set to: ((ProduceCropYield*YieldUncert)*(GardenSize*GardenSizeUncert))/(HumanUptakeofProduceUncert*Multiplier_ProduceUptake))/(1/(4 * 1yr)) This is corrected in v5.032.	Agreed.	Y
FracLocalPlants_MOP, FracLocalPlant_IHI	\\Dose_ParameterCalculations\\DoseParameters\\LocalFractionParameters	Changed distribution to discrete	N	For parameters without sampling, the discrete values were set to 0. This would "zero-out" the uptake in the probabilistic modeling runs. I corrected these by setting the discrete values to 1 in v5.032.	Agreed, however these stochastic properties were deleted from v5.032. Confirmed functions impacted by these elements used FracLocalPlant_MOP_det and _IHI_det in v5.032.	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm				
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FracLocalXYZ_MOP_d et, FracLocalXYZ_IHI_det	\\Dose_Parameter Calculations\\Dose Parameters\\Local FractionParameters	Updated values in accordance with Table 10.3-1	N/A	This is a duplicate entry (see above)	Agreed.	Y
Drill_Cutting_Inv	\\Model_Concentra tions\\Drill_Cutting _Inv	Updated inventory and description to SRR-CWDA- 2018-00041 Rev1	Y	None	N/A	Y
Inventory_Realistic	\\Inventory\\Inventory _Realistic	Updated description to include Rev 2, updated values for Cf-251 (All SDUs) and SDUs 1 and 4	Y	None	N/A	Y
Inventory_Compliance	\\Inventory\\Inventory _Compliance	Updated description to include Rev 2, updated values for Cf-251 (All SDUs) and SDUs 1 and 4	Y	None	N/A	Y
Inventory_Defensible	\\Inventory\\Inventory _Defensible	Updated description to include Rev 2, updated values for Cf-251 (All SDUs) and SDUs 1 and 4	Y	None	N/A	Y
WellDiameter	\\Dose_Parameter Calculations\\IHI DrillCutConc_Calc \\WellDiameter	Updated description to include SRR-CWDA-2013- 00058 Rev2, Table 10.2-3	Y	None	N/A	Y
[not applicable]	[not applicable]	Versioned model to 5.031.	Y	None	N/A	Y
If checker has no comments, check here. <input type="checkbox"/>						

Add additional rows above, as needed.

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.031.gsm		Source Model ID (or filename): SRS Saltstone v5.030.gsm	
New Model File Date: 9/26/2018		Source Model File Date: 9/13/2018	
Parameter or Element	Location	Change Description	Correct Y, N
Analyst Name (print): Leslie Wooten			Checker Comment
Checker Name (print): Steve Hommel			Analyst Response
		E-Signature (or sign/date/scan hardcopy): <i>[Signature]</i> 10/1/2018	Checker Concur? Y, N
		E-Signature (or sign/date/scan hardcopy): <i>[Signature]</i> 10/1/2018	

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SRS Saltstone v5.032.gsm Changed Model Check Form (8 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.032.gsm		Source Model ID (or filename): SRS Saltstone v5.031.gsm				
New Model File Date: 9/27/2018		Source Model File Date: 9/26/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Corrections to v5.031 in response to Checker comments.						
DoseParameters	\\Dose_Parameter_Calculations\	Organized the sequence of containers within this container. Organized so the sequence approximately follows the sequence of the parameter descriptions within the dose calculator report. Since this change does not impact values, this will likely not show as a change in the model file.	Y	None	N/A	Y
HumanUptakeChooser_switch	\\User_Input\HumanUptakeChooser_switch		Y	Element shows as changed, but was not entered into checklist. Entry added by checker. Analyst provided additional explanation and element was renamed to HumanUptakeChooser	Agreed. Comment noted.	Y
DCFIngestion_Adult,	\\Dose_Parameter_Calculations\DoseParameters\DoseConversionFactor_s	Corrected values for Pb-210 and Ra-228 based on Added description: SRR-CWDA-2013-00057 Rev2, Table 7.1-1	Y	None	N/A	Y

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SRS Saltstone v5.032\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.032.gsm		Source Model ID (or filename): SRS Saltstone v5.031.gsm				
New Model File Date: 9/27/2018		Source Model File Date: 9/26/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
HumanUptakeofProduce	\\Dose_Parameter _Calculations\\DoseParameters\\HumanUptakeParameters	Corrected typo in the defensible value, from 564 to 546 kg/yr	Y	None	N/A	Y
UncertMultiplier_Soil, UncertMultiplier_AirUptake, and UncertMultiplier_MilkUptake	\\Dose_Parameter _Calculations\\DoseParameters\\HumanUptakeParameters	Changed discrete values from 0 to 1 so probabilistic modeling runs will use the default/recommended values.	Y	None	N/A	Y
UncertMultiplier_Watert oMEAT UncertMultiplier_Watert oMILK UncertMultiplier_Fodder toMEAT UncertMultiplier_Fodder toMILK UncertMult_MEATFodderFraction UncertMult_MILKFodderFraction	\\Dose_Parameter _Calculations\\DoseParameters\\OtherUptakeParameters	Changed discrete values from 0 to 1 so probabilistic modeling runs will use the default/recommended values.	Y	None	N/A	Y
SoilToPlantRatio_0 TransferFactorMeat_0 TransferFactorEgg_0 TransferFactorFish_0 TransferFactorMilk_0 TransferFactorPoultry_0	\\Dose_Parameter _Calculations\\DoseParameters\\TransferFactors	Corrected value for carbon (C) to match input reference	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.032.gsm		Source Model ID (or filename): SRS Saltstone v5.031.gsm				
New Model File Date: 9/27/2018		Source Model File Date: 9/26/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SoilToPlant_Ratio_Uncert TransferFactorMeat_Uncert TransferFactorMilk_Uncert TransferFactorFish_Uncert	\\Dose_Parameter_Calculations\DoseParameters\TransferFactors	Changed discrete values from 0 to 1 so probabilistic modeling runs will use the default/recommended values.	Y	None	N/A	Y
FractionSwimming	\\Dose_Parameter_Calculations\DoseParameters\ExposureAndInhalationParams	Updated value to match reference.	Y	None	N/A	Y
ARF_Uncert AirMassLoadingSoil_Uncert FractionUncertSwimming FractionUncertShower FractionUncertDrilling FractionUncertGarden	\\Dose_Parameter_Calculations\DoseParameters\ExposureAndInhalationParams	Changed discrete values from 0 to 1 so probabilistic modeling runs will use the default/recommended values.	Y	None	N/A	Y
WellDepth	\\Dose_Parameter_Calculations\DoseParameters\WellDepthParameters	Element shows as changed, but it was not changed.	Y	None	N/A	Y
WellDepth_Uncert	\\Dose_Parameter_Calculations\DoseParameters\WellDepthParameters	Changed from unitless to using ft as the unit. Also set deterministic value from "1" to "WellDepth"	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.032.gsm		Source Model ID (or filename): SRS Saltstone v5.031.gsm				
New Model File Date: 9/27/2018		Source Model File Date: 9/26/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WellConcRatio	\\Dose_Parameter _Calculations\\Dose Parameters\\Well DepthParameters	Modified selector logic. Added the first option, which says if the model is run deterministically (Realization = 0), to automatically use the full concentrations (multiplier = 1).	Y	None	N/A	Y
FracLocalPlants_MOP_ det FracLocalPlants_IHI_ t	\\Dose_Parameter _Calculations\\Dose Parameters\\Local IFractionParameters	Based on Eq 10.3-1, set local fraction to: (((ProduceCropYield*YieldUncert )*(GardenSize*GardenSizeUnc ert))/((HumanUptakeOffProduce*Un certMultiplier_ProduceUptake)))*( 1/4 * 1yr))	Y	None	N/A	Y
YieldUncert	\\Dose_Parameter _Calculations\\Dose Parameters\\Crop Parameters\\Yield Uncert		Y	Element shows as changed, but was not entered into checklist. Entry added by checker. Analyst modified selector logic. Added the first option, which says if the model is run deterministically (Realization = 0), to automatically use the full concentrations (multiplier = 1).	Agreed. Comment noted.	Y
FracLocalPlants_MOP FracLocalPlants_IHI	\\Dose_Parameter _Calculations\\Dose Parameters\\Local IFractionParameters	Deleted these local fractions.	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.032.gsm		Source Model ID (or filename): SRS Saltstone v5.031.gsm				
New Model File Date: 9/27/2018		Source Model File Date: 9/26/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PlantDose_100m_rads	\\Dose_Results\\Se ctA_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_ Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctB_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_ Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctC_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_ Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctD_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_ Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctE_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_ Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctF_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_ Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctF_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_ Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.032.gsm		Source Model ID (or filename): SRS Saltstone v5.031.gsm				
New Model File Date: 9/27/2018		Source Model File Date: 9/26/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PlantDose_100m_rads	\\Dose_Results\\Se ctG_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_Ing_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctH_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_Ing_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctI_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_Ing_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctJ_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_Ing_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctK_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_Ing_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctL_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_Ing_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_100m_rads	\\Dose_Results\\Se ctM_100m_Dose\\ DoseCalcs_100m\\ Dose_100m_Ing_Ing_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.032.gsm		Source Model ID (or filename): SRS Saltstone v5.031.gsm				
New Model File Date: 9/27/2018		Source Model File Date: 9/26/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PlantDose_IHI_rads	\\Dose_Results\\IHI _Well1_Dose\\Dose eCalcs_IHI\\Dose_I HI_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_IHI_rads	\\Dose_Results\\IHI _Well2_Dose\\Dose eCalcs_IHI\\Dose_I HI_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_IHI_rads	\\Dose_Results\\IHI _Well3_Dose\\Dose eCalcs_IHI\\Dose_I HI_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_IHI_rads	\\Dose_Results\\IHI _Well4_Dose\\Dose eCalcs_IHI\\Dose_I HI_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_IHI_rads	\\Dose_Results\\IHI _Well5_Dose\\Dose eCalcs_IHI\\Dose_I HI_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_IHI_rads	\\Dose_Results\\IHI _Well6_Dose\\Dose eCalcs_IHI\\Dose_I HI_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.032.gsm		Source Model ID (or filename): SRS Saltstone v5.031.gsm				
New Model File Date: 9/27/2018		Source Model File Date: 9/26/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PlantDose_IHI_rads	\\Dose_Results\\IHI_Weil7_Dose\\DoseCalcs_IHI\\Dose_IHI_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_IHI_rads	\\Dose_Results\\IHI_1mBoundary\\DoseCalcs_IHI\\Dose_IHI_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
PlantDose_SL_rads	\\Dose_Results\\SL_Dose\\DoseCalcs_SL\\Dose_SL_Ing_Calcs	Updated link from FracLocalPlants_XXX To FracLocalPlants_XXX_det Where XXX is MOP or IHI	Y	None	N/A	Y
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop\\SDU_TransportSubmodel		Y	Element shows as changed, but was not entered into checklist. Entry added by checker. No change was made.	Agreed. Comment noted.	Y
[not applicable]	[not applicable]	Versioned model to 5.032.	Y	None	N/A	Y
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): Steve Hommel 10/1/2018				
Checker Name (print): Leslie Wooten		E-Signature (or sign/date/scan hardcopy): Leslie Wooten 10/1/2018				

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SRS Saltstone v5.032\_Check.docx

SRS Saltstone v5.033.gsm Changed Model Check Form (6 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.033.gsm		Source Model ID (or filename): SRS Saltstone v5.032.gsm				
New Model File Date: 9/28/2018		Source Model File Date: 9/27/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Adjust sector arrays to remove Sectors I, J, K, and L.						
SectI_100m_Dose	\Dose_Results	Deleted container and all contents.	Y	None	N/A	Y
SectJ_100m_Dose	\Dose_Results	Deleted container and all contents.	Y	None	N/A	Y
SectK_100m_Dose	\Dose_Results	Deleted container and all contents.	Y	None	N/A	Y
SectL_100m_Dose	\Dose_Results	Deleted container and all contents.	Y	None	N/A	Y
[Array: Sectors]	[Model → Array Labels]	Modified Sectors Array. It previously has Sectors A through F. Added G and H.	Y	None	N/A	Y
[Array: PorflowSectors]	[Model → Array Labels]	Modified PorflowSectors Array. Deleted Sectors I through L.	Y	None	N/A	Y
[Array: SDUsNorth]	[Model → Array Labels]	Modified SDUsNorth Array. Includes all round SDUs.	Y	None	N/A	Y
[Array: SDUsSouth]	[Model → Array Labels]	Modified SDUsSouth Array. Includes only SDUs 1 and 4.	Y	None	N/A	Y
[Array: SDU_Types]	[Model → Array Labels]	Modified SDU_Types Array. Changed last item from SDUalt to SDU7.	Y	None	N/A	Y
[Array: SectorSet]	[Model → Array Labels]	Modified SectorSet Array. Deleted Sectors I through L.	Y	None	N/A	Y
[Array: SectorsNorth]	[Model → Array Labels]	Modified SectorsNorth Array. Set to be A through E.	Y	None	N/A	Y

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SRS Saltstone v5.033\_Check

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.033.gsm		Source Model ID (or filename): SRS Saltstone v5.032.gsm				
New Model File Date: 9/28/2018		Source Model File Date: 9/27/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
[Array: SectorsSouth]	[Model → Array Labels]	Modified SectorsSouth Array. Set to be F through H.	Y	None	N/A	Y
SectorI_100m	\\Model_Concentra tions\\PORFLOW_ Conc	Deleted element.	Y	None	N/A	Y
SectorJ_100m	\\Model_Concentra tions\\PORFLOW_ Conc	Deleted element.	Y	None	N/A	Y
SectorK_100m	\\Model_Concentra tions\\PORFLOW_ Conc	Deleted element.	Y	None	N/A	Y
SectorL_100m	\\Model_Concentra tions\\PORFLOW_ Conc	Deleted element.	Y	None	N/A	Y
STAT100	\\Model_Concentra tions\\PORFLOW_ Conc	Edited element to remove broken links.	Y	None	N/A	Y
Seepline_Conc	\\Model_Concentra tions\\PORFLOW_ Conc	Edited element to reduce the columns indexing from 12 to 8.	Y	None	N/A	Y
SectorI_conc	\\Model_Concentra tions\\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y
SectorJ_conc	\\Model_Concentra tions\\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y
SectorK_conc	\\Model_Concentra tions\\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y

SRS Saltstone v5.033\_Check

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.033.gsm		Source Model ID (or filename): SRS Saltstone v5.032.gsm				
New Model File Date: 9/28/2018		Source Model File Date: 9/27/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorL_conc	\\Model_Concentra tions\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y
SectorI_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y
SectorJ_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y
SectorK_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y
SectorL_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y
SectorI_conc_2	\\Model_Concentra tions\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y
SectorJ_conc_2	\\Model_Concentra tions\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y
SectorK_conc_2	\\Model_Concentra tions\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y
SectorL_conc_2	\\Model_Concentra tions\GoldSim100 m_Conc	Deleted element.	Y	None	N/A	Y
SectorA_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	Modified Sector A to link to North arrays instead of South.	Y	None	N/A	Y

SRS Saltstone v5.033\_Check

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.033.gsm		Source Model ID (or filename): SRS Saltstone v5.032.gsm				
New Model File Date: 9/28/2018		Source Model File Date: 9/27/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorB_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	Modified Sector B to link to North arrays instead of South.	Y	None	N/A	Y
SectorC_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	Modified Sector C to link to North arrays instead of South.	Y	None	N/A	Y
SectorD_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	Modified Sector D to link to North arrays instead of South.	Y	None	N/A	Y
SectorE_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	Modified Sector E to link to North arrays instead of South.	Y	None	N/A	Y
SectorF_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	No change. Just noting that Sector F was already a southern sector.	Y	None	N/A	Y
SectorG_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	Modified Sector G to link to South arrays instead of North.	Y	None	N/A	Y
SectorH_conc_1	\\Model_Concentra tions\GoldSim100 m_Conc	Modified Sector H to link to South arrays instead of North.	Y	None	N/A	Y
SectorA_conc_2	\\Model_Concentra tions\GoldSim100 m_Conc	Modified Sector A to link to North arrays instead of South.	Y	None	N/A	Y
SectorB_conc_2	\\Model_Concentra tions\GoldSim100 m_Conc	Modified Sector B to link to North arrays instead of South.	Y	None	N/A	Y
SectorC_conc_2	\\Model_Concentra tions\GoldSim100 m_Conc	Modified Sector C to link to North arrays instead of South.	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.033.gsm		Source Model ID (or filename): SRS Saltstone v5.032.gsm				
New Model File Date: 9/28/2018		Source Model File Date: 9/27/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorD_conc_2	Model_Concentra tions\GoldSim100 m_Conc	Modified Sector D to link to North arrays instead of South.	Y	None	N/A	Y
SectorE_conc_2	Model_Concentra tions\GoldSim100 m_Conc	Modified Sector E to link to North arrays instead of South.	Y	None	N/A	Y
SectorF_conc_2	Model_Concentra tions\GoldSim100 m_Conc	No change. Just noting that Sector F was already a southern sector.	Y	None	N/A	Y
SectorG_conc_2	Model_Concentra tions\GoldSim100 m_Conc	Modified Sector G to link to South arrays instead of North.	Y	None	N/A	Y
SectorH_conc_2	Model_Concentra tions\GoldSim100 m_Conc	Modified Sector H to link to South arrays instead of North.	Y	None	N/A	Y
MOP_Doses	Dose_Results	Changed logic for Total to remove broken links.	Y	None	N/A	Y
Conc_SL	Dose_Results	Changed logic to remove broken links.	Y	None	N/A	Y
SDU_TransportSubmod el	DisposalUnits\SD Us\OuterLoop\Inn erLoop	Modified time steps to use 100-yr timesteps. And set model duration to 10,000 years. This is done only to facilitate faster testing of the model and should be set to shorter time steps and longer durations for the benchmarking analysis.	Y	None	N/A	Y

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SRS Saltstone v5.033\_Check



**Changed Model Check Form**

Waste Disposal Authority

New Model ID (or filename): SRS Saltstone v5.033.gsm		Source Model ID (or filename): SRS Saltstone v5.032.gsm				
New Model File Date: 9/28/2018		Source Model File Date: 9/27/2018				
Parameter or Element	Location	Change Description	Correct ? Y, N	Checker Comment	Analyst Response	Checker Concur? Y, N
[Model Time]	[Run → Simulation Settings]	Modified time steps to use 100-yr timesteps. And set model duration to 10,000 years. This is done only to facilitate faster testing of the model and should be set to shorter time steps and longer durations for the benchmarking analysis.	Y	None	N/A	Y
[not applicable]	[not applicable]	Versioned model to 5.033.	Y	None	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): <i>Steve Hommel</i> 10/1/2018				
Checker Name (print): Leslie Wooten		E-Signature (or sign/date/scan hardcopy): <i>Leslie Wooten</i> 10/1/2018				

Add additional rows above, as needed.  
(Not required if no comments)

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SRS Saltstone v5.033\_Check



SRS Saltstone v5.034.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.034.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.033.gsm				
<b>New Model File Date:</b> 10/2/2018		<b>Source Model File Date:</b> 9/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Minor Edits and brought in draft (non-final) aquifer concentrations to get preliminary dose results.						
EffIrrigationRate	\\Dose_Parameter _Calculations\\Dose Parameters\\Inter mediateParameter Calcs	Renamed element to correct spelling error (used to be <i>EffIrrigationRate</i> )	Y	N/A	None	Y
InstitutionalControl_IHI	\\Dose_Parameter _Calculations\\IHI_ DrillCutConc_Calc	Deleted unused element.	Y	N/A	None	Y
[Author]	[Run → Simulation Settings → Information]	Changed model author from "Glenn Taylor (SRNL)" to "Steve Hommel".	Y	N/A	None	Y
SectorIdata SectorJdata SectorKdata SectorLdata SectorIBM SectorJBM SectorKBM SectorLBM PFSectorI PFSectorJ PFSectorK PFSectorL	\\Benchmark\\Benc hmarkingPlots	Deleted elements.	Y	N/A	None	Y
[Array: Config]	\\Benchmark\\Benc hmarkingData	Deleted elements.	Y	N/A	None	Y
[Array: Groups]	[Model → Array Labels] [Model → Array Labels]	Deleted unused array. This change does not show in the GoldSim version report.	Y	N/A	None	Y

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10/2/2018

Waste Disposal Authority

### Changed Model Check Form

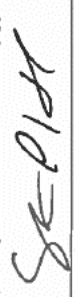

New Model ID (or filename): SRS Saltstone v5.034.gsm		Source Model ID (or filename): SRS Saltstone v5.033.gsm				
New Model File Date: 10/2/2018		Source Model File Date: 9/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
[Array: NonTransport]	[Model → Array Labels]	Deleted unused array. This change does not show in the GoldSim version report.	Y	N/A	None	Y
[Array: PF_times]	[Model → Array Labels]	Deleted unused array. This change does not show in the GoldSim version report.	Y	N/A	None	Y
[Array: PF_times_K]	[Model → Array Labels]	Deleted unused array. This change does not show in the GoldSim version report.	Y	N/A	None	Y
[Array: Sectors]	[Model → Array Labels]	Deleted unused array. This change does not show in the GoldSim version report.	Y	N/A	None	Y
[Array: Vector4]	[Model → Array Labels]	Deleted unused array. This change does not show in the GoldSim version report.	Y	N/A	None	Y
[Array: Wells]	[Model → Array Labels]	Deleted unused array. This change does not show in the GoldSim version report.	Y	N/A	None	Y
UsePORFLOWConcentrations	\\User_Input	Set to True	Y	N/A	None	Y
SectorA_100m SectorB_100m SectorC_100m SectorD_100m SectorE_100m SectorF_100m SectorG_100m SectorH_100m	\\Model_Concentra tions\\PORFLOW_ Conc	Input preliminary PORFLOW model results from \\godzilla- 01\\hpc_project\\projwork66\\ srr18\\SaltstonePA\\AquiferZ\\ Transport\\CaseCV_4\\All	Y	N/A	None	Y
[Time]	[Run → Simulation Settings]	Set model to run for 20,000 years with 10-yr timesteps	Y	N/A	None	Y

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Waste Disposal Authority  
**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.034.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.033.gsm				
<b>New Model File Date:</b> 10/2/2018		<b>Source Model File Date:</b> 9/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
[Time Points]	[Run → Simulation Settings→ Advanced]	Added 1,000 years as the Compliance Period and 10,000 years as the Performance Period.	Y	N/A	None	Y
SDU_TransportSubmod el	\DisposalUnits\SD Us\OuterLoop\Inn erLoop\	Submodel shows as changed. No change made.	Y	N/A	None	Y
[not applicable]	[not applicable]	Versioned model to 5.034.	Y	N/A	None	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  10/2/2018				
<b>Checker Name (print):</b> Jerry Mangold		<b>E-Signature (or sign/date/scan hardcopy):</b>  10/02/2018				

SRS Saltstone v5.034\_Check.docx

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SRS Saltstone v5.034.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.034.gsm		Source Model ID (or filename): SRS Saltstone v5.033.gsm				
New Model File Date: 10/2/2018		Source Model File Date: 9/28/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Minor Edits and brought in draft (non-final) aquifer concentrations to get preliminary dose results.						
EffIrrigationRate	\\Dose_Parameter _Calculations\\Dose Parameters\\Inter mediateParameter Calcs	Renamed element to correct spelling error (used to be <i>EffIrrigationRate</i> )	Y	N/A	None	Y
InstitutionalControl_IHL	\\Dose_Parameter _Calculations\\IHL DrillCutConc_Calc	Deleted unused element.	Y	N/A	None	Y
[Author]	[Run → Simulation Settings → Information]	Changed model author from "Glenn Taylor (SRNL)" to "Steve Hommel".	Y	N/A	None	Y
SectorIdata SectorJdata SectorKdata SectorLdata SectorIBM SectorJBM SectorKBM SectorLBM PFSectorI PFSectorJ PFSectorK PFSectorL	\\Benchmark\\Benc hmarkingPlots  \\Benchmark\\Benc hmarkingPlots  \\Benchmark\\Benc hmarkingData	Deleted elements.  Deleted elements.  Deleted elements.	Y  Y  Y	N/A  N/A  N/A	None  None  None	Y  Y  Y
[Array: Config]	[Model → Array Labels]	Deleted unused array.	Y	N/A	None	Y
[Array: Groups]	[Model → Array Labels]	Deleted unused array. This change does not show in the GoldSim version report.	Y	N/A	None	Y

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SRS Saltstone v5.035.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.035.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.034.gsm				
<b>New Model File Date:</b> 10/23/2018		<b>Source Model File Date:</b> 10/2/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Updated the sampling approach for stochastic inventory.						
[Time]	[Run → Simulation Settings]	Set model to run for 10,000 years with 20-yr timesteps to facilitate faster testing.	Y	N/A	N/A	Y
[Time Points]	[Run → Simulation Settings → Advanced]	Removed shorter time-stepping period to facilitate faster testing.	Y	N/A	N/A	Y
Tc99SpeciesNumber	[GlobalModel_Input/GeneralParameters]	Updated value based on current Species Array (Tc99 = 42)	Y	N/A	N/A	Y
SDU_TransportSubmodel	[DisposalUnits/SDUs/OuterLoop/InnerLoop]	Modified time-stepping to facilitate faster testing.	Y	Time step was modified to 100 Yr	N/A	Y
Uncert_OtherRads_Inventory	[Inventory/SDU_Inventory/Uncertainties]	Added container	Y	N/A	N/A	Y
Uncert_I129_Inventory	[Inventory/SDU_Inventory/Uncertainties]	Added container	Y	N/A	N/A	Y
Uncert_Tc99_Inventory	[Inventory/SDU_Inventory/Uncertainties]	Added container	Y	N/A	N/A	Y
InventoryUncertainty_SDUXX Where XX = 1, 4, 2A, 2B, 3A, 3B, 5A, 5B, 6, 7, 8, 9, 10, 11, and 12	[Inventory/SDU_Inventory/Uncertainties]	Moved these elements in to container: Uncert_OtherRads_Inventory	Y	N/A	N/A	Y

SRS Saltstone v5.035\_Check\_law.docx

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10/24/2018

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.035.gsm		Source Model ID (or filename): SRS Saltstone v5.034.gsm				
New Model File Date: 10/23/2018		Source Model File Date: 10/2/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
InventoryUncertainty_S DUX Where XX = 1, 4, 2A, 2B, 3A, 3B, 5A, 5B, 6, 7, 8, 9, 10, 11, and 12	\\Inventory\SDU_In ventoryUncertainti es\Uncert_OtherR ads_Inventory	Elements moved from: \\Inventory\SDU_InventoryU ncertainties The sampling distribution (and correlation) was updated based on recommendations from SRR-CWDA-2018-00076.	Y	N/A	N/A	Y
InventoryUncert_I129_ SDUX Where XX = 1, 4, 2A, 2B, 3A, 3B, 5A, 5B, 6, 7, 8, 9, 10, 11, and 12	\\Inventory\SDU_In ventoryUncertainti es\Uncert_I129_In ventory	Elements added. The sampling distribution is based on recommendations from SRR-CWDA-2018- 00076.	Y	N/A	N/A	Y
InventoryUncert_Tc99_ SDUX Where XX = 1, 4, 2A, 2B, 3A, 3B, 5A, 5B, 6, 7, 8, 9, 10, 11, and 12	\\Inventory\SDU_In ventoryUncertainti es\Uncert_Tc99_I nventory	The sampling distribution (and correlation) was updated based on recommendations from SRR-CWDA-2018-00076.	Y	N/A	N/A	Y
InventoryUncert_SDUX X Where XX = 1, 4, 2A, 2B, 3A, 3B, 5A, 5B, 6, 7, 8, 9, 10, 11, and 12	\\Inventory\SDU_In ventoryUncertainti es	Added elements. Multiplies the realistic inventory values by a probabilistic multipliers based on recommendations from SRR-CWDA-2018-00076.	Y	N/A	N/A	Y
InventoryUncertainty	\\Inventory	Modified element to read in data from the SDU-specific inventory sampling.	Y	N/A	N/A	Y
Inventory_Realistic	\\Inventory	Element shows as changed. No change made.	Y	N/A	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.035.gsm		Source Model ID (or filename): SRS Saltstone v5.034.gsm	
New Model File Date: 10/23/2018		Source Model File Date: 10/2/2018	

Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ModeledInventory	Inventory	Updated the selector logic so that when the model is set to do probabilistic sampling, it will read in the data from InventoryUncertainty.	Y	N/A	N/A	Y
InventoryChooser_switch	User_Input	Set to 2 to test the inventory sampling.	Y	N/A	N/A	Y
UsePORFLOWConcentrations	User_Input	Set to false to test the inventory sampling.	Y	N/A	N/A	Y
ReadTc_99	User_Input	Set to false to test the To-99 inventory sampling.	Y	N/A	N/A	Y
Files	GlobalModel_Input	Deleted empty container.	Y	N/A	N/A	Y
Ones_Species	GlobalModel_InputMiscellaneous	Deleted unused element.	Y	N/A	N/A	Y
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop\	Submodel shows as changed. No change made.	Y	N/A	None	Y
[not applicable]	[not applicable]	Versioned model to 5.035.	Y	N/A	N/A	Y

If checker has no comments, check here. ☒

Add additional rows above, as needed.

Analyst Name (print): Steve Hommel	E-Signature (or sign/date/scan hardcopy): <i>SEH</i> 10/24/2018
Checker Name (print): Leslie Wooten	E-Signature (or sign/date/scan hardcopy): <i>LLWooten</i> 10/24/2018

SRS Saltstone v5.035\_Check\_law.docx

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10/24/2018



SRS Saltstone v5.036.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.036.gsm		Source Model ID (or filename): SRS Saltstone v5.035.gsm				
New Model File Date: 10/24/2018		Source Model File Date: 10/23/2018				
Parameter or Element	Location	Change Description	Correct Y, N	Checker Comment	Analyst Response	Checker Concur? Y, N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Set the sampling of inventories to use a scalar sampling (instead of using the Species vector).						
InventoryUncertainty_S DUX Where XX = 1, 4, 2A, 2B, 3A, 3B, 5A, 5B, 6, 7, 8, 9, 10, 11, and 12	Inventory\SDU_In ventoryUncertainti es\Uncert_OtherR ads_Inventory	The sampling distribution was changed from a vector (Species) sampling to a scalar sampling so all "other rads" will use the same multiplier.	Y	N/A	None	Y
InventoryUncert_SDUX Where XX = 1, 4, 2A, 2B, 3A, 3B, 5A, 5B, 6, 7, 8, 9, 10, 11, and 12	Inventory\SDU_In ventoryUncertainti es	Revised definitions of other rads (i.e. all rads other than 1-129 and Tc-99) to use the scalar values (see previous entry).	Y	N/A	None	Y
SDU_TransportSubmod el	DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel shows as changed. No change made.	Y	N/A	None	Y
[not applicable]	[not applicable]	Versioned model to 5.036.	Y	N/A	None	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy):  10/24/2018				
Checker Name (print): Leslie Woolen		E-Signature (or sign/date/scan hardcopy):  10/24/2018				

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10/24/2018

SRS Saltstone v5.037.gsm Changed Model Check Form (4 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.037.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.036.gsm				
<b>New Model File Date:</b> 11/5/2018		<b>Source Model File Date:</b> 10/24/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Updated plume measurements.						
[N/A]	[N/A]	Opened and saved model file in GoldSim Version 12.1	Y	Note: This entry added by the Checker. Analyst to confirm.	Agreed	Y
Arrays	[N/A]	Added sector F to the SectorsNorth array label	Y	None	N/A	Y
Arrays	[N/A]	Added sector E to the SectorsSouth array label	Y	None	N/A	Y
FlowField_PEST101	TransportWaterTransport	Copied FlowField_PEST53 container and renamed it to FlowField_PEST101	Y	Note: This entry added by the Checker. Analyst to confirm.	Agreed	Y
CLDist_North (Data element)	Model/Transport/WaterTransport/FlowField_Pest101	Copied and pasted values from cells D4 to I16 (tab PlumesForGoldSim from 2018_SDF_PA_StreamTraces_and_PlumeMeasures.xlsx)	Y	None	N/A	Y
CLDist_NorthAdd	Model/Transport/WaterTransport/FlowField_Pest101	Copied and pasted values from cells R4 to W16 (tab PlumesForGoldSim from 2018_SDF_PA_StreamTraces_and_PlumeMeasures.xlsx)	Y	None	N/A	Y
CLDist_South	Model/Transport/WaterTransport/FlowField_Pest101	Copied and pasted values from cells H17 to K22 (tab PlumesForGoldSim from 2018_SDF_PA_StreamTraces_and_PlumeMeasures.xlsx)	Y	None	N/A	Y

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SRS Saltstone v5.037\_Check.docx

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.037.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.036.gsm			
<b>New Model File Date:</b> 11/5/2018			<b>Source Model File Date:</b> 10/24/2018			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLDist_SouthAdd	Model/Transport/ WaterTransport/FlowField_Pest101	Copied and pasted values from cells V17 to Y22 (tab PlumesForGoldSim from 2018_SDF_PA_StreamTraces_and_PlumeMeasures.xlsx)	Y	None	N/A	Y
CLOffset_North	Model/Transport/ WaterTransport/FlowField_Pest101	Copied and pasted values from cells D25 to I37 (tab PlumesForGoldSim from 2018_SDF_PA_StreamTraces_and_PlumeMeasures.xlsx)	Y	None	N/A	Y
CLOffset_NorthAdd	Model/Transport/ WaterTransport/FlowField_Pest101	Copied and pasted values from cells R25 to W37 (tab PlumesForGoldSim from 2018_SDF_PA_StreamTraces_and_PlumeMeasures.xlsx)	Y	None	N/A	Y
CLOffset_South	Model/Transport/ WaterTransport/FlowField_Pest101	Copied and pasted values from cells H38 to K43 (tab PlumesForGoldSim from 2018_SDF_PA_StreamTraces_and_PlumeMeasures.xlsx)	Y	None	N/A	Y
CLOffset_SouthAdd	Model/Transport/ WaterTransport/FlowField_Pest101	Copied and pasted values from cells V38 to Y43 (tab PlumesForGoldSim from 2018_SDF_PA_StreamTraces_and_PlumeMeasures.xlsx)	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.037.gsm		Source Model ID (or filename): SRS Saltstone v5.036.gsm				
New Model File Date: 11/5/2018		Source Model File Date: 10/24/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SelectAquiferTransport Field	Model\User_Input	Added a description with a place holder for the PEST.101 report document number	Y	None	N/A	Y
CLDist_North	Model\Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y	None	N/A	Y
CLDist_NorthAdd	Model\Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y	None	N/A	Y
CLDist_South	Model\Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y	None	N/A	Y
CLDist_SouthAdd	Model\Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y	None	N/A	Y
CLOffset_North	Model\Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y	None	N/A	Y
CLOffset_NorthAdd	Model\Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y	None	N/A	Y
CLOffset_South	Model\Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y	None	N/A	Y
CLOffset_SouthAdd	Model\Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y	None	N/A	Y
SDU_TransportSubmod el	\\DisposalUnits\SD Us\OuterLoop\Inn erLoop\	Submodel shows as changed. No change made.	Y	N/A	None	Y



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**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.037.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.036.gsm	
<b>New Model File Date:</b> 11/5/2018		<b>Source Model File Date:</b> 10/24/2018	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
[not applicable]	[not applicable]	Versioned model to 5.037.	Y
If checker has no comments, check here. <input type="checkbox"/>		<b>Checker Comment</b>	<b>Analyst Response</b>
<b>Analyst Name (print):</b> Ben Dean			None
<b>Checker Name (print):</b> Steve Hommel		Add additional rows above, as needed.	
		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  11/5/2018	
		<b>E-Signature (or sign/date/scan hardcopy):</b>  11/5/2018	

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SRS Saltstone v5.037\_Check



SRS Saltstone v5.038.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.037.gsm	
<b>New Model File Date:</b> 11/5/2018		<b>Source Model File Date:</b> 11/5/2018	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Updated links to support plume calculations. [Note: Input values for all except the plume measures still need to be updated.]			
Select/AquiferTransport Field	\User_Input	Set value to 101 to select new inputs.	Y
CLDist_North	\Transport\WaterTransport\FlowField_PEST101	No change. I looked at the values and GoldSim registered them as changed. Values reflect data in 2018_SDF_PA_StreamTraces_and_PlumeMeasures.xlsx	Y
CLDist_NorthAdd	\Transport\WaterTransport\FlowField_PEST101	No change. I looked at the values and GoldSim registered them as changed. Values reflect data in 2018_SDF_PA_StreamTraces_and_PlumeMeasures.xlsx	Y
CLOffset_North	\Transport\WaterTransport\FlowField_PEST101	No change. I looked at the values and GoldSim registered them as changed. Values reflect data in 2018_SDF_PA_StreamTraces_and_PlumeMeasures.xlsx	Y
			Checker Concur? Y,N

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038.gsm		Source Model ID (or filename): SRS Saltstone v5.037.gsm				
New Model File Date: 11/5/2018		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DilutionMask_North	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y
DilutionMask_NorthAdd	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y
DilutionMask_South	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y
DilutionMask_SouthAdd	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y
MeanSatZoneDarcyVel _SDU	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y
MeanSatZoneDarcyVel _SDU1	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y
MeanSatZoneDarcyVel _SDU4	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y
PathLength_SDU1	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y
PathLength_SDU4	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y
PathLengths_SDU	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.037.gsm				
<b>New Model File Date:</b> 11/5/2018		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Porosity_of_PoreV	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y
SatThickness_determ	Model/Transport/ WaterTransport/FI owField_Picked	Added a switch for Flow Field 101 to select PEST101	Y			Y
SDU_TransportSubmod el	DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel shows as changed. No change made.	Y			Y
[not applicable]	[not applicable]	Versioned model to 5.038.	Y			Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  11/6/2016				
<b>Checker Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b>  11/6/2018				

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SRS Saltstone v5.040.gsm Changed Model Check Form (20 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.040.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.039.gsm				
<b>New Model File Date:</b> 1/24/2019		<b>Source Model File Date:</b> 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
<p>Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&amp;DV Form 4)?</p> <p>- If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&amp;DV Form 4) for this model.</p> <p><b>Objective:</b> Changes to Version 5.040, include the updating of stochastic distributions controlling the sampling of flow fields in the vadose zone transport model used to generate radionuclide releases to the saturated zone. Also updated in the model are receptor well distance measurements used to evaluate saturated zone radionuclide concentrations at the 100-meter compliance boundary.</p>						
DilutionMask_North_str	\\Transport\\WaterT ransport\\FlowField _PEST101	Renamed\\Disposal\\Units\\SD U1\\UnsatZone DilutionMask_North and replaced data with new values from 2018_SDF_PA_StreamTra ces_and_PlumeMeasures- SPH BD.xlsx	Y	None	N/A	Y
DilutionMask_NorthAdd_str	\\Transport\\WaterT ransport\\FlowField _PEST101	Renamed DilutionMask_NorthAdd and replaced data with new values from 2018_SDF_PA_StreamTra ces_and_PlumeMeasures- SPH BD.xlsx	Y	None	N/A	Y
DilutionMask_South_str	\\Transport\\WaterT ransport\\FlowField _PEST101	Renamed DilutionMask_South and replaced data with new values from 2018_SDF_PA_StreamTra ces_and_PlumeMeasures- SPH BD.xlsx	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DilutionMask_SouthAdd_str	\\Transport\\WaterTransport\\FlowField_PEST101	Renamed DilutionMask_SouthAdd and replaced data with new values from 2018_SDF_PA_StreamTraces_and_PlumeMeasures-SPH BD.xlsx	Y	None	N/A	Y
DilutionMask_North_1	\\Transport\\WaterTransport\\FlowField_Picked\\Previous DilutionMasks	Copied and pasted DilutionMask_North into \\Transport\\WaterTransport\\FlowField_Picked\\Previous DilutionMasks (automatically renamed)	Y	None	N/A	Y
DilutionMask_NorthAdd_1	\\Transport\\WaterTransport\\FlowField_Picked\\Previous DilutionMasks	Copied and pasted DilutionMask_NorthAdd into \\Transport\\WaterTransport\\FlowField_Picked\\Previous DilutionMasks (automatically renamed)	Y	None	N/A	Y
DilutionMask_South_1	\\Transport\\WaterTransport\\FlowField_Picked\\Previous DilutionMasks	Copied and pasted DilutionMask_South into \\Transport\\WaterTransport\\FlowField_Picked\\Previous DilutionMasks (automatically renamed)	Y	None	N/A	Y
DilutionMask_SouthAdd_1	\\Transport\\WaterTransport\\FlowField_Picked\\Previous DilutionMasks	Copied and pasted into DilutionMask_SouthAdd \\Transport\\WaterTransport\\FlowField_Picked\\Previous DilutionMasks (automatically renamed)	Y	None	N/A	Y

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Waste Disposal Authority

### Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DilutionMask_Option	\\Transport\\WaterT ransport\\FlowField _PEST101	Element added	Y	None	N/A	Y
Text block associated with element: DilutionMask_Option	\\Transport\\WaterT ransport\\FlowField _PEST101			Entry added by Checker: The text associated with the dilution mask option does not reflect the selector values. 1 = stream trace option 2 = break through curve option	In v5.051 Re-did selectors DilutionMask_North, DilutionMask_North Add, DilutionMask_South, DilutionMask_South Add, and DilutionMask_Option (Please check)	Y
FlowFieldPicker	\\Transport\\WaterT ransport\\FlowField _Picked	No Change.	Y	None	N/A	Y
DilutionMask_North	\\Transport\\WaterT ransport\\FlowField _Picked	Deleted expression element	Y	None	N/A	Y
DilutionMask_NorthAdd	\\Transport\\WaterT ransport\\FlowField _Picked	Deleted expression element	Y	None	N/A	Y
DilutionMask_South	\\Transport\\WaterT ransport\\FlowField _Picked	Deleted expression element	Y	None	N/A	Y
DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _Picked	Deleted expression element	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm			Source Model ID (or filename): SRS Saltstone v5.039.gsm			
New Model File Date: 1/24/2019			Source Model File Date: 1/7/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DilutionMask_North	\\Transport\\WaterT ransport\\FlowField _Picked	Copied and pasted selector element from \\Transport\\Water\\Transport\\ FlowField_Picked\\Previous DilutionMasks	Y	None	N/A	Y
DilutionMask_NorthAdd	\\Transport\\WaterT ransport\\FlowField _Picked	Copied and pasted selector element from \\Transport\\Water\\Transport\\ FlowField_Picked\\Previous DilutionMasks	Y	None	N/A	Y
DilutionMask_South	\\Transport\\WaterT ransport\\FlowField _Picked	Copied and pasted selector element from \\Transport\\Water\\Transport\\ FlowField_Picked\\Previous DilutionMasks	Y	None	N/A	Y
DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _Picked	Copied and pasted selector element from \\Transport\\Water\\Transport\\ FlowField_Picked\\Previous DilutionMasks	Y	None	N/A	Y
DilutionMask_North	\\Transport\\WaterT ransport\\FlowField _Picked	Updated selector element to allow choice of dilution factor based on tracer pulse breakthrough curves streamtraces or not using a dilution factor. This change is for PEST Run 101 data only	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DilutionMask_NorthAdd	\\Transport\\WaterT ransport\\FlowField _Picked	Updated selector element to allow choice of dilution factor based on tracer pulse breakthrough curves streamtraces or not using a dilution factor. This change is for PEST Run 101 data only	Y	None	N/A	Y
DilutionMask_South	\\Transport\\WaterT ransport\\FlowField _Picked	Updated selector element to allow choice of dilution factor based on tracer pulse breakthrough curves streamtraces or not using a dilution factor. This change is for PEST Run 101 data only	Y	None	N/A	Y
DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField _Picked	Updated selector element to allow choice of dilution factor based on tracer pulse breakthrough curves streamtraces or not using a dilution factor. This change is for PEST Run 101 data only	Y	None	N/A	Y
ReadPFDataX.in X=1, 2, 4, 6, 7, 9	External files	Updated external files	Y	This was checked by running the model and observing the results.	N/A	Y
FileIndexSelect	\\Disposal\\Units\\Tc9 9Input\\FluxToUZ_ SDU1\\DLLData_FI ux	Updated selector element to reflect changes in ReadPFData1.in	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Iname	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU4\\DLLData_FI ux	Deleted data element	Y	None	N/A	Y
Iname	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU4\\DLLData_FI ux	Added selector element to reflect changes in input file ReadPFData1.in	Y	None	N/A	Y
FileIndexSelect	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU4\\DLLData_FI ux	Updated selector element to reflect changes in ReadPFData4.in	Y	None	N/A	Y
Iname	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU4\\DLLData_FI ux	Deleted data element	Y	None	N/A	Y
Iname	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU4\\DLLData_FI ux	Added selector element to reflect changes in input file ReadPFData4.in	Y	None	N/A	Y
FileExt	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU4\\DLLData_FI ux	Not changed	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
RandomAquiferFlowField	\\Transport\\WaterTransport	Deleted stochastic element and replaced with data element of the same name. Data element was then reconnected with the selector element FlowFieldPicker in \\Transport\\WaterTransport\\FlowField_Picked	Y	None	N/A	Y
N1_v2	\\GlobalModel_Input\\Stochastic\\FlowFieldByParameter	Deleted element	Y	None	N/A	Y
N2_v2	\\GlobalModel_Input\\Stochastic\\FlowFieldByParameter	Deleted element	Y	None	N/A	Y
N3_v2	\\GlobalModel_Input\\Stochastic\\FlowFieldByParameter	Deleted element	Y	None	N/A	Y
N1_v1	\\GlobalModel_Input\\Stochastic\\FlowFieldByParameter	Deleted element	Y	None	N/A	Y
N2_v1	\\GlobalModel_Input\\Stochastic\\FlowFieldByParameter	Deleted element	Y	None	N/A	Y
N3_v1	\\GlobalModel_Input\\Stochastic\\FlowFieldByParameter	Deleted element	Y	None	N/A	Y
N1_v4	\\GlobalModel_Input\\Stochastic\\FlowFieldByParameter	Deleted element	Y	None	N/A	Y

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Waste Disposal Authority

### Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
N2_v4	\\GlobalModel\\Inp ut\\Stochastic\\Flow FieldByParameter	Deleted element	Y	None	N/A	Y
N3_v4	\\GlobalModel\\Inp ut\\Stochastic\\Flow FieldByParameter	Deleted element	Y	None	N/A	Y
Infiltration_sample	\\GlobalModel\\Inp ut\\Stochastic\\Flow FieldByParameter\\Infiltration_Sampli ng	Added Stochastic element with a discrete distribution based on is based on Table 4.4-82 of SRR-CWDA- 2019-00001 Draft A	Y	None	N/A	Y
Infiltration_dist	\\GlobalModel\\Inp ut\\Stochastic\\Flow FieldByParameter\\Infiltration_Sampli ng	Deleted element	Y	None	N/A	Y
Infiltration_dist1	\\GlobalModel\\Inp ut\\Stochastic\\Flow FieldByParameter\\Infiltration_Sampli ng	Deleted element	Y	None	N/A	Y
Degradation_sample	\\GlobalModel\\Inp ut\\Stochastic\\Flow FieldByParameter\\Degradation_Sam pling	Added Stochastic element with a discrete distribution based on is based on Table 4.4-82 of SRR-CWDA- 2019-00001 Draft A	Y	None	N/A	Y
Degradation_dist	\\GlobalModel\\Inp ut\\Stochastic\\Flow FieldByParameter\\Degradation_Sam pling	Deleted element	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Degradation_dist1	\\GlobalModel_Inp ut\\Stochastic\\Flow FieldByParameter\\ Degradation_Sam pling	Deleted element	Y	None	N/A	Y
BackfillSatK_Sampling	\\GlobalModel_Inp ut\\Stochastic\\Flow FieldByParameter	Changed container name from Slope_Sampling	Y	None	N/A	Y
BackfillSatK_sample	\\GlobalModel_Inp ut\\Stochastic\\Flow FieldByParameter\\ BackfillSatK_Sam pling	Added Stochastic element with a discrete distribution based on is based on Table 4.4-82 of SRR-CWDA- 2019-00001 Draft A	Y	None	N/A	Y
Slope_dist	\\GlobalModel_Inp ut\\Stochastic\\Flow FieldByParameter\\ BackfillSatK_Sam pling	Deleted element	Y	None	N/A	Y
Slope_dist1	\\GlobalModel_Inp ut\\Stochastic\\Flow FieldByParameter\\ BackfillSatK_Sam pling	Deleted element	Y	None	N/A	Y
SaltstoneSatK_sample	\\GlobalModel_Inp ut\\Stochastic\\Flow FieldByParameter\\ SaltstoneSatK_Sa mpling	Added Stochastic element with a discrete distribution based on is based on Table 4.4-82 of SRR-CWDA- 2019-00001 Draft A	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneSatK_dist	\\GlobalModel_Inp ut\\Stochastic\\Flow FieldByParameter\\ SaltstoneSatK_Sa mpling	Deleted element	Y	None	N/A	Y
SaltstoneSatK_dist1	\\GlobalModel_Inp ut\\Stochastic\\Flow FieldByParameter\\ SaltstoneSatK_Sa mpling	Deleted element	Y	None	N/A	Y
FlowFieldSampler	\\GlobalModel_Inp ut\\Stochastic\\Flow FieldByParameter	Added selector element to generate flow field sample number from sampled flow field parameters: Infiltration_sample, Degradation_sample, Infiltration_sample, and BackfillSatK_sample, and SaltstoneSatK_Sampling. Flow field number is based on Table 4.4-82 of SRR- CWDA-2019-00001 Draft A	Y	None	N/A	Y
FlowFieldSampler	\\GlobalModel_Inp ut\\Stochastic\\Flow FieldByParameter	Added element to submodel interface	Y	None	N/A	Y
FlowFieldSampleNum ber	\\GlobalModel_Inp ut\\Stochastic	Deleted element from submodel interface	Y	None	N/A	Y
FlowFieldSampleNum ber	\\GlobalModel_Inp ut\\Stochastic\\Flow FieldByParameter	Renamed FlowFieldSampler	Y	None	N/A	Y
FlowFieldSampleNum ber	\\InputData\\Global Stochastic	Deleted vector selector element	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FlowFieldSampleNumber	InputData\Global Stochastic	Added selector element to capture new scalar version of this element from submodel interface	Y	None	N/A	Y
IRLZ	DisposalUnits\Tc9 9InputFluxToUZ SDU1\DLLData_FI ux	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y
IRLZ	DisposalUnits\Tc9 9InputFluxToUZ SDU4\DLLData_FI ux	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y
IRLZ	DisposalUnits\SD U1\SDU1PORFLO WData\ReadFlow FieldFiles\DLLDat a_SDU1	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y
IRLZ	DisposalUnits\SD U4\SDU4PORFLO WData\ReadFlow FieldFiles\DLLDat a	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y
IRLZ	DisposalUnits\SD U1\SDU1PORFLO WData\ReadFlow FieldFiles2\DLLDa ta_SDU1	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y
IRLZ	DisposalUnits\SD U4\SDU4PORFLO WData\ReadFlow FieldFiles2\DLLDa ta	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IRLZ	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Deff_SDU1\\DLLData_De	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y
IRLZ	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\Deff_SDU4\\DLLData_De	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y
Sample_v2	\\GlobalModel_Inp\\ut\\Stochastic\\FlowFieldByParameter	Deleted element	Y	None	N/A	Y
Sample_v1	\\GlobalModel_Inp\\ut\\Stochastic\\FlowFieldByParameter	Deleted element	Y	None	N/A	Y
Sample_v4	\\GlobalModel_Inp\\ut\\Stochastic\\FlowFieldByParameter	Deleted element	Y	None	N/A	Y
FlowFieldSampleNumber	\\GlobalModel_Inp\\ut\\Stochastic\\FlowFieldByParameter	Added line to set the deterministic run value to 1	Y	This is counter-intuitive because the Compliance Case conditions are equal to Flow Field #27. (I would have expected the default setting to be a value of 27, not 1.) However, this is acceptable because the downstream selectors (File/Index) check for realization number then selects alternative file sets for the deterministic runs.	Reset the default to 27.	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Depend_pos	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU1\\DLLData_FI ux	Updated selector to force output to equal 2.	Y	None	N/A	Y
Depend_pos	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU4\\DLLData_FI ux	Updated selector to force output to equal 2.	Y	None	N/A	Y
ZeroFlux_BC	\\DisposalUnits\\SD U1\\UnsatZone	Set to false to use zero- concentration BC	Y	Note: BC = Boundary Condition	N/A	Y
ZeroFlux_BC	\\DisposalUnits\\SD U4\\UnsatZone	Set to false to use zero- concentration BC	Y	Note: BC = Boundary Condition	N/A	Y
SDU1_Height	\\DisposalUnits\\SD U_Data\\SDU1_dat a	Not changed	Y	None	N/A	Y
SDU4_Height	\\DisposalUnits\\SD U_Data\\SDU4_dat a	Adjusted height to include saltstone without clean grout	Y	None	N/A	Y
IDU	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU1\\DLLData_FI ux	Redefined selector element to indicate the SDU Type (1) for stochastic runs	Y	None	N/A	Y
SourceID	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU1\\DLLData_FI ux	Changed Source ID number (14) to Source Type number (1)	Y	None	N/A	Y
Iname	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU1\\DLLData_FI ux	Deleted data element	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Iname	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU1\\DLLData_FI_ ux	Replaced above data element with selector element reflecting file naming convention for stochastic input files	Y	None	N/A	Y
szTable	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU1\\DLLData_FI_ ux	Adjusted selector to reflect the change to every realization has its own file and the same columns are now read as opposed to one file with each column representing a realization	Y	None	N/A	Y
IDU	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU4\\DLLData_FI_ ux	Redefined selector element to indicate the SDU Type (4) for stochastic runs	Y	None	N/A	Y
SourceID	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU4\\DLLData_FI_ ux	Changed Source ID number (14) to Source Type number (4)	Y	None	N/A	Y
Iname	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU4\\DLLData_FI_ ux	Deleted data element	Y	None	N/A	Y
Iname	\\DisposalUnits\\Tc9 9Input\\FluxToUZ_ SDU4\\DLLData_FI_ ux	Replaced above data element with selector element reflecting file naming convention for stochastic input files	Y	None	N/A	Y

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### Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.040.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.039.gsm				
<b>New Model File Date:</b> 1/24/2019		<b>Source Model File Date:</b> 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
szTable	\\DisposalUnits\\Tc9 9Input\\FluxToUZ SDU4\\DLLData_Fl ux	Adjusted selector to reflect the change to every realization has its own file and the same columns are now read as opposed to one file with each column representing a realization	Y	None	N/A	Y
Submodel						
DET_start	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Added then deleted element	Y	None	N/A	Y
Nlines_max	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Added selector element to point to first line of deterministic Tc-99 release input file names in control files.	Y	None	N/A	Y
ISDU_1	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Added data element for an index indicating starting location of files based on model source number for stochastic Tc-99 vadose zone release inputs from SDU2 Type SDUs	Y	None	N/A	Y
ISDU _375_6	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Added data element for an index indicating starting location of files based on model source number for stochastic Tc-99 vadose zone release inputs from Source #7 (SDU 6)	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ISDU _375_7a	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Added data element for an index indicating starting location of files based on model source number for stochastic Tc-99 vadose zone release inputs from SDU7 Type SDUs	Y	None	N/A	Y
ISDU _375_7b	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Index indicating starting location of files based on model source number for stochastic Tc-99 vadose zone release inputs from SDU7 Type SDUs, taking into account the shift of file name lines due to using a different SDU type for Source #9 (SDU 8)	Y	None	N/A	Y
ISDU _375_9	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Index indicating starting location of files based on model source number for stochastic Tc-99 vadose zone release inputs from Source #10 (SDU9)	Y	None	N/A	Y
IStart	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Added input data element indicating the location of the first Tc-99 release file name in each external control data file.	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ISDU_type	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Added selector to choose which ISDU_ * file is used based on the Source index	Y	While I don't see any technical issues with the way this is set up, it isn't clear to me why there is a "7a" and a "7b". Since SDUs 7, 8, 10, 11, and 12 are all the same, couldn't all of these be set to use "7a"?	7a and 7b are pointers and not SDU numbers and they are different because the SDU9 file is controlled by ReadPFData9 in as opposed to ReadPFData7 in which controls the Type-7 SDUs.	Y
FileIndexSelect	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Updated selector element to reflect changes in ReadPFData2.in ReadPFData6.in ReadPFData7.in ReadPFData9.in	Y	None	N/A	Y
Iname	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Deleted data element	Y	None	N/A	Y
Iname	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Added selector element to reflect changes in input file ReadPFData2.in ReadPFData6.in ReadPFData7.in ReadPFData9.in	Y	None	N/A	Y
IRLZ	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IRLZ	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ DLLData	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y
IRLZ	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2\\ DLLData	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y
IRLZ	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DefDLLD ata	Changed definition to the scalar FlowFieldSampleNumber	Y	None	N/A	Y
Depend_pos	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Updated selector to force output to equal 2.	Y	None	N/A	Y
ZeroFlux_BC	\\SDUs\\UnsatZone	Set to false to use zero- concentration BC	Y	Note: BC = Boundary Condition	N/A	Y
IDU	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DefDLLD ata	Redefined selector element to capture the SDU ID number	Y	None	N/A	Y
IDU_Type	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DefDLLD ata	Added a selector element to translate IDU to SDU Type indicator	Y	None	N/A	Y
ReadDefData	\\InputData\\SDUP ORFLOWData\\Def f_SDUs	Updated input interface to use IDU_Type to indicate input file to be read	Y	None	N/A	Y
Solubility	\\GlobalModel_Inp ut\\Stochastic	Added to submodel SDU_TransportSubmodel interface	Y	None	N/A	Y

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### Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.040.gsm		Source Model ID (or filename): SRS Saltstone v5.039.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Solubility	\\InputData\\Global Stochastic	Added selector to capture Solubility switch from submodel interface	Y	None	N/A	Y
szTable	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Adjusted selector to reflect the change to every realization has its own file and the same columns are now read as opposed to one file with each column representing a realization	Y	None	N/A	Y
IDU	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs	Redefined selector element to capture the SDU ID number	Y	None	N/A	Y
IDU_Type	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs	Added a selector element to translate IDU to SDU Type indicator	Y	None	N/A	Y
readPFFluxdata	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs	Updated input interface to use IDU Type to indicate input file to be read	Y	None	N/A	Y
IDU	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ DLLData	Redefined selector element to capture the SDU ID number	Y	None	N/A	Y
IDU_Type	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ DLLData	Added a selector element to translate IDU to SDU Type indicator	Y	None	N/A	Y
RFFSDU	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles	Updated input interface to use IDU Type to indicate input file to be read	Y	None	N/A	Y



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**Changed Model Check Form**

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<b>New Model ID (or filename):</b> SRS Saltstone v5.040.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.039.gsm				
<b>New Model File Date:</b> 1/24/2019		<b>Source Model File Date:</b> 1/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IDU	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2\\ DLLData	Redefined selector element to capture the SDU ID number	Y	None	N/A	Y
IDU_Type	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2\\ DLLData	Added a selector element to translate IDU to SDU Type indicator	Y	None	N/A	Y
RFFSDU	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2	Updated input interface to use IDU_Type to indicate input file to be read	Y	None	N/A	Y
If checker has no comments, check here. <input type="checkbox"/>						
<b>Analyst Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  4/19/2019				
<b>Checker Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/19/2019				



SRS Saltstone v5.041.gsm Changed Model Check Form (4 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.041.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.040.gsm				
<b>New Model File Date:</b> 1/30/2019		<b>Source Model File Date:</b> 1/24/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Updated IHI SZ transport distance data.						
File_SDU1	\\GlobalModel_Inp ut\\FileStatements	Added file element to pass input file ReadPFData1.in from master files to slaves. ReadPFData1.in indicates which PORFLOW generated files from folder SDF_FY19Data01 need to be read for SDU 1 calculations	Y	None	N/A	Y
File_SDU2	\\GlobalModel_Inp ut\\FileStatements	Added file element to pass input file ReadPFData2.in from master files to slaves. ReadPFData2.in indicates which PORFLOW generated files from folder SDF_FY19Data01 need to be read for SDU 2A, SDU 2B, SDU 3A, SDU 3B, SDU 5A, and SDU 5B calculations	Y	None	N/A	Y
File_SDU4	\\GlobalModel_Inp ut\\FileStatements	Added file element to pass input file ReadPFData4.in from master files to slaves. ReadPFData4.in indicates which PORFLOW generated files from folder SDF_FY19Data01 need to be read for SDU 4 calculations	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.041.gsm		Source Model ID (or filename): SRS Saltstone v5.040.gsm				
New Model File Date: 1/30/2019		Source Model File Date: 1/24/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
File_SDU6	\\GlobalModel_Inp ut\\FileStatements	Added file element to pass input file ReadPFData6.in from master files to slaves. ReadPFData6.in indicates which PORFLOW generated files from folder SDF_FY19Data01 need to be read for SDU 6 calculations	Y	None	N/A	Y
File_SDU7	\\GlobalModel_Inp ut\\FileStatements	Added file element to pass input file ReadPFData7.in from master files to slaves. ReadPFData7.in indicates which PORFLOW generated files from folder SDF_FY19Data01 need to be read for SDU 7, SDU 8, SDU 10, SDU 11, and SDU 12 calculations	Y	None	N/A	Y
File_SDU9	\\GlobalModel_Inp ut\\FileStatements	Added file element to pass input file ReadPFData9.in from master files to slaves. ReadPFData9.in indicates which PORFLOW generated files from folder SDF_FY19Data01 need to be read for SDU 9 calculations	Y	None	N/A	Y
Endpoints_PA	\\SensitivityAnalysis s_New	New Endpoints multi- variate result element generated for this version	Y	None	N/A	Y

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### Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.041.gsm		Source Model ID (or filename): SRS Saltstone v5.040.gsm				
New Model File Date: 1/30/2019		Source Model File Date: 1/24/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLOffset_1m	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ataMatrices_1m	IHI well offset (from pathlines) distances updated from 2018_SDF_PA_IHI_Plume Measures.xlsx.	Y	None	N/A	Y
PFMask_1m	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ataMatrices_1m	IHI well active source factors (1 or 0) for specific IHI wells from 2018_SDF_PA_IHI_Plume Measures.xlsx.	Y	None	N/A	Y
PathLengths_1m	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ataMatrices_1m	IHI well from pathline distances to IHI wells updated from 2018_SDF_PA_IHI_Plume Measures.xlsx.	Y	None	N/A	Y
Benchmark_PF	\\User_Input	Changed to false for 2019 PA models	Y	None	N/A	Y
InventoryChooser_switc h	\\User_Input	Changed to 2 to indicate stochastic model analysis. Should be set to 1 for deterministic analysis or if linear influence of inventory data not to be considered in sensitivity analysis	Y	None	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Barry Lester		E-Signature (or sign/date/scan hardcopy): (Not required if no comments) <i>[Signature]</i> 2/1/2019 4/8/2019				

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Waste Disposal Authority						Changed Model Check Form		
New Model ID (or filename): SRS Saltstone v5.041.gsm			Source Model ID (or filename): SRS Saltstone v5.040.gsm					
New Model File Date: 1/30/2019			Source Model File Date: 1/24/2019					
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N		
Checker Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy):  4/8/2019					

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SRS Saltstone v5.042.gsm Changed Model Check Form (1 Page)

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.042.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.041.gsm	
<b>New Model File Date:</b> 2/4/2019		<b>Source Model File Date:</b> 1/30/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Updated links to support plume calculations. [Note: Input values for all except the plume measures still need to be updated.]			
SeepToWellRatio	\\User_Input	SeepToWellRatio reset to 0.222 based on SRR-CWDA-2017-00077, Rev. 1	Y
InventoryChooser_switch	\\User_Input	Data element set to 1 reflecting default change to deterministic analysis in Simulation Settings	Y
SDU_Choice	\\User_Input	No changes made.	NA
Scenario_switch	\\User_Input	No changes made.	NA
CLOffset_1m	\\Transport\\WaterTransport\\PlumeCalc_Sectors\\PlumeDataMatrices_1m	No changes made.	NA
PfMask_1m	\\Transport\\WaterTransport\\PlumeCalc_Sectors\\PlumeDataMatrices_1m	No changes made.	NA
If checker has no comments, check here. <input checked="" type="checkbox"/>			
<b>Analyst Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> Add additional rows above, as needed. (Not required if no comments)	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b> 4/8/19	

SRS Saltstone v5.042\_Check

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4/8/2019

SRS Saltstone v5.043.gsm Changed Model Check Form (20 Pages)

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.043.gsm (Hommel's changes)			<b>Source Model ID (or filename):</b> SRS Saltstone v5.042.gsm (Barry's latest)			
<b>New Model File Date:</b> 2/4/2019			<b>Source Model File Date:</b> 2/4/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Model updates to: (1) make probabilistic analysis easier, (2) setup IHI drill cutting options, and (3) remove extraneous elements.						
[not applicable]	[not applicable]	Model was renamed.	Y			
Drill_Cutting_Inv → Drill_Cutting_Inv_SDU	Model_Concentra tions	Renamed element from Drill_Cutting_Inv to Drill_Cutting_Inv_SDU to reflect this as a drill cutting inventory based on drilling into an SDU. Note: I found an arithmetic error in the drill cutting values from Section 5 of SRR-CWDA-2018-00041, Rev 1. To correct this, the values from the reference are divided by 3.	N	There are a number of rounding errors. Although the difference is minor and not expected to impact the interpretations of the results	These inventories are superseded by an alternate scenario inventory used in future versions	Y
Drill_Cutting_Inv_Soil	Model_Concentra tions	Added element to reflect drill cutting based on drilling into soil. See SRR-CWDA- 2018-00093 Rev 1.	N	There are a number of rounding errors. Although the difference is minor and not expected to impact the interpretations of the results	These inventories are superseded by an alternate scenario inventory used in future versions	Y

SRS Saltstone v5.043\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHI_DrillingInventory	\\Dose_Parameter Calculations\\IHI_ DrillCutConc_Calc	Modified selector element to allow users to specify which drill cutting option to assume for acute IHI dose. Default should be soil. But use no drill cuttings for benchmarking.	Y			
IHI_DrillEventTime	\\Dose_Parameter Calculations\\IHI_ DrillCutConc_Calc	Added element to select event time based on the user-selected drill cutting inventory. (soil = 100 years, SDU = 500 years, both added to a probabilistic sampling value from IHI_DrillEventTime_Uncert)	Y			
IHI_DrillEventTime_Uncert	\\Dose_Parameter Calculations\\IHI_ DrillCutConc_Calc	Added element to randomly sample the time of an IHI intrusion.	Y			
IHI_Event	\\Dose_Parameter Calculations\\IHI_ DrillCutConc_Calc	Modified Trigger to use IHI_DrillEventTime	Y			
N/A	\\User_Input	Text beside element IntruderInventorySwitch revised to describe options.	Y			
IntruderInventorySwitch	\\User_Input	Set value to 1 and updated description.	Y			

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Waste Disposal Authority		Changed Model Check Form				
<b>New Model ID (or filename):</b> SRS Saltstone v5.043.gsm (Hommel's changes)		<b>Source Model ID (or filename):</b> SRS Saltstone v5.042.gsm (Barry's latest)				
<b>New Model File Date:</b> 2/4/2019		<b>Source Model File Date:</b> 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Acute_IHI_Dose	\\Dose_Results	Added container (and all elements within this container) to reflect the acute IHI dose calculations.	Y			
SectorA_100m	\\Model_Concentra tions\\PÖRFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
SectorB_100m	\\Model_Concentra tions\\PÖRFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
SectorC_100m	\\Model_Concentra tions\\PÖRFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
SectorD_100m	\\Model_Concentra tions\\PÖRFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			

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SRS Saltstone v5.043\_Check

Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)			Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)			
New Model File Date: 2/4/2019			Source Model File Date: 2/4/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorE_100m	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
SectorF_100m	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
SectorG_100m	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
SectorH_100m	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
IHL_1m_Well1	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			

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SRS Saltstone v5.043\_Check

Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)			Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)			
New Model File Date: 2/4/2019			Source Model File Date: 2/4/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_Well2	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
IHL_1m_Well3	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
IHL_1m_Well4	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
IHL_1m_Well5	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
IHL_1m_Well6	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			

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SRS Saltstone v5.043\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_Well7	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	"Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
MOB_SleepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Element was previously named PORFLOW_Sleepline. I renamed it and added another element named PORFLOW_Sleepline (below). "Zero'ed out" the data in this element.	Y			
UTR_SleepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Added element. "Zero'ed out" the data in this element. This is only used when the file is being used as a Dose Calculator, which is a "one-off" use of the model file.	Y			
PORFLOW_Sleepline	\\Model_Concentra tions\\PORFLOW_ Conc	Added new element. This element is used to pick the max seepline value (either McQueen Branch (MQB) or Upper Three Runs (UTR)).	Y			

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Available_Seepline_Data	\\Model_Concentrations\\PORFLOW_Conc	Set all values to 1 so that when seepines are used, only the PORFLOW data is used.	Y			
Unavailable_Seepline_Data	\\Model_Concentrations\\PORFLOW_Conc	Deleted this element and added a new one that simply takes the binary opposite of Available_Seepline_Data	Y			
Seepline_Conc	\\Model_Concentrations\\PORFLOW_Conc	Updated logic to use the new version of the element PORFLOW_Seepline	Y			
SeepToWellRatio	\\User_Input	I updated the value to 0.222 based on the draft of SRR-CWDA-2017-00077, Rev. 1. I also updated the text next to the element.	Y	Confirmed that this was done in v5.042.		
HumanUptakeofWater	\\Dose_Parameter_Calculations\\DoseParameters\\HumanUptakeParameters	In the selector logic, I replaced links to: <u>InputSetSelector</u> with links in <u>Scenario_Switch</u> . These two elements were redundant.	Y			
HumanBreathingRate	\\Dose_Parameter_Calculations\\DoseParameters\\HumanUptakeParameters	In the selector logic, I replaced links to: <u>InputSetSelector</u> with links in <u>Scenario_Switch</u> . These two elements were redundant.	Y			

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SRS Saltstone v5.043\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
HumanUptakeofEgg	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	In the selector logic, I replaced links to: <u>InputSetSelector</u> with links in <u>Scenario_Switch</u> . These two elements were redundant.	Y			
HumanUptakeofFish	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	In the selector logic, I replaced links to: <u>InputSetSelector</u> with links in <u>Scenario_Switch</u> . These two elements were redundant.	Y			
HumanUptakeofMeat	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	In the selector logic, I replaced links to: <u>InputSetSelector</u> with links in <u>Scenario_Switch</u> . These two elements were redundant.	Y			
HumanUptakeofMilk	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	In the selector logic, I replaced links to: <u>InputSetSelector</u> with links in <u>Scenario_Switch</u> . These two elements were redundant.	Y			
HumanUptakeofPoultry	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	In the selector logic, I replaced links to: <u>InputSetSelector</u> with links in <u>Scenario_Switch</u> . These two elements were redundant.	Y			
HumanUptakeofProduce	\\Dose_Parameter _Calculations\\Dos eParameters\\Hum anUptakeParamet ers	In the selector logic, I replaced links to: <u>InputSetSelector</u> with links in <u>Scenario_Switch</u> . These two elements were redundant.	Y			

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SRS Saltstone v5.043\_Check

Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)			Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)			
New Model File Date: 2/4/2019			Source Model File Date: 2/4/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ModeledInventory	Inventory	In the selector logic, I replaced links to: InputSetSelector with links in Scenario_Switch. These two elements were redundant.	Y			
InputSetSelector	User_Input	After removing the links, I deleted this element.	Y			
Kd_Dist	Materials\Concrete_Kds_Oxidizing\old_concrete_kds_ox	Rename to Kd_Dist_OxIII Elements with the same name cannot be identified in the End Points.	Y			
Kd_Dist	Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Rename to Kd_Dist_ReIII Elements with the same name cannot be identified in the End Points.	Y			
Kd_Dist	Materials\ClayeySoil\Kds_LeachateImpacted	Rename to Kd_Dist_ClayL Elements with the same name cannot be identified in the End Points.	Y			
Kd_Dist	Materials\Concrete_Kds_Oxidizing\young_concrete_kd_s_ox	Rename to Kd_Dist_OxI Elements with the same name cannot be identified in the End Points.	Y			
Kd_Dist	Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Rename to Kd_Dist_ReI Elements with the same name cannot be identified in the End Points.	Y			

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SRS Saltstone v5.043\_Check



Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist	\\Materials\SandyS oilKds_Leachatel mpacted	Rename to Kd_Dist_SandL Elements with the same name cannot be identified in the End Points.	Y			
Kd_Dist	\\Materials\Concret e_Kds_Oxidizing\ middle_concrete_ kds_ox	Rename to Kd_Dist_Oxll Elements with the same name cannot be identified in the End Points.	Y			
Kd_Dist	\\Materials\Concret e_Kds_Reducing\ middle_concrete_ kds_red	Rename to Kd_Dist_Rell Elements with the same name cannot be identified in the End Points.	Y			
Kd_Dist	\\Materials\ClayeyS oilKds	Rename to Kd_Dist_Clay Elements with the same name cannot be identified in the End Points.	Y			
Kd_Dist	\\Materials\SandyS oilKds	Rename to Kd_Dist_Sand Elements with the same name cannot be identified in the End Points.	Y			
ParticleDensity_Concret e	\\Materials\SDU_C ylindrical_Concret e	Replaced stochastic element with data element. Even though this was a stochastic element, it had no distribution.	Y			
ParticleDensity_Joint	\\Materials\Joint	Replaced stochastic element with data element. Even though this was a stochastic element, it had no distribution.	Y			

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SRS Saltstone v5.043\_Check

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)			Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)			
New Model File Date: 2/4/2019			Source Model File Date: 2/4/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ParticleDensity_LMM	\\Materials\SDU_C ylindrical_Concret e	Replaced stochastic element with data element. Even though this was a stochastic element, it had no distribution.	Y			
ParticleDensity_UMM	\\Materials\SDU_C ylindrical_Concret e	Replaced stochastic element with data element. Even though this was a stochastic element, it had no distribution.	Y			
Porosity_Concrete	\\Materials\SDU_C ylindrical_Concret e	Replaced stochastic element with data element. Even though this was a stochastic element, it had no distribution.	Y			
Porosity_Joint	\\Materials\Joint	Replaced stochastic element with data element. Even though this was a stochastic element, it had no distribution.	Y			
Porosity_LMM	\\Materials\SDU_C ylindrical_Concret e	Replaced stochastic element with data element. Even though this was a stochastic element, it had no distribution.	Y			
Porosity_UMM	\\Materials\SDU_C ylindrical_Concret e	Replaced stochastic element with data element. Even though this was a stochastic element, it had no distribution.	Y			

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SRS Saltstone v5.043\_Check

Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)			Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)			
New Model File Date: 2/4/2019			Source Model File Date: 2/4/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
AirMassLoadingSoil_Uncert	\\Dose_Parameter_Calculations\\DoseParameters\\ExposureAndInhalationParams	Deleted element. Even though this was a stochastic element, it had no distribution.	Y			
ARE_Uncert	\\Dose_Parameter_Calculations\\DoseParameters\\ExposureAndInhalationParams	Deleted element. Even though this was a stochastic element, it had no distribution.	Y			
FractionUncertDrilling	\\Dose_Parameter_Calculations\\DoseParameters\\ExposureAndInhalationParams	Deleted element. Even though this was a stochastic element, it had no distribution.	Y			
FractionUncertGarden	\\Dose_Parameter_Calculations\\DoseParameters\\ExposureAndInhalationParams	Deleted element. Even though this was a stochastic element, it had no distribution.	Y			
FractionUncertShower	\\Dose_Parameter_Calculations\\DoseParameters\\ExposureAndInhalationParams	Deleted element. Even though this was a stochastic element, it had no distribution.	Y			
FractionUncertSwimming	\\Dose_Parameter_Calculations\\DoseParameters\\ExposureAndInhalationParams	Deleted element. Even though this was a stochastic element, it had no distribution.	Y			

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SRS Saltstone v5.043\_Check

Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba	Materials\Concrete_Kds_Oxidizinglo Id_concrete_kds_ox	Rename to Kd_Dist_OxIII_Ba Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Ra	Materials\Concrete_Kds_Oxidizinglo Id_concrete_kds_ox	Rename to Kd_Dist_OxIII_Ra Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Sr	Materials\Concrete_Kds_Oxidizinglo Id_concrete_kds_ox	Rename to Kd_Dist_OxIII_Sr Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Ba	Materials\Concrete_Kds_Oxidizinglo Id_concrete_kds_r e	Rename to Kd_Dist_ReIII_Ba Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_I	Materials\Concrete_Kds_Oxidizinglo Id_concrete_kds_r e	Rename to Kd_Dist_ReIII_I Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Ra	Materials\Concrete_Kds_Oxidizinglo Id_concrete_kds_r e	Rename to Kd_Dist_ReIII_Ra Elements with the same name cannot be identified in the End Points.	Y			

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SRS Saltstone v5.043\_Check

Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Sr	Materials\Concrete_Kds_Oxidizing Id_concrete_kds_r	Rename to Kd_Dist_Reill_Sr Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Ba	Materials\Concrete_Kds_Oxidizing ong_concrete_kd s_ox	Rename to Kd_Dist_Oxl_Ba Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Ra	Materials\Concrete_Kds_Oxidizing ong_concrete_kd s_ox	Rename to Kd_Dist_Oxl_Ra Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Sr	Materials\Concrete_Kds_Oxidizing ong_concrete_kd s_ox	Rename to Kd_Dist_Oxl_Sr Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Ba	Materials\Concrete_Kds_Oxidizing ong_concrete_kd s_re	Rename to Kd_Dist_Reil_Ba Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_I	Materials\Concrete_Kds_Oxidizing ong_concrete_kd s_re	Rename to Kd_Dist_Reil_I Elements with the same name cannot be identified in the End Points.	Y			

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SRS Saltstone v5.043\_Check

Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ra	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_re	Rename to Kd_Dist_Rel_Ra Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Sr	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_re	Rename to Kd_Dist_Rel_Sr Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Ba	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Rename to Kd_Dist_Oxll_Ba Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Ra	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Rename to Kd_Dist_Oxll_Ra Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Sr	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Rename to Kd_Dist_Oxll_Sr Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Ba	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_re	Rename to Kd_Dist_Rel_Ba Elements with the same name cannot be identified in the End Points.	Y			

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SRS Saltstone v5.043\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_I	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_re	Rename to Kd_Dist_Reil_I Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Ra	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_re	Rename to Kd_Dist_Reil_Ra Elements with the same name cannot be identified in the End Points.	Y			
SaltstoneKd_Dist_Sr	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_re	Rename to Kd_Dist_Reil_Sr Elements with the same name cannot be identified in the End Points.	Y			
SDUALType_data	DisposalUnits\SDU_Data	Delete container and contents and fix link(s). This is a relic from earlier models. It will not be used again.	Y			
SoilToPlant_Ratio_Uncert	Dose_Parameter_Calculations\DoseParameters\TransferFactors	Deleted element. Even though this was a stochastic element, it had no distribution.	Y			
TransferFactorMeat_Uncert	Dose_Parameter_Calculations\DoseParameters\TransferFactors	Deleted element. Even though this was a stochastic element, it had no distribution.	Y			
TransferFactorMilk_Uncert	Dose_Parameter_Calculations\DoseParameters\TransferFactors	Deleted element. Even though this was a stochastic element, it had no distribution.	Y			

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Waste Disposal Authority

### Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.043.gsm (Hommel's changes)			<b>Source Model ID (or filename):</b> SRS Saltstone v5.042.gsm (Barry's latest)			
<b>New Model File Date:</b> 2/4/2019			<b>Source Model File Date:</b> 2/4/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
TransferFactorFish_Un cert	\\Dose_Parameter _Calculations\\Dos eParameters\\Tran sferFactors	Deleted element. Even though this was a stochastic element, it had no distribution.	Y			
SoilToPlantRatio	\\Dose_Parameter _Calculations\\Dos eParameters\\Tran sferFactors	Deleted element and renamed the SoilToPlantRatio_0 to SoilToPlantRatio to replace it.	Y			
TransferFactorMeat	\\Dose_Parameter _Calculations\\Dos eParameters\\Tran sferFactors	Deleted element and renamed the TransferFactorMeat_0 to TransferFactorMeat to replace it.	Y			
TransferFactorMilk	\\Dose_Parameter _Calculations\\Dos eParameters\\Tran sferFactors	Deleted element and renamed the TransferFactorMilk_0 to TransferFactorMilk to replace it.	Y			
TransferFactorPoultry	\\Dose_Parameter _Calculations\\Dos eParameters\\Tran sferFactors	Deleted element and renamed the TransferFactorPoultry_0 to TransferFactorPoultry to replace it.	Y			
TransferFactorEgg	\\Dose_Parameter _Calculations\\Dos eParameters\\Tran sferFactors	Deleted element and renamed the TransferFactorEgg_0 to TransferFactorEgg to replace it.	Y			

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
TransferFactorFish	\\Dose_Parameter _Calculations\\Dose Parameters\\TransferFactors	Deleted element and renamed the TransferFactorFish_0 to TransferFactorFish to replace it.	Y			
YieldUncert	\\Dose_Parameter _Calculations\\Dose Parameters\\Crop Parameters	Deleted element. Even though this was a stochastic element, it had no distribution.	Y			
LEAF_pre	\\Dose_Parameter _Calculations\\Dose Parameters\\IntermediateParameter Calcs	Updated formulas to address missing link (from deleting "uncert" elements).	Y			
FracLocalPlants_MOP_det	\\Dose_Parameter _Calculations\\Dose Parameters\\LocalFracParameters	Updated formulas to address missing link (from deleting "uncert" elements).	Y			
FracLocalPlants_IHI_det	\\Dose_Parameter _Calculations\\Dose Parameters\\LocalFracParameters	Updated formulas to address missing link (from deleting "uncert" elements).	Y			
EDF_Soil_Ing_IHI EDF_Soil_Exp_IHI EDF_Soil_Inh_IHI	\\Dose_Parameter _Calculations\\EffectiveDoseFactors	Updated formulas to address missing link (from deleting "uncert" elements).	Y			
EDF_Shower_Exp EDF_IrrSoil_Exp EDF_Swim_Exp	\\Dose_Parameter _Calculations\\EffectiveDoseFactors	Updated formulas to address missing link (from deleting "uncert" elements).	Y			

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## Waste Disposal Authority

New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
EDF_IrrWater_Inh EDF_IrrDust_Inh EDF_Shower_Inh EDF_Swim_Inh	\\Dose_Parameter _Calculations\\Effec tiveDoseFactors	Updated formulas to address missing link (from deleting "uncert" elements).	Y			
EDF_AcuteHI_Inh EDF_AcuteHI_Exp EDF_AcuteHI_Inh	\\Dose_Parameter _Calculations\\Effec tiveDoseFactors	Updated formulas to address missing link (from deleting "uncert" elements).	Y			
ChemElements	ChemElements	Delete all unused chemicals: Ag, As, B, Ba, Bk, Cd, Cr, Cu, F, Fe, Hg, Mn, Mo, NO2, NO3, Pd, PO4, Sb, SO4, and Zn. We never updated the GoldSim model to incorporate the chemicals. Since Greg is now SRR, we can use PORFLOW for chemical models. No longer need these in GoldSim.	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Removed inputs from deleted elements associated with SDU_alt	Y			
[None]	\\Dose_Parameter _Calculations\\Dose Parameters\\Well DepthParameters	Modified text discussion	Y			

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.043.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.042.gsm (Barry's latest)				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Endpoints_PA	\SensitivityAnalysis s_New	Replaced (deleted and added) Element. This time, after pulling in the stochastics, I deleted all Region II Kds and all Ox I Kds. Also delete the Tc-99 inventory stochastics. The model does not currently use these.	Y			
		Versioned the file.	Y			
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments) <i>Steve Hommel</i> 4/23/2019				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): <i>Ben Dean</i> 4/23/2019				

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SRS Saltstone v5.044.gsm Changed Model Check Form (6 Pages)

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.044.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.043.gsm				
<b>New Model File Date:</b> 2/4/2019		<b>Source Model File Date:</b> 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)?						
- If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Updating South Arrays Step 1.						
SouthSDU1	Array Labels	Added Array Label Set for SDU 1: SDU1_North, SDU1_Central, SDU1_South	Y	None	N/A	Y
SouthSDU4	Array Labels	Added Array Label Set for SDU 4: SDU4_North, SDU4_Central, SDU4_South	Y	None	N/A	Y
NearWellPipe_Central	\\DisposalUnits\\SDU1\\NearWell	Renamed and rescaled data to reflect splitting of source to more accurately reflect flow field with 3 pathlines instead of 1. Central zone reflects half of the source (by width).	Y	None	N/A	Y
NearWellPipe_North	\\DisposalUnits\\SDU1\\NearWell	Copied NearWellPipe_Central and rescaled data to reflect splitting of source to more accurately reflect flow field with 3 pathlines instead of 1. North zone reflects 1/4 of the source (by width).	Y	None	N/A	Y
NearWellPipe_South	\\DisposalUnits\\SDU1\\NearWell	Copied NearWellPipe_Central and rescaled data to reflect splitting of source to more accurately reflect flow field with 3 pathlines instead of 1. North zone reflects 1/4 of the source (by width).	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.044.gsm		Source Model ID (or filename): SRS Saltstone v5.043.gsm				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
LDisp_vec	\\DisposalUnits\\SDU1\\NearWell	Added vector by SouthSDU1 to assign longitudinal dispersivities to pipe-pathway elements	Y	None	N/A	Y
SatZoneDarcyVel_vec	\\DisposalUnits\\SDU1	Added vector by SouthSDU1 to assign Darcy velocities to pipe-pathway elements	Y	None	N/A	Y
NearWellPipe_Central	\\DisposalUnits\\SDU4\\NearWell	Renamed and rescaled data to reflect splitting of source to more accurately reflect flow field with 3 pathlines instead of 1. Central zone reflects half of the source (by width).	Y	None	N/A	Y
NearWellPipe_North	\\DisposalUnits\\SDU4\\NearWell	Copied NearWellPipe_Central and rescaled data to reflect splitting of source to more accurately reflect flow field with 3 pathlines instead of 1. North zone reflects 1/4 of the source (by width).	Y	None	N/A	Y
NearWellPipe_South	\\DisposalUnits\\SDU4\\NearWell	Copied NearWellPipe_Central and rescaled data to reflect splitting of source to more accurately reflect flow field with 3 pathlines instead of 1. North zone reflects 1/4 of the source (by width).	Y	None	N/A	Y
LDisp_vec	\\DisposalUnits\\SDU4\\NearWell	Added vector by SouthSDU1 to assign longitudinal dispersivities to pipe-pathway elements	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.044.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.043.gsm				
<b>New Model File Date:</b> 2/4/2019		<b>Source Model File Date:</b> 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SatZoneDarcyVel_vec	\\DisposalUnits\\SDU4	Added vector by SouthSDU1 to assign Darcy velocities to pipe-pathway elements	Y	None	N/A	Y
MeanSatZonePoreVel_SD U1_vec_a	\\Transport\\WaterTransport\\FlowField_PEST101	Added data element for three source segment model pipe-element model for SDU1 for pore velocities based on a PORFLOW result generated tracer pulses.	Y	Optional comment: To make this consistent with the dilution factors, instead of "a" use "_b" for breakthrough curve.	N/A	Y
MeanSatZonePoreVel_SD U1_vec_b	\\Transport\\WaterTransport\\FlowField_PEST101	Added data element for three source segment model pipe-element model for SDU1 for pore velocities based on PORFLOW result generated streamtraces.	Y	Optional comment: To make this consistent with the dilution factors, instead of "b" use "_str" for stream trace.	N/A	Y
MeanSatZonePoreVel_SD U1_vec	\\Transport\\WaterTransport\\FlowField_PEST101	Added selector element to allow user to choose between MeanSatZonePoreVel_SD_U1_vec_a, MeanSatZonePoreVel_SD_U1_vec_b, or maximum value of the two choices	Y	None	N/A	Y
MeanSatZonePoreVel_SD U4_vec_a	\\Transport\\WaterTransport\\FlowField_PEST101	Added data element for three source segment model pipe-element model for SDU4 for pore velocities based on PORFLOW result generated tracer pulses	Y	Optional comment: To make this consistent with the dilution factors, instead of "a" use "_b" for breakthrough curve	N/A	Y

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### Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.044.gsm		Source Model ID (or filename): SRS Saltstone v5.043.gsm				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZonePoreVel_SD U4_vec_b	\\Transport\\WaterT ransport\\FlowField _PEST101	Added data element for three source segment model pipe- element model for SDU4 for pore velocities based on PORFLOW result generated streamtraces.	Y	Optional comment: To make this consistent with the dilution factors, instead of " _b" use " _str" for stream trace.	N/A	Y
MeanSatZonePoreVel_SD U4_vec	\\Transport\\WaterT ransport\\FlowField _PEST101	Added selector element to allow user to choose between MeanSatZonePoreVel_SD vec_a, MeanSatZonePoreVel_SD vec_b, or maximum value of the two choices	Y	None	N/A	Y
PathLength_SDU1_vec	\\Transport\\WaterT ransport\\FlowField _PEST101	Added vector by SouthSDU1 to assign path lengths to the 100-meter boundary for the updated 3-pipe pathway model	Y	None	N/A	Y
PathLength_SDU4_vec	\\Transport\\WaterT ransport\\FlowField _PEST101	Added vector by SouthSDU4 to assign path lengths to the 100-meter boundary for the updated 3-pipe pathway model	Y	None	N/A	Y
MeanSatZoneDarcyVel_S DU1_vec	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element for SDU 1 three source segment pipe-element model to generate Darcy velocity vector for array size SouthSDU1	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.044.gsm		Source Model ID (or filename): SRS Saltstone v5.043.gsm				
New Model File Date: 2/4/2019		Source Model File Date: 2/4/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZoneDarcyVel_SD DU4_vec	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element for SDU 4 three source segment pipe-element model to generate Darcy velocity vector for array size SouthSDU4	Y	None	N/A	Y
PathLength_SD DU1	\\Transport\\WaterT ransport\\FlowField _Picked	Default value changed to FlowField_PEST101 values	Y	None	N/A	Y
PathLength_SD DU4	\\Transport\\WaterT ransport\\FlowField _Picked	Default value changed to FlowField_PEST101 values	Y	None	N/A	Y
PathLength_SD DU1_vec	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element for SDU 1 three source segment pipe-element model to assign path lengths from SDU 1 to the 100-meter boundary for array size SouthSDU1	Y	None	N/A	Y
PathLength_SD DU4_vec	\\Transport\\WaterT ransport\\FlowField _Picked	Added selector element for SDU 4 three source segment pipe-element model to assign path lengths from SDU 4 to the 100-meter boundary for array size SouthSDU4	Y	None	N/A	Y
SatZoneDarcyVelDist_SD U1_vec	\\Transport\\WaterT ransport	Added expression element to assign sampled Darcy velocity values to vector used by the SDU 1 three source segment pipe-element model	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.044.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.043.gsm				
<b>New Model File Date:</b> 2/4/2019		<b>Source Model File Date:</b> 2/4/2019				
Parameter or Element	Location	Change Description	Correct Y N	Checker Comment	Analyst Response	Checker Concur? Y N
SalZoneDarcyVelDist_SD U4_vec	TransportWaterT ransport	Added expression element to assign sampled Darcy velocity values to vector used by the SDU 4 three source segment pipe-element model	Y	None	N/A	Y
If checker has no comments, check here. <input type="checkbox"/>						
Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments) <i>Barry Lester</i> 4/8/2019				
<b>Checker Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Steve Hommel</i> 4/9/2019				

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SRS Saltstone v5.045.gsm Changed Model Check Form (8 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.045.gsm (Hommel's changes)			<b>Source Model ID (or filename):</b> SRS Saltstone v5.044.gsm (Barry's latest)			
<b>New Model File Date:</b> 2/6/2019			<b>Source Model File Date:</b> 2/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Additional changes to make probabilistic analysis easier.						
[not applicable]	[not applicable]	Model was renamed.	Y			
UncertMultiplier_MilkUptake	\\Dose_ParameterCalculations\\DoseParameters\\HumanUptakeParameters	Deleted element. It was not being used.	Y			
UncertMultiplier_SoilUptake	\\Dose_ParameterCalculations\\DoseParameters\\HumanUptakeParameters	Deleted element. It was not being used.	Y			
UncertMultiplier_AirUptake	\\Dose_ParameterCalculations\\DoseParameters\\HumanUptakeParameters	Deleted element. It was not being used.	Y			
HumanUptakeofMilk	\\Dose_ParameterCalculations\\DoseParameters\\HumanUptakeParameters	Removed link to uncertainty multiplier. It was not being used.	Y			
HumanBreathingRate	\\Dose_ParameterCalculations\\DoseParameters\\HumanUptakeParameters	Removed link to uncertainty multiplier. It was not being used.	Y			

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.045.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.044.gsm (Barry's latest)				
New Model File Date: 2/6/2019		Source Model File Date: 2/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UncertMultiplier_Watert oMEAT	\\Dose_Parameter _Calculations\\Dos eParameters\\Othe rUptakerParamete rs	Deleted element. It was not being used.	Y			
UncertMultiplier_Watert oMILK	\\Dose_Parameter _Calculations\\Dos eParameters\\Othe rUptakerParamete rs	Deleted element. It was not being used.	Y			
UncertMultiplier_Fodder toMEAT	\\Dose_Parameter _Calculations\\Dos eParameters\\Othe rUptakerParamete rs	Deleted element. It was not being used.	Y			
UncertMultiplier_Fodder toMILK	\\Dose_Parameter _Calculations\\Dos eParameters\\Othe rUptakerParamete rs	Deleted element. It was not being used.	Y			
UncertMultiplier_MEAT FodderFraction	\\Dose_Parameter _Calculations\\Dos eParameters\\Othe rUptakerParamete rs	Deleted element. It was not being used.	Y			
UncertMultiplier_MILKF odderFraction	\\Dose_Parameter _Calculations\\Dos eParameters\\Othe rUptakerParamete rs	Deleted element. It was not being used.	Y			
DryBulkDensity_Sandy Soil	\\Materials\\SandyS oilProperties	Changed value to 1.62 g/cm <sup>3</sup> * SoilDensityUncert	Y			

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.045.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.044.gsm (Barry's latest)				
New Model File Date: 2/6/2019		Source Model File Date: 2/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Porosity_SandySoil	Materials\SandySoilProperties	Changed value to 1 – (DryBulkDensity_SandySoil /2.66 g/cm3)	Y			
DryBulkDensity_SatSandySoil	Materials\SatSandySoilProperties	Changed value to 1.04 g/cm3 * SoilDensityUncert	Y			
DryBulkDensity_ClayeySoil	Materials\ClayeySoilProperties	Changed value to 1.71 g/cm3 * SoilDensityUncert	Y			
Porosity_ClayeySoil	Materials\ClayeySoilProperties	Changed value to 1 – (DryBulkDensity_ClayeySoil /2.63 g/cm3)	Y			
EDF_AcuteIHI_Inh	Dose_ParameterCalculations\EffectiveDoseFactors	Updated formula to remove link(s) to deleted element(s) and Removed *SoilDensityUncert from calc. It is now part of the Bulk Density term.	Y			
EDF_AcuteIHI_Inh	Dose_ParameterCalculations\EffectiveDoseFactors	Updated formula to remove link(s) to deleted element(s) and Removed *SoilDensityUncert from calc. It is now part of the Bulk Density term.	Y			
EDF_IrrSoil_Exp	Dose_ParameterCalculations\EffectiveDoseFactors	Removed *SoilDensityUncert from calc. It is now part of the Bulk Density term.	Y			
EDF_Plant_Inh_IHI	Dose_ParameterCalculations\EffectiveDoseFactors	Removed *SoilDensityUncert from calc. It is now part of the Bulk Density term.	Y			

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.045.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.044.gsm (Barry's latest)				
New Model File Date: 2/6/2019		Source Model File Date: 2/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
EDF_IrrWater_Inh	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s)	Y			
EDF_IrrDust_Inh	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s)	Y			
EDF_Shower_Inh	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s)	Y			
EDF_Swim_Inh	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s)	Y			
EDF_Soil_Ing	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s)	Y			
EDF_Meat_Ing	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s)	Y			
EDF_Milk_Ing	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s)	Y			
EDF_Milk_Ing_IHI	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s)	Y			
EDF_Soil_Ing_IHI	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s) and Removed *SoilDensityUncert from calc. It is now part of the Bulk Density term	Y			

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Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.045.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.044.gsm (Barry's latest)				
New Model File Date: 2/6/2019		Source Model File Date: 2/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
EDF_Soil_Inh_IHl	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s) and Removed *SoilDensityUncert from calc. It is now part of the Bulk Density term.	Y			
Fodder_Meat_Ing_IHl	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s)	Y			
Fodder_Milk_Ing_IHl	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Updated formula to remove link(s) to deleted element(s)	Y			
LeachRate	\\Dose_Parameter _Calculations\\Dos eParameters\\Inter mediateParameter Calcs	Removed *SoilDensityUncert from calc. It is now part of the Bulk Density term.	Y			
SaltstoneKd_Iodine	\\GlobalModel_Inp ut\\Stochastic	Added element that samples discrete values of: 0.333 = 1 0.334 = 2 0.333 = 3 The user input Scenario switch should be used as the deterministic value.	Y			
I_Kd_Saltstone_Rel	\\Materials\\Saltston eSpecificKds	Replaced element with selector based on the SaltstoneKd_Iodine sampling. Iodine Kds are from SRR- CWDA-2018-00045	Y			

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Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.045.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.044.gsm (Barry's latest)				
New Model File Date: 2/6/2019		Source Model File Date: 2/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
I_Kd_Saltstone_Rell	\\Materials\\Saltston eSpecificKds	Replaced element with selector based on the SaltstoneKd_Iodine sampling. Iodine Kds are from SRR- CWDA-2018-00045	Y			
I_Kd_Saltstone_Rell1	\\Materials\\Saltston eSpecificKds	Replaced element with selector based on the SaltstoneKd_Iodine sampling. Iodine Kds are from SRR- CWDA-2018-00045	Y			
[created an array for dose paths]	[Array labels]	Created an array for a dose path summary.	Y			
Dose_Paths_Summary	\\Dose_Results\\Se ctA_100m_Dose	Added element.	Y			
Dose_Paths_Summary	\\Dose_Results\\Se ctB_100m_Dose	Added element.	Y			
Dose_Paths_Summary	\\Dose_Results\\Se ctC_100m_Dose	Added element.	Y			
Dose_Paths_Summary	\\Dose_Results\\Se ctD_100m_Dose	Added element.	Y			
Dose_Paths_Summary	\\Dose_Results\\Se ctE_100m_Dose	Added element.	Y			
Dose_Paths_Summary	\\Dose_Results\\Se ctF_100m_Dose	Added element.	Y			
Dose_Paths_Summary	\\Dose_Results\\Se ctG_100m_Dose	Added element.	Y			
Dose_Paths_Summary	\\Dose_Results\\Se ctH_100m_Dose	Added element.	Y			

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4/23/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.045.gsm (Hommel's changes)			<b>Source Model ID (or filename):</b> SRS Saltstone v5.044.gsm (Barry's latest)			
<b>New Model File Date:</b> 2/6/2019			<b>Source Model File Date:</b> 2/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Endpoints_PA	\\SensitivityAnalyses_New	Removed links from deleted elements. Also removed WellDepth_Uncert and SaltstoneKd_Dist_Ba_XX. Finally, rearranged the order of stochastics to put those that are likely to be important closer to front.	Y			
ResultSummary	\\Dose_Results	Added container.	Y			
MaxSector_Result	\\Dose_Results\\ResultSummary	Added element to generate summary data for analysis.	Y			
MaxSect	\\Dose_Results\\ResultSummary	Added element to expose result as a time history.	Y			
Rad_from_MaxSector	\\Dose_Results\\ResultSummary	Added element to generate summary data for analysis.	Y			
OtherRads_from_MaxSector	\\Dose_Results\\ResultSummary	Added element to generate summary data for analysis.	Y			
Rads_MOP	\\Dose_Results\\ResultSummary	Added element to expose result as a time history.	Y			
Paths_from_MaxSector	\\Dose_Results\\ResultSummary	Added element to generate summary data for analysis.	Y			
Paths_MOP	\\Dose_Results\\ResultSummary	Added element to expose result as a time history.	Y			
		Versioned the file.	Y			

SRS Saltstone v5.045\_Check

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4/23/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.045.gsm (Hommel's changes)		Source Model ID (or filename): SRS Saltstone v5.044.gsm (Barry's latest)				
New Model File Date: 2/6/2019		Source Model File Date: 2/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y/N	Checker Comment	Analyst Response	Checker Concur? Y/N
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): <i>Ben Dean</i> 4/23/2019				

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SRS Saltstone v5.046.gsm Changed Model Check Form (3 Pages)

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.046.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.045.gsm				
<b>New Model File Date:</b> 2/7/2019		<b>Source Model File Date:</b> 2/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Updated links to support plume calculations. [Note: Input values for all except the plume measures still need to be updated.]						
WellDistance	DisposalUnits\SDU1\SiteGeometry	Changed scalar expression: element to vector by SouthSDU1 and reset to PathLength_SDU1_vec	Y	None	N/A	Y
WellDistance	DisposalUnits\SDU4\SiteGeometry	Changed scalar expression element to vector by SouthSDU4 and reset to PathLength_SDU4_vec	Y	None	N/A	Y
SouthernSDUs	Model_Concentrations\GoldSim100m_Conc	Reset expression element to capture 100-m boundary concentrations from three sectors of SDU1 and SDU 4	Y	None	N/A	Y
SectorF_conc_1	Model_Concentrations\GoldSim100m_Conc	Superposed contribution from SDU 10 onto contributions from SDU 1 and SDU 4 at Well F1	Y	None	N/A	Y
PathLengths_SDU	Transport\WaterTransport\FlowField_Picked	Reset default value to FlowField_PES101.PathLengths_SDU	Y	None	N/A	Y
PathLengths_South	Transport\WaterTransport\PlumeCalc_Sectors	Reset expression element to capture path lengths to the 100-m boundary for three sectors of SDU1 and SDU 4	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.046.gsm		Source Model ID (or filename): SRS Saltstone v5.045.gsm				
New Model File Date: 2/7/2019		Source Model File Date: 2/6/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FlowfaceAreaMat_South	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ataMatrices	Reset expression element to capture flow face areas for pipe elements evaluating radionuclide transport to the 100-m boundary for the three sectors of SDU1 and SDU 4	Y	None	N/A	Y
SaltLengthMat_South	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ataMatrices	Reset expression element to capture source lengths for pipe elements evaluating radionuclide transport to the 100-m boundary for the three sectors of SDU1 and SDU 4	Y	None	N/A	Y
SaltWidthMat_South	\\Transport\\WaterT ransport\\PlumeCal c_Sectors\\PlumeD ataMatrices	Reset expression element to capture source widths for pipe elements evaluating radionuclide transport to the 100-m boundary for the three sectors of SDU1 and SDU 4	Y	None	N/A	Y
SectorE_conc_2	\\Model_Concentra tions\\GoldSim100 m_Conc	Superposed contribution from SDU 1 (north) onto contributions from Northern SDUs at Well E2	Y	None	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>		Add additional rows above, as needed.				

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.046.gsm		Source Model ID (or filename): SRS Saltstone v5.045.gsm				
New Model File Date: 2/7/2019		Source Model File Date: 2/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Analyst Name (print): Barry Lester				E-Signature (or sign/date/scan hardcopy): <i>[Signature]</i> 4/13/2019		
Checker Name (print): Steve Hommel				E-Signature (or sign/date/scan hardcopy): <i>[Signature]</i> 3/11/2019		

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SRS Saltstone v5.047.gsm Changed Model Check Form (5 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.047.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.046.gsm				
<b>New Model File Date:</b> 2/21/2019		<b>Source Model File Date:</b> 2/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Updated links to support plume calculations. [Note: Input values for all except the plume measures still need to be updated.]						
GardenSoilMass	\\Dose_Parameter Calculations\\IHL DrillCutConc_Calc	Change: TillDepth*GardenSize*Sand ySoil:Density To: TillDepth*GardenSize* GardenSizeUncert*Sandy Soil Density	Y	None	N/A	Y
IHL_GardenConc	\\Dose_Parameter Calculations\\IHL DrillCutConc_Calc	Change: Garden_Mass_in_Pathway* Species_Specific_Activity / (GardenSize*TillDepth) To: Garden_Mass_in_Pathway* Species_Specific_Activity / (GardenSize* GardenSizeUncert *TillDepth)	Y	None	N/A	Y
PeakDose_100m_Sect B [new element]	\\SensitivityAnalysis s_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to MOP_Doses[SectorB]	Y	None	N/A	Y
PeakDose_100m_Sect D [new element]	\\SensitivityAnalysis s_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to MOP_Doses[SectorD]	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.047.gsm		Source Model ID (or filename): SRS Saltstone v5.046.gsm				
New Model File Date: 2/21/2019		Source Model File Date: 2/7/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PeakDose_IHI_1m [new element]	\\SensitivityAnalysis s_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to IHI_1mBoundary.Dose_IHI	Y	None	N/A	Y
PeakDose_100m_1129 [new element]	\\SensitivityAnalysis s_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to Rad_from_MaxSector[1129]	Y	None	N/A	Y
PeakDose_100m_Tc99 [new element]	\\SensitivityAnalysis s_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to Rad_from_MaxSector[Tc99]	Y	None	N/A	Y
PeakDose_100m_Water ring [new element]	\\SensitivityAnalysis s_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to Paths_from_MaxSector[Wa teringestion]	Y	None	N/A	Y
PeakDose_100m_Plant ing [new element]	\\SensitivityAnalysis s_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to Paths_from_MaxSector[Pla ntingestion]	Y	None	N/A	Y
Floor_Kds	\\DisposalUnits\\SD U1\\ConcreteDegrada tion	Selector updated to capture concrete Kds as opposed to saltstone Kds	Y	None	N/A	Y

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Waste Disposal Authority

### Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.047.gsm		Source Model ID (or filename): SRS Saltstone v5.046.gsm				
New Model File Date: 2/21/2019		Source Model File Date: 2/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Wall_Kds	\\DisposalUnits\\SDU1\\ConcreteDegradation	Selector updated to capture concrete Kds as opposed to saltstone Kds	Y	None	N/A	Y
FFFloor_Kds	\\DisposalUnits\\SDU1\\ConcreteDegradation	Selector updated to capture concrete Kds as opposed to saltstone Kds	Y	None	N/A	Y
Floor_Kds	\\DisposalUnits\\SDU4\\ConcreteDegradation	Selector updated to capture concrete Kds as opposed to saltstone Kds	Y	None	N/A	Y
Wall_Kds	\\DisposalUnits\\SDU4\\ConcreteDegradation	Selector updated to capture concrete Kds as opposed to saltstone Kds	Y	None	N/A	Y
FFFloor_Kds	\\DisposalUnits\\SDU4\\ConcreteDegradation	Selector updated to capture concrete Kds as opposed to saltstone Kds	Y	None	N/A	Y
NumUZLayers_SDUI	\\Transport\\WaterTransport	Data element renamed then changed from 10 to 20	Y	None	N/A	Y
NumUZLayers_SDUI4	\\Transport\\WaterTransport	SDU specific data element added and set to 20	Y	None	N/A	Y
NumUZLayers_SDUI_Cyl	\\Transport\\WaterTransport	Cylindrical SDU specific data element added, set to 20, and passed through submodel interface to be captured by NumUZLayers in \\InputData\\SDU_Data\\Geometry	Y	None	N/A	Y
NumUZLayers	\\InputData\\SDU_Data\\Geometry	Factor of 0.5 removed	Y	None	N/A	Y
UZCellVolume	\\DisposalUnits\\SDU4\\SiteGeometry	Factor of 0.5 removed	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.047.gsm			Source Model ID (or filename): SRS Saltstone v5.046.gsm			
New Model File Date: 2/21/2019			Source Model File Date: 2/7/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UZ_Cell_Thickness	\\DisposalUnits\\SDU4\\SiteGeometry	Denominator replaced by SDU specific value Num\\UZLayers_SDU4	Y	None	N/A	Y
UZThickness	\\DisposalUnits\\SDU4\\SiteGeometry	Element not changed	Y	None	N/A	Y
UZCell_xx, xx=03-09	\\DisposalUnits\\SDU1\\UnsatZone	Updated velocity term vector indices to reflect doubling of number of cells representing the UZ	Y	None	N/A	Y
UZCell_09	\\DisposalUnits\\SDU1\\UnsatZone	Connected advective and diffusive links to UZCell_In in \\DisposalUnits\\SDU1\\Unsat Zone\\UZADD	Y	None	N/A	Y
UZADD	\\DisposalUnits\\SDU1\\UnsatZone	Added container with 10 additional linked cells to create a more refined grid of 20 cell pathways	Y	None	N/A	Y
UZCell_Out	\\DisposalUnits\\SDU1\\UnsatZone\\UZADD	Connected advective and diffusive links to UZCell_Out one level above in \\DisposalUnits\\SDU1\\Unsat Zone	Y	None	N/A	Y
UZDiff_Thickness	\\DisposalUnits\\SDU1\\UnsatZone	Renamed element to force consistency between original cell pathways and those in the UZADD container	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.047.gsm		Source Model ID (or filename): SRS Saltstone v5.046.gsm				
New Model File Date: 2/21/2019		Source Model File Date: 2/7/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UZDiff_Thickness	\\DisposalUnits\SD U4\UnsatZone	Removed factor of 0.5 for consistency with use of NumUZLayers. SDU4 to indicate the number of cell- pathway elements defining the UZ pathway	Y	None	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Barry Lester			E-Signature (or sign/date/scan hardcopy): (Not required if no comments) <i>Barry Lester</i> 4/3/2019			
Checker Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): <i>Steve Hommel</i> 3/1/2019			

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SRS Saltstone v5.048.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.048.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.047.gsm				
<b>New Model File Date:</b> 2/27/2019		<b>Source Model File Date:</b> 2/20/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Updated links to support plume calculations. [Note: Input values for all except the plume measures still need to be updated.]						
MassToSaturatedZone	\DisposalUnits\SD U1\NearWell	Change: Added diffusive link component exiting UZ to mass release integrator.	Y			
MassToSaturatedZone	\DisposalUnits\SD U4\UnsatZone	Change: Added diffusive link component exiting UZ to mass release integrator.	Y			
HumanUptakeChooser_ switch	\User_Input	Change: Replaced with deterministic model value for model default	Y			
Submodel						
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> G.P. Flach		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>G.P. Flach</i> 3/20/2019				

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SRS Saltstone v5.049.gsm Changed Model Check Form (11 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.049.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.048.gsm				
<b>New Model File Date:</b> 3/06/2019		<b>Source Model File Date:</b> 2/27/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Added logic to allow a parametric data set used in stochastic runs to be selected for use in a deterministic run.						
UseSpecifiedFlowField	\\User_Input	Added a conditional switch to allow user to choose a parametric flow field and associated time-variant effective diffusion file and set of Tc-99 release time histories to use in a deterministic run.	Y	None	N/A	Y
SpecifiedFlowField	\\User_Input	Added a data element to assign which parametric flow field and associated data to use if UseSpecifiedFlowField is set to "true". Set default to 54 to reflect maximum infiltration parametric set	Y	None	N/A	Y
SpecifiedFlowCases	\\User_Input	Added a container containing a list of the parametric data sets are available	Y	None	N/A	Y
IRLZ_a	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WDData\\Deff_SDU1\\DLLData_Deff	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "true"	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.048.gsm				
<b>New Model File Date:</b> 3/06/2019		<b>Source Model File Date:</b> 2/27/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FileIndex	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Defl_SDU1\\DLLData_Defl	Updated FileIndex allowing it to control whether a deterministic or parametric effective diffusion data set is read in during a deterministic simulation.	Y	None	N/A	Y
readPFdata	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Defl_SDU1	Replaced IRLZ with IRLZ_a in external property element's interface.	Y	None	N/A	Y
IRLZ_a	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles\\DLLData_a_SDU1	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "true"	Y	None	N/A	Y
FileIndex	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles\\DLLData_a_SDU1	Updated FileIndex allowing it to control whether a deterministic or parametric flow field data set is read in during a deterministic simulation.	Y	None	N/A	Y
RFFSDU1	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles\\DLLData_a_SDU1	Replaced IRLZ with IRLZ_a in external property element's interface.	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049.gsm			Source Model ID (or filename): SRS Saltstone v5.048.gsm			
New Model File Date: 3/06/2019			Source Model File Date: 2/27/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IRLZ_a	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles2\\DLLData_SDU1	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "true"	Y	None	N/A	Y
FileIndex	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles2\\DLLData_SDU1	Updated FileIndex allowing it to control whether a deterministic or parametric flow field data set is read in during a deterministic simulation.	Y	None	N/A	Y
RFFSDU1	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles2	Replaced IRLZ with IRLZ_a in external property element's interface.	Y	None	N/A	Y
IRLZ_a	\\DisposalUnits\\Tc9\\9Input\\FluxToUZ\\SDU1\\DLLData_Flux	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "true"	Y	None	N/A	Y
FileIndexSelect	\\DisposalUnits\\Tc9\\9Input\\FluxToUZ\\SDU1\\DLLData_Flux	Updated FileIndexSelect allowing it to control whether a deterministic or parametric Tc-99 data set is read in during a deterministic simulation.	Y	None	N/A	Y

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Waste Disposal Authority

### Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049.gsm		Source Model ID (or filename): SRS Saltstone v5.048.gsm				
New Model File Date: 3/06/2019		Source Model File Date: 2/27/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IDU	\\DisposalUnits\\Tc9 9Input\\FluxToUZ SDU1\\DLLData_FI ux	Updated the selector element to reflect the choice of reading in a deterministic or parametric flow-field based data set for a deterministic simulation.	Y	None	N/A	Y
Iname	\\DisposalUnits\\Tc9 9Input\\FluxToUZ SDU1\\DLLData_FI ux	Updated the selector element to reflect the choice of reading in a deterministic or parametric flow-field based data set for a deterministic simulation.	Y	None	N/A	Y
readPFFluxdata	\\DisposalUnits\\Tc9 9Input\\FluxToUZ SDU1\\DLLData_FI ux	Replaced IRLZ with IRLZ_a in external property element's interface.	Y	None	N/A	Y
SourceID	\\DisposalUnits\\Tc9 9Input\\FluxToUZ SDU1\\DLLData_FI ux	Was Not changed	Y	None	N/A	Y
IRLZ_a	\\DisposalUnits\\SD U4\\SDU4PORFLO WData\\Def_SDU 4\\DLLData_DeFF	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "true"	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049.gsm		Source Model ID (or filename): SRS Saltstone v5.048.gsm				
New Model File Date: 3/06/2019		Source Model File Date: 2/27/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FileIndex	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\Defl_SDU4\\DLLData_Defl	Updated FileIndex allowing it to control whether a deterministic or parametric effective diffusion data set is read in during a deterministic simulation.	Y	None	N/A	Y
readPFdata	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\Defl_SDU4	Replaced IRLZ with IRLZ_a in external property element's interface.	Y	None	N/A	Y
IRLZ_a	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles\\DLLData_SDU4	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "true"	Y	None	N/A	Y
FileIndex	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles\\DLLData_SDU4	Updated FileIndex allowing it to control whether a deterministic or parametric flow field data set is read in during a deterministic simulation.	Y	None	N/A	Y
RFFSDU4	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles\\DLLData_SDU4	Replaced IRLZ with IRLZ_a in external property element's interface.	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049.gsm			Source Model ID (or filename): SRS Saltstone v5.048.gsm			
New Model File Date: 3/06/2019			Source Model File Date: 2/27/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IRLZ_a	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles2\\DLLData_SDU4	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "true"	Y	None	N/A	Y
FileIndex	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles2\\DLLData_SDU4	Updated FileIndex allowing it to control whether a deterministic or parametric flow field data set is read in during a deterministic simulation.	Y	None	N/A	Y
RFFSDU4	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles2	Replaced IRLZ with IRLZ_a in external property element's interface.	Y	None	N/A	Y
IRLZ_a	\\DisposalUnits\\Tc9\\9Input\\FluxToUJ\\SDU4\\DLLData_Flux	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "true"	Y	None	N/A	Y
FileIndexSelect	\\DisposalUnits\\Tc9\\9Input\\FluxToUJ\\SDU4\\DLLData_Flux	Updated FileIndex allowing it to control whether a deterministic or parametric Tc-99 data set is read in during a deterministic simulation	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049.gsm		Source Model ID (or filename): SRS Saltstone v5.048.gsm				
New Model File Date: 3/06/2019		Source Model File Date: 2/27/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IDU	\\DisposalUnits\\Tc9 9Input\\FluxToUZ SDU4\\DLLData_Fl ux	Updated the selector element to reflect the choice of reading in a deterministic or parametric flow-field based data set for a deterministic simulation.	Y	None	N/A	Y
Iname	\\DisposalUnits\\Tc9 9Input\\FluxToUZ SDU4\\DLLData_Fl ux	Updated the selector element to reflect the choice of reading in a deterministic or parametric flow-field based data set for a deterministic simulation	Y	None	N/A	Y
readPFFluxdata	\\DisposalUnits\\Tc9 9Input\\FluxToUZ SDU4\\DLLData_Fl ux	Replaced IRLZ with IRLZ_a in external property element's interface.	Y	None	N/A	Y
UseSpecifiedFlowField	\\User_Input	Passed variable through SDU_TransportSubmodel interface in container \\DisposalUnits\\SDUs\\Outer Loop\\InnerLoop	Y	None	N/A	Y
SpecifiedFlowField	\\User_Input	Passed variable through SDU_TransportSubmodel interface in container \\DisposalUnits\\SDUs\\Outer Loop\\InnerLoop	Y	None	N/A	Y
Submodel						
UseSpecifiedFlowField	\\InputData\\UserIn put	Captured variable passed through SDU_TransportSubmodel in expression element	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.049.gsm		Source Model ID (or filename): SRS Saltstone v5.048.gsm				
New Model File Date: 3/06/2019		Source Model File Date: 2/27/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SpecifiedFlowField	\\InputData\\UserIn put	Captured variable passed through SDU TransportSubmodel in selector element	Y	None	N/A	Y
IRLZ_a	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DefDLLD ata	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "true"	Y	None	N/A	Y
FileIndex	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DefDLLD ata	Updated FileIndex allowing it to control whether a deterministic or parametric effective diffusion data set is read in during a deterministic simulation.	Y	None	N/A	Y
ReadDefData	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DefDLLD ata	Replaced IRLZ with IRLZ a in external property element's interface.	Y	None	N/A	Y
IRLZ_a	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ DLLData	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "true"	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.048.gsm			
<b>New Model File Date:</b> 3/06/2019			<b>Source Model File Date:</b> 2/27/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FileIndex	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ DLLData	Updated FileIndex allowing it to control whether a deterministic or parametric flow field data set is read in during a deterministic simulation.	Y	None	N/A	Y
LocNum	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ DLLData	Was not changed	Y	None	N/A	Y
RFFSDU	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles	Replaced IRLZ with IRLZ_a in external property element's interface.	Y	None	N/A	Y
IRLZ_a	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2\\ DLLData	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "true"	Y	None	N/A	Y
FileIndex	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2\\ DLLData	Updated FileIndex allowing it to control whether a deterministic or parametric flow field data set is read in during a deterministic simulation.	Y	None	N/A	Y
RFFSDU	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2	Replaced IRLZ with IRLZ_a in external property element's interface.	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.048.gsm			
<b>New Model File Date:</b> 3/06/2019			<b>Source Model File Date:</b> 2/27/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IRLZ_a	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Added selector element to assign chosen parametric data set number to the external properties element if running a deterministic problem and UseSpecifiedFlowField is set to "True"	Y	None	N/A	Y
FileIndexSelect	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Updated FileIndex allowing it to control whether a deterministic or parametric Tc-99 data set is read in during a deterministic simulation.	Y	None	N/A	Y
IDU_Type	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Updated the selector element to reflect the choice of reading in a deterministic or parametric flow-field based data set for a deterministic simulation	Y	None	N/A	Y
Iname	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Updated the selector element to reflect the choice of reading in a deterministic or parametric flow-field based data set for a deterministic simulation	Y	None	N/A	Y
ISDU_375_9	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs\\DLL Data_Flux	Was not changed	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.048.gsm	
<b>New Model File Date:</b> 3/08/2019		<b>Source Model File Date:</b> 2/27/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
readPFFluxdata	\\InputData\\SDUP ORFLOW\\Data\\Flu xToUZ SDUs	Replaced IRLZ with IRLZ_a in external property element's interface.	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			
<b>Analyst Name (print):</b> Barry Lester		<b>Checker Comment</b>	<b>Analyst Response</b>
<b>Checker Name (print):</b> Steve Hommel			<b>Checker Concur? Y,N</b>
		Add additional rows above, as needed.	
		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments) <i>Barry Lester</i> 4/8/2019	
		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Steve Hommel</i> 4/8/2019	

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SRS Saltstone v5.050.gsm Changed Model Check Form (21 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.050.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 4/04/2019		<b>Source Model File Date:</b> 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Updated links to support plume calculations. [Note: Input values for all except the plume measures still need to be updated.]						
Kd_BE	Materials\ClayeyS oilKds	Changed name from Kd_Median	Y			
SD_Pick	Materials\ClayeyS oilKds	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev. 1, Section 4.8.1. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
Kd_Dist_Clay	Materials\ClayeyS oilKds	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev. 1, Section 4.8.1. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
Kd_BE	Materials\ClayeyS oilKds_Leachatel mpacted	Changed name from Kd_Median	Y			

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SD_Pick	\\Materials\ClayeyS oilKds_Leachatel mpacted	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.1. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
Kd_Dist_ClayL	\\Materials\ClayeyS oilKds_Leachatel mpacted	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.1. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
Kd_BE	\\Materials\SandyS oilKds	Changed name from Kd_Median	Y			
SD_Pick	\\Materials\SandyS oilKds	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.1. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.050.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm			
<b>New Model File Date:</b> 4/04/2019			<b>Source Model File Date:</b> 3/06/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_Sand	\\Materials\SandyS oilKds	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.1. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
Kd_BE	\\Materials\SandyS oilKds_Leachatel mpacted	Changed name from Kd_Median	Y			
SD_Pick	\\Materials\SandyS oilKds_Leachatel mpacted	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.1. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
Kd_Dist_SandL	\\Materials\SandyS oilKds_Leachatel mpacted	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.1. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
Kd_BE	\\Materials\Concret e_Kds_Oxidizingly oung_concrete_kd s_ox	Changed name from Kd_Median	Y			

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.050.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 4/04/2019			Source Model File Date: 3/06/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SD_Pick	\\Materials\Concrete_Kds_Oxidizing_ks_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
Kd_Dist_OxI	\\Materials\Concrete_Kds_Oxidizing_ks_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SD_Pick_Ba	\\Materials\Concrete_Kds_Oxidizing_ks_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name and GSD changed to SD in element name	Y			

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.050.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 4/04/2019		<b>Source Model File Date:</b> 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SD_Pick_Ra	\\Materials\Concrete_Kds_Oxidizing_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
SD_Pick_Sr	\\Materials\Concrete_Kds_Oxidizing_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
SaltstoneKd_Dist_Ba_Oxl	\\Materials\Concrete_Kds_Oxidizing_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ra_Oxl	\\Materials\Concrete_Kds_Oxidizing\young_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_Sr_Oxl	\\Materials\Concrete_Kds_Oxidizing\young_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
Kd_BE	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Changed name from Kd_Median	Y			
SD_Pick	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_OxII	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SD_Pick_Ba	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name and GSD changed to SD in element name	Y			
SD_Pick_Ra	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SD_Pick_Sr	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
SaltstoneKd_Dist_Ba_Oxll	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_Ra_Oxll	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Sr_O xll	\\Materials\Concret e_Kds_Oxidizing\l middle_concrete_ kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
Kd_BE	\\Materials\Concret e_Kds_Oxidizing\l ld_concrete_kds_ ox	Changed name from Kd_Median	Y			
SD_Pick	\\Materials\Concret e_Kds_Oxidizing\l ld_concrete_kds_ ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
Kd_Dist_OxIII	\\Materials\Concret e_Kds_Oxidizing\l ld_concrete_kds_ ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SD_Pick_Ba	\\Materials\\Concrete_Kds_Oxidizing\\ Id_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name and GSD changed to SD in element name	Y			
SD_Pick_Ra	\\Materials\\Concrete_Kds_Oxidizing\\ Id_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
SD_Pick_Sr	\\Materials\\Concrete_Kds_Oxidizing\\ Id_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			

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Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_OxIII	\\Materials\Concrete_Kds_Oxidizing\lo Id_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_Ra_OxIII	\\Materials\Concrete_Kds_Oxidizing\lo Id_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_Sr_OxIII	\\Materials\Concrete_Kds_Oxidizing\lo Id_concrete_kds_ox	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
Kd_BE	\\Materials\Concrete_Kds_Oxidizing\lo young_concrete_kds_red	Changed name from Kd_Median	Y			

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SD_Pick	\\Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
Kd_Dist_Rel	\\Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SD_Pick_Ba	\\Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name and GSD changed to SD in element name	Y			

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SD_Pick_I	\\Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name and GSD changed to SD in element name	Y			
SD_Pick_Ra	\\Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
SD_Pick_Sr	\\Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_R el	\\Materials\\Concrete_Kds_Reducing\\ young_concrete_k ds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_I_Rel	\\Materials\\Concrete_Kds_Reducing\\ young_concrete_k ds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_Ra_Rel	\\Materials\\Concrete_Kds_Reducing\\ young_concrete_k ds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_Sr_Rel	\\Materials\\Concrete_Kds_Reducing\\ young_concrete_k ds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_BE	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Changed name from Kd_Median	Y			
SD_Pick	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev. 1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
Kd_Dist_Rell	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev. 1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SD_Pick_Ba	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev. 1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name and GSD changed to SD in element name	Y			

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SD_Pick_I	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name and GSD changed to SD in element name	Y			
SD_Pick_Ra	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
SD_Pick_Sr	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			

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SRS Saltstone v5.050\_Check

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_R ell	\\Materials\\Concrete_Kds_Reducing\\ middle_concrete_ kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_I_Rel I	\\Materials\\Concrete_Kds_Reducing\\ middle_concrete_ kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_Ra_ Rel	\\Materials\\Concrete_Kds_Reducing\\ middle_concrete_ kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_Sr_R ell	\\Materials\\Concrete_Kds_Reducing\\ middle_concrete_ kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.050.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 4/04/2019			Source Model File Date: 3/06/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_BE	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Changed name from Kd_Median	Y			
SD_Pick	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	N	Note: GSD not changed to SD in element name.		
Kd_Dist_ReIII	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SD_Pick_Ba	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name and GSD changed to SD in element name	Y			

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Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.050.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 4/04/2019			Source Model File Date: 3/06/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SD_Pick_I	\\Materials\\Concrete_Kds_Reducing\\old_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name and GSD changed to SD in element name	Y			
SD_Pick_Ra	\\Materials\\Concrete_Kds_Reducing\\old_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			
SD_Pick_Sr	\\Materials\\Concrete_Kds_Reducing\\old_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Standard deviation is now the true (normal) Standard deviation and GSD changed to SD in element name	Y			



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SRS Saltstone v5.050\_Check

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_R eIII	\\Materials\\Concrete_Kds_Reducing\\old_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_I_Rel III	\\Materials\\Concrete_Kds_Reducing\\old_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_Ra_R RelII	\\Materials\\Concrete_Kds_Reducing\\old_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SaltstoneKd_Dist_Sr_R eIII	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Updated to reflect corrected distribution calculations based on SRNL-STI-00473 Rev.1, Section 4.8.2. Distribution changed from lognormal to normal based on the Central Limit Theorem	Y			
SRS Saltstone v5.050_Check		20 of 21				
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**Changed Model Check Form**

New Model ID (or filename): SRS Saltstone v5.050.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm	
New Model File Date: 4/04/2019		Source Model File Date: 3/06/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
If checker has no comments, check here. <input type="checkbox"/>		Checker Comment	Analyst Response
Analyst Name (print): Barry Lester		Checker Concur? Y,N	
Checker Name (print): David Watkins		Add additional rows above, as needed.	
E-Signature (or sign/date/scan hardcopy):  4/13/2019		E-Signature (or sign/date/scan hardcopy):  4/15/19	

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SRS Saltstone v5.050\_Check

SRS Saltstone v5.051.gsm Changed Model Check Form (115 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.051.gsm		Source Model ID (or filename): SRS Saltstone v5.038.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Incorporates changes identified for SRS Saltstone v5.039.gsm.						
NSDU6_add	\\DisposalUnits\\SD U_Data	Pointer used to account for added cell pathway elements in containers named SDU6add in submodel	Y	None	N/A	Y
UZThickness_table	\\DisposalUnits\\SD U_Data	Updated based on Section 4.4.4 of SRR-CWDA- 2019-00001 Draft A	N	All values are correct except SDU 6. Goldsim has a value of 43.5 ft, the table in Section 4.4.4 of the 2019 PA has 42 ft.	Note that 42 feet represents the depth to water table from at the outer edge of SDU 6 to the end of the backfill. In the center of the SDU the UZ thickness is 44.805. The choice of 43.5 was based on approximately using a linear interpolation between the center of the SDU and its outer edge. The thickness could adjust to 43.9 feet based on areal interpolation but 43.5 ft is conservative.	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.051.gsm		Source Model ID (or filename): SRS Saltstone v5.038.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU2_HDPE_Thickness	\\DisposalUnits\\SDU_Data\\SDU2Type_data	HDPE equivalent thickness from PORFLOW added to approximate effects of the liner on diffusion. Advective influence is implicit to velocity fields.	Y	None	N/A	Y
SDU6_HDPE_Thickness	\\DisposalUnits\\SDU_Data\\SDU6Type_data	HDPE equivalent thickness from PORFLOW added to approximate effects of the liner on diffusion. Advective influence is implicit to velocity fields.	Y	None	N/A	Y
SDU6_Joint1Width	\\DisposalUnits\\SDU_Data\\SDU6Type_data	Reset to inches	Y	None	N/A	Y
SDU6_Joint2Width	\\DisposalUnits\\SDU_Data\\SDU6Type_data	Reset to inches	Y	None	N/A	Y
SDU6_RSpace	\\DisposalUnits\\SDU_Data\\SDU6Type_data	Not changed	Y	None	N/A	Y
SDU7Type_data	\\DisposalUnits\\SDU_Data\\SDU6Type_data	Copied and pasted SDU6Type_data and renamed container and all contents	Y	None	N/A	Y
SDU7_Joint1Width	\\DisposalUnits\\SDU_Data\\SDU7Type_data	Reset to inches	Y	None	N/A	Y

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.051.gsm		Source Model ID (or filename): SRS Saltstone v5.038.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU7_Joint3Width	\\DisposalUnits\\SDU_Data\\SDU7Type_data	Reset to inches	Y	None	N/A	Y
SDU7_Floor_Thickness	\\DisposalUnits\\SDU_Data\\SDU7Type_data	Set to 24 inches as per Table 4.4-73 from SRR-CWDA-2019-00001 Draft A	Y	None	N/A	Y
SDU7Joint1Area	\\DisposalUnits\\SDU_Data\\SDU7Type_data	Differs slightly from SDU6Joint1Area due to roundoff in joint thickness	N	SDU7Joint1Area appears to be equivalent to SDU6Joint1Area since joint width is set to 2 inches in both cases	I agree, no change necessary	Y
SDU7Joint2Area	\\DisposalUnits\\SDU_Data\\SDU7Type_data	Differs slightly from SDU6Joint2Area due to roundoff in joint thickness	N	SDU7Joint2Area appears to be equivalent to SDU6Joint2Area since joint width is set to 2 inches in both cases	I agree, no change necessary	Y
SDU7_HDPE_Thickness	\\DisposalUnits\\SDU_Data\\SDU7Type_data	HDPE equivalent thickness from PORFLOW added to approximate effects of the liner on diffusion. Advective influence is implicit to velocity fields.	Y	None	N/A	Y
SDU1_SDU4_concrete_wall	\\DisposalUnits\\SDU1	Linked to : SDU1_SDU4_FloorWall.DensityBulkDensity_Walls14 And SDU1_SDU4_FloorWall.Porosity_Walls14	Y	None	N/A	Y

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.051.gsm		Source Model ID (or filename): SRS Saltstone v5.038.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU1_SDU4_concrete_Floor	\\DisposalUnits\\SDU1	Linked to : SDU1_SDU4_FloorWall.D ryBulkDensity_Floor14 And SDU1_SDU4_FloorWall.P osity_Floor14	Y	None	N/A	Y
SDU1_SDU4_concrete_Floor	\\DisposalUnits\\SDU1	Linked to \\DisposalUnits\\SDU1\\SDU 1\\PORFLOWData\\Defl_SD U1\\DiffusionCoefficientEle ments\\Floor_Tortuosity	Y	None	N/A	Y
Saltstone_Kds	\\DisposalUnits\\SDU1\\ConcreteDegradation	Updated to reflect new transition-time logic	Y	None	N/A	Y
Wall_Kds	\\DisposalUnits\\SDU1\\ConcreteDegradation	Updated to reflect new transition-time logic	Y	None	N/A	Y
Floor_Kds	\\DisposalUnits\\SDU1\\ConcreteDegradation	Updated to reflect new transition-time logic	Y	None	N/A	Y
FFFloor_Kds	\\DisposalUnits\\SDU1\\ConcreteDegradation	Updated to reflect new transition-time logic	Y	None	N/A	Y
FastZone_Kds	\\DisposalUnits\\SDU1\\ConcreteDegradation	Updated to reflect new transition-time logic	Y	None	N/A	Y
FastZone_Kds_vec	\\DisposalUnits\\SDU1\\ConcreteDegradation	Updated to reflect new transition-time logic	N	No "FastZone_Kds_vec" element exist in this location.	You are correct, there are no zones in SDU1 columns	Y

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SRS Saltstone v5.051\_Check



Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051.gsm		Source Model ID (or filename): SRS Saltstone v5.038.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DeffPar_vec	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Deff_SDU1	Updated column pointers to reflect new diffusion coefficient files	Y	None	N/A	Y
UZ_Tortuosity	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Deff_SDU1\\DiffusionCoefficientElements	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the UZ	Y	None	N/A	Y
BackFill_Tortuosity	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Deff_SDU1\\DiffusionCoefficientElements	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the Backfill	Y	None	N/A	Y
Floor_Tortuosity	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Deff_SDU1\\DiffusionCoefficientElements	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the Floor	Y	None	N/A	Y

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SRS Saltstone v5.051\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051.gsm			Source Model ID (or filename): SRS Saltstone v5.038.gsm			
New Model File Date: 4/10/2019			Source Model File Date: 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FFFloor_Tortuosity	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Diff_SDUEntElements	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the fast flow section in the floor	Y	None	N/A	Y
Joint_Tortuosity	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Diff_SDUEntElements	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the joint elements	Y	None	N/A	Y
Crack_Tortuosity	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Diff_SDUEntElements	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the crack (fast zone) within the saltstone	Y	None	N/A	Y

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Waste Disposal Authority

### Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FileIndex	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Deff_SDU1\\DLLData_Deif	Deleted data property selector element and replaced with line in SDU 1 general input file (ReadPFData1.in) that points to diffusion coefficient file for specified scenario.	Y	For the probabilistic runs (i.e., Realization_a<>0), the ReadPFData1.in file points to C:\\SDF_FY19Data01\\V4\\RLZ001\\Transport\\De_I-129.tab but the only file I only found De_Tc-99.tab file (not De_I-129.tab file).	The present input files point to De_Tc-99.tab files for stochastic runs. De_I-129.tab are presently used for deterministic runs only. Note that to De_Tc-99.tab and De_I-129.tab which define the time-dependent diffusion coefficients used in the model are radionuclide independent and will be the same for any individual SDU and scenario/realization	Y
szTable	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\Deff_SDU1\\DLLData_Deif	Data updated to reflect changed number (15 to 7) of columns in PORFLOW generated effective diffusion files (De_I-129.tab)	Y	I think "(15 to 7)" is a typo and is meant to be "(15 to 17)". szTable currently has a value of 17.	Correct, there are 17 columns in the file	Y

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Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.051.gsm		Source Model ID (or filename): SRS Saltstone v5.038.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ATWT_ND	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\PORFLO\\WFluxToUZ	Added data element to scale Tc-99 flux in mols by the atomic weight of Tc-99	Y	Since we are looking at Tc-99 flux, wouldn't we want to set the atomic mass to 99 g/mol for the specific isotope rather than 98.906 g/mol?	98.906 g/mol is consistent with the species element and Table 4.4-102 of the PA so I am not sure why it shouldn't be used	Y
Tc99FluxToUZa_SDU1	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\PORFLO\\WFluxToUZ	Renamed	N	Element is still named Tc99FluxToUZa_V1	Will update name in later version	Y
Tc99FluxToUZ_V1	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\PORFLO\\WFluxToUZ	Logic added to convert from mols to grams using ATWT_ND	Y		Will update name in later version	Y
Tc99Row	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\PORFLO\\WFluxToUZ	Added pointer to assign Tc-99 data based on position in species element	Y	None	N/A	Y
FloPar_vec	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlow\\FieldFiles	Added flow field column numbers for pH2 transition time in floor saltstone, and floor fast zone. Reassigned flow field column locations based on new PA flow field output	Y	None	N/A	Y

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SRS Saltstone v5.051\_Check

Waste Disposal Authority	RFFSDU1	\DisposalUnits\SDU1\SDU1PORFLOWData\ReadFlowFieldFiles	Added interface input and output variables for pH2 transition time in floor saltstone, and floor fast zone. Updated flow field column locations and flow data output in Input Interface and Output Interface Definitions based on new PA flow field output	Y	Joint DV and Joint sat (#22 and #41 under the Input Interface, respectively) refer back to values for material zone "Group0019" in the GoldSim.tab file. Is Group0019 = SDU1 joints?  WallB_DVH and WallOB_DVH (#25 and #26 under the Input Interface, respectively) refer back to values for material zones "WallT_darcyH" and "WallB_darcyH" in the GoldSim.tab file, respectively. I think the label used in RFFSDU1 should be changed from WallB_DVH to WallIT_DVH and WallOB_DVH to WallIB_DVH for clarity.  For similar reasons, I think:  Saltstone1 Sat (#32 under the Input Interface) should be renamed SaltstoneTI_sat  SaltstoneO_Sat (#33 under the Input Interface) should be renamed SaltstoneTO_sat	The influence of all the joints is combined into a single release column and "Group0019" is the combined flow and saturation data for all the joints.  I will update the names in next flow file change	Y
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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051.gsm			Source Model ID (or filename): SRS Saltstone v5.038.gsm			
New Model File Date: 4/10/2019			Source Model File Date: 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
				Wall_Sat (#36 under the Input Interface) should be renamed WallIT_sat		
FileIndex	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles\\DLLData_SDU1	Deleted data property element and replaced with selector element to reflect line in SDU 1 general input file (ReadPFData1.in) that points to flow data file for specified scenario.	Y	None	N/A	Y
szTable	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles\\DLLData_SDU1	Updated number of columns to search for flow data in PORFLOW generated flow field data files based on updated 2019 PA changes.	Y	None	N/A	Y
pH2	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles\\FlowData	Copied container pH and its contents, renamed container pH2, and contents *pH2a. Contents are now used to capture chemical environment transition time for Region III to Region IV transition	Y	None	N/A	Y

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Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051.gsm		Source Model ID (or filename): SRS Saltstone v5.038.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Floor_pH2	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlow\\FieldFiles\\ScalarData	Copied Floor_pH, renamed it and linked expression element to external element	Y	None	N/A	Y
Saltstone_pH2	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlow\\FieldFiles\\ScalarData	Copied Saltstone_pH, renamed it and linked expression element to external element	Y	None	N/A	Y
FFFloor_pH2	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlow\\FieldFiles\\ScalarData	Copied FFFloor_pH, renamed it and linked expression element to external element	Y	None	N/A	Y
Wall_pH2	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlow\\FieldFiles\\ScalarData	Added data element to indicate that wall transitions to pH2, instantaneously	Y	None	N/A	Y
Floor_pH2a	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlow\\FieldFiles\\FlowData\\pH2	Copied Floor_pH, renamed element, and assigned time for Region III to Region IV transition	Y	None	N/A	Y
Saltstone_pH2a	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlow\\FieldFiles\\FlowData\\pH2	Copied Saltstone_pH, renamed element, and assigned time for Region III to Region IV transition	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FFFloor_pH2a	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles\\FlowData\\pH2	Copied FFFloor_pH, renamed element, and assigned time for Region III to Region IV transition	Y	None	N/A	Y
Wall_pH2a	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles\\FlowData\\pH2	Copied Wall_pH and renamed element	Y	None	N/A	Y
FloPar_vec	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles2	Added flow field column numbers for pH2 transition time in floor saltstone, and floor fast zone. Reassigned flow field column locations based on new PA flow field output		Added by checker.	Agreed.	Y
szTable	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles2\\DLLData_SDU1	Updated number of columns to search for flow data in PORFLOW generated flow field data files based on updated 2019 PA changes.		Added by checker.	Agreed.	Y
FileIndex	\\DisposalUnits\\SDU1\\SDU1PORFLO\\WData\\ReadFlowFieldFiles2\\DLLData_SDU1	Deleted data property element and replaced with selector element to reflect line in SDU 1 general input file (ReadPFData1.in) that points to flow data file for specified scenario.		Added by checker.	Agreed.	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.051.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDUCell_area	\\DisposalUnits\\SD U1\\SiteGeometry	Added expression element to assign cell based diffusive area for vertical diffusive flux.	Y	I need to better understand what "CellLength" element represents	The "CellLength" element represents the horizontal distance from the beginning of each cell to the beginning of the next cell (as measured along the radius for cylindrical SDUs) and are based on a geometric progression between material zones. Note that for computational efficiency the complete backfill zone is not represented	Y
UZDiffThickness	\\DisposalUnits\\SD U1\\UnsatZone	Added diffusive length term for diffusive flux links.	Y	None	N/A	Y
DiffusiveSink	\\DisposalUnits\\SD U1\\UnsatZone	Added cell-pathway sink element to allow for diffusion from the UZ to the SZ	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DiffusiveSink_Volume	\\DisposalUnits\\SD U1\\UnsatZone	Added expression element to define volume of the DiffusiveSink element as the product of the bottom area of the SDU and the saturated zone thickness.		Added by checker.	Agreed.	Y
UZCell_*_*="In", 02- 09, and "Out"	\\DisposalUnits\\SD U1\\UnsatZone	Connected diffusive mass flux links between UZ cell pathway elements and into the new pathway cell element DiffusiveSink which is set to be a zero- concentration boundary	Y	None	N/A	Y
ZeroFlux_BC	\\DisposalUnits\\SD U1\\UnsatZone	Set up a condition data element to choose whether the bottom of the UZ has a zero-diffusive flux boundary condition or a zero-concentration boundary condition	Y	None	N/A	Y
ZeroFlux_BCa	\\DisposalUnits\\SD U1\\UnsatZone	Added a binary selector element used to set up a zero-diffusive flux boundary condition or a zero-concentration boundary condition	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ReleaseFlux_mass	\\DisposalUnits\\SD U1\\UnsatZone	Changed name from RechargeFlux_mass and added the diffusive term to the radionuclide release rate at the bottom of the UZ	Y	None	N/A	Y
SandySoil	\\DisposalUnits\\SD U1\\UnsatZone	Added a tortuosity term to the solid properties element	Y	None	N/A	Y
UZKd	\\DisposalUnits\\SD U1\\UnsatZone	Updated selector element to reflect 2019 PA conceptual model with the transition from Region III to Region IV chemistry marking the end of leachate impacted water seeping into the UZ	Y	None	N/A	Y
ReleaseFlux_mass	\\DisposalUnits\\SD U1\\UnsatZone	Changed name from RechargeFlux_mass and added the diffusive term to the radionuclide release rate at the bottom of the UZ	Y	None	N/A	Y
SandySoil	\\DisposalUnits\\SD U1\\UnsatZone	Added a tortuosity term to the solid properties element	Y	None	N/A	Y
WallPorosity	\\DisposalUnits\\SD U1\\Waste\\SDU_C ells	Linked to SDU1_SDU4_FloorWall.P orosity_Walls14	Y	None	N/A	Y

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New Model File Date: 4/10/2019			Source Model File Date: 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Number_of_cells	\\DisposalUnits\\SDU\\Waste\\SDU_Cells	Goldsim states that one of the element's attributes has changed but it appears to be identical to previous versions. Looks to be ok.		Added by checker.	Agreed.	Y
ConcretePorosity	\\DisposalUnits\\SDU\\Waste\\SDU_Cells	Element deleted		Added by checker.	Agreed.	Y
DiffThickness_V1	\\DisposalUnits\\SDU\\Waste\\SDU_Cells	Moved element from \\DisposalUnits\\SDU\\Site Geometry		Added by checker.	Agreed.	Y
ClayKd	\\DisposalUnits\\SDU\\Waste\\SDU_Cells\\Fill	Updated selector element to reflect 2019 PA conceptual model with the transition from Region III to Region IV chemistry marking the end of leachate impacted water seeping into the UZ		Added by checker.	Agreed.	Y
FillRow20	\\DisposalUnits\\SDU\\Waste\\SDU_Cells\\Fill\\FillRow20	Vertical diffusive mass links were added between Fill_XJY1 for J =23-26 and \\DisposalUnits\\SDU\\UnsaturatedZone\\UZ_Cell_In	Y	None	N/A	Y
FillRowK; K=1-20	\\DisposalUnits\\SDU\\Waste\\SDU_Cells\\Fill\\FillRowK	Vertical diffusive mass links were added from Fill_XJY1 to Fill_XJY1 for J=23-26 between rows K and K+1 for K=1-19)	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltStoneFast_XJY1; J=6-8	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\Grout\\GroutRow20\\FastZone	Vertical diffusive mass links were added between SaltStoneFast_XJY1 in GroutRow20 for J =6-8 and \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorFastZone\\SDU_F1	Y	None	N/A	Y
SaltStone_XJY1; J=1-5	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\Grout\\GroutRow20\\InnerZone	Vertical diffusive mass links were added between SaltStone_XJY1 in GroutRow20 for J=1.5 and \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor1\\SDU_F1	Y	None	N/A	Y
SaltStone_XJY1; J=9-16	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\Grout\\GroutRow20\\OuterZone	Vertical diffusive mass links were added between SaltStone_XJY1 in GroutRow20 for J=9-16 and \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2\\SDU_F1	Y	None	N/A	Y
JF Area	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\Grout\\GroutRow20	Area of cell floor made up of joints		Added by checker	Agreed.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltStoneFast_XJY1; J=6-8	\\DisposalUnits\\SDU_Cells\\Grout\\GroutRowK\\FastZone	Vertical diffusive mass links were added from SaltStoneFast_XJY1 to SaltStoneFast_XJY1 for J=6-8 between rows K and K+1 for K=1-19)	Y	None	N/A	Y
SaltStone_XJY1; J=1-5	\\DisposalUnits\\SDU_Cells\\Grout\\GroutRowK\\InnerZone	Vertical diffusive mass links were added from SaltStone_XJY1 to SaltStone_XJY1 for J=1-5 between rows K and K+1 for K=1-19)	Y	None	N/A	Y
SaltStone_XJY1; J=9-16	\\DisposalUnits\\SDU_Cells\\Grout\\GroutRowK\\OuterZone	Vertical diffusive mass links were added from SaltStone_XJY1 to SaltStone_XJY1 for J=9-16 between rows K and K+1 for K=1-19)	Y	None	N/A	Y
JointsK; K=1-6	\\DisposalUnits\\SDU_Cells\\Joints	Connected vertical diffusive mass links between JointK and JointK+1 for K=1-5.	Y	None	N/A	Y
Joint6	\\DisposalUnits\\SDU_Cells\\Joints	Connected vertical diffusive mass links between Joint6 and Joint6+1 for K=1-5.	Y	None	N/A	Y
JointDiffThick	\\DisposalUnits\\SDU_Cells\\Joints	Added expression element to define the diffusive distance between floor cells	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FloorConcretePorosity	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor1	Linked to SDU1_SDU4_FloorWall.Porosity_Floor14	Y	None	N/A	Y
FloorDiffThick	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor1	Added expression element to define the diffusive distance between floor cells	Y	None	N/A	Y
SDU_FK; K=1-10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor1	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-9. The link between SDU_F9 and SDU_F10 is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 10 cell pathway elements linked in series to represent this segment of the floor.	Y	Since we use JointFraction in calculating the joint area in the floor, do we need to exclude this area in performing the floor calculations?  In particular, look at the SDU_Area element located \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorX where X = 1 - 2	Since the joint fraction was just a small percentage of the floor area it was disregarded (2.7%). Note that the mass entering the floor from the saltstone does account for this difference. SDUArea in floor containers was adjusted for clarity as noted below	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_F9	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor1	Connected vertical diffusive mass links between SDU_F9 and SDU_F1 in\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor1\\SDU_FADD. The link between SDU_F9 and SDU_F1 is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 20 cell pathway elements linked in series to represent this segment of the floor.	Y	None	N/A	Y
SDU_F10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor1	Connected vertical diffusive mass link between SDU_F10 and \\DisposalUnits\\SDU1\\UnsatZone\\UZCell_In	Y	None	N/A	Y

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<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_FK; K=1-10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor1\\SDU_FADD	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-9. The link between SDU_F10 and SDU_F10 in \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor1 is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 20 cell pathway elements linked in series to represent this segment of the floor.	Y	I don't think this is necessary but for the sake of clarity it may be helpful to have the (1-FluxControl) term as a multiplier for all inflows/outflows for cells present in the FADD container.	See SDUArea for both floor sections. This is basically for clarity and should have a negligible effect on answers.	Y
ConcretePorosity	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2	Linked to SDU1_SDU4_FloorWall.Porosity_Floor14	Y	None	N/A	Y
FloorDiffThick	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2	Added expression element to define the diffusive distance between floor cells	Y	None	N/A	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.051.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_FK; K=1-10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-9. The link between SDU_F9 and SDU_F10 is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 10 cell pathway elements linked in series to represent this segment of the floor.	Y	Since we use JointFraction in calculating the joint area in the floor, do we need to exclude this area in performing the floor calculations.  In particular, look at the SDU_Area element located \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2 where $X = 1 - 2$	See SDUArea for both floor sections. This is basically for clarity and should have a negligible effect on answers.	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.051.gsm	<b>Source Model ID (or filename):</b> SRS Saltstone v5.038.gsm					
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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_F9	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2	Connected vertical diffusive mass links between SDU_F9 and SDU_F1 in\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2\\SDU_FADD. The link between SDU_F9 and SDU_F1 is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 20 cell pathway elements linked in series to represent this segment of the floor.	Y	None	N/A	Y
SDU_F10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2	Connected vertical diffusive mass link between SDU_F10 and \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2\\SDU_F10	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_FK; K=1-10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2\\SDU_FADD	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-9. The link between SDU_F10 and SDU_F10 in \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloor2 is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 20 cell pathway elements linked in series to represent this segment of the floor.	Y	None	N/A	Y
SDU1_SDU4_concrete_Floor	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorFastZone	Linked to SDU1_SDU4_FloorWall.P orosity_Floor14	Y	None	N/A	Y
FloorDiffThick	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorFastZone	Added expression element to define the diffusive distance between floor cells	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_FK; K=1-10	\\DisposalUnits\SDU1\Waste\SDU_Cells\SDUFloorFastZone	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-9. The link between SDU_F9 and SDU_F10 is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 10 cell pathway elements linked in series to represent this segment of the floor.	Y	None	N/A	Y

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<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_F9	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorFastZone	Connected vertical diffusive mass links between SDU_F9 and SDU_F1 in\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorFastZone\\SDU_FADD. The link between SDU_F9 and SDU_F1 is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 20 cell pathway elements linked in series to represent this segment of the floor.	Y	None	N/A	Y
SDU_F10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorFastZone	Connected vertical diffusive mass link between SDU_F10 and \\DisposalUnits\\SDU1\\Uns atZone\\UZCell_In	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_FK; K=1-10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorFastZone\\SDU_FADD	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-9. The link between SDU_F10 and SDU_F10 in \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorFastZone is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 20 cell pathway elements linked in series to represent this segment of the floor.	Y	None	N/A	Y
ConcretePorosity	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\SDUFloorFastZone	Linked to SDU1_SDU4_FloorWallPorosity_Floor14	Y	None	N/A	Y
WallRow20	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\Wall\\WallRow20	Vertical diffusive mass links were added between Wall_XJY1 for J=17-22 and \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\Wall\\FloorW F01	Y	None	N/A	Y

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WallRowK; K=1-20	\\DisposalUnits\SDU1\Waste\SDU_Cells\Wall\WallRowK	Vertical diffusive mass links were added from Wall_XJY1 to Wall_XJY1 for J=17-22 between rows K and K+1 for K=1-19	Y	It appears we are working with two different heights: SDU height of 27 ft and Grout height of 24 ft.  SDU_WallArea uses the SDU height (27 ft) divided by number of vertical cells (used to discretize the wall vertically), multiplied by the SDU length. The SDU_WallArea is being used as the diffusive area in diffusive links between saltstone elements, saltstone and wall elements, SDU wall elements, wall and backfill elements, and backfill elements.  Meanwhile, "DiffThickness_V1" is defined using GroutHeight (approx. 24 ft) divided by 2*number of vertical cells. Furthermore, the cell volume ("CellVolumeX" element) is defined using the "GroutHeight" element (24 ft).	SDU1_Height reset to 24 feet	Y
SDU1_SDU4_concrete_Floor	\\DisposalUnits\SDU1\Waste\SDU_Cells\Wall\Floor	Linked to SDU1_SDU4_FloorWall.P orosity_Floor14	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FloorDiffThick	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\WallFloor	Added expression element to define the diffusive distance between floor cells	Y	Suggest changing "NumWallCells" data element to a selector element that equals 20 when SDU_FADD_opt = True Else 10.	Made the change but renamed the selector "NumWallFloorCells"	Y
SDU_FADD_opt	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\WallFloor	Added element to allow for user to select whether the wall floor area should be discretized into 10 or 20 vertical cells.		Added by checker.	Agreed.	Y
FluxControl	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\WallFloor	Added selector element to implement the user's decision from SDU_FADD_opt		Added by checker.	Agreed.	Y
WFK; K=01-10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\WallFloor	Connected vertical diffusive mass links between WFK and WFK+1 for K=01-09. The link between WF09 and WF10 is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 10 cell pathway elements linked in series to represent this segment of the floor.	Y	None	N/A	Y

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New Model File Date: 4/10/2019			Source Model File Date: 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WF09	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\WallFloor	Connected vertical diffusive mass links between WF09 and WF01 in \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\WallFloor\\WF09. The link between WF09 and WF01 is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 20 cell pathway elements linked in series to represent this segment of the floor.	Y	Outflow from WF09 to WF10 uses the element SDU_Area rather than WFArea when calculating flow rate. The same issue is found in the diffusive flux link from WF09 to WF10.  I believe this is incorrect and should be using the WFArea element.	Corrected as noted	Y
WF10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\WallFloor	Connected vertical diffusive mass link between WF10 and \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\WallFloor.	Y	None	N/A	Y
JointDiffThick	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\WallFloor	Added expression element to define the diffusive distance between floor cells	N	Believe this is a typo. "FloorDiffThick" was added to define the diffusive distance between floor cells	This is a typo	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WFK; K=01-10	\\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\WallFloor\\WFK	Connected vertical diffusive mass links between WFK and WFK+1 for K=01-09. The link between WF10 and WF10 in \\DisposalUnits\\SDU1\\Waste\\SDU_Cells\\WallFloor\\WFK is controlled by the FluxControl selector element which allows mass between the two cell pathway elements only if the user wants to use 20 cell pathway elements linked in series to represent this segment of the floor.	Y	None	N/A	Y
SDU1_SDU4_concrete_wall	\\DisposalUnits\\SDU4	Linked to : SDU1_SDU4_FloorWall.DensityBulkDensity_Walls14 And SDU1_SDU4_FloorWall.Porosity_Walls14	Y	This differs slightly from SDU 1 regarding porosity, <i>SDU1_SDU4_FloorWall.Porosity_Walls14</i>	ConcretePorosity in SDU_Floor1 and SDU_Floor2 corrected by assigning floor values. ConcretePorosity in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells deleted.	Y
SDU1_SDU4_concrete Floor	\\DisposalUnits\\SDU4	Linked to SDU1_SDU4_FloorWall.Porosity_Floor14	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU1_SDU4_concrete_Floor	\\DisposalUnits\\SDU4	Linked to \\DisposalUnits\\SDU4\\SDU4PORFLOWData\\Defl_SDU4\\DiffusionCoefficientElements\\Tortuosity\\Floor_Tortuosity	Y	None	N/A	Y
FloorFastZone	\\DisposalUnits\\SDU4	linked to FFFloor_Tortuosity	Y	None	N/A	Y
SheetDrainFastZone	\\DisposalUnits\\SDU4	Linked to SDFZ_Tortuosity	Y	Should the porosity for the SheetDrainFastZone be multiplied by a sheet drain saturation value similar to the FloorFastZone Solid properties element?	This is a remnant element which may be redone if the sheetdrain is ever used as a fast zone again. Presently the sheetdrain uses wastegROUT values	Y
DryBulkDensity_FastZoneFloor	\\DisposalUnits\\SDU4	Linked to SDU1_SDU4_FloorWall.DryBulkDensity_Column14.	Y	None	N/A	Y
Porosity_FastZoneFloor	\\DisposalUnits\\SDU4	Linked to SDU1_SDU4_FloorWall.Porosity_Column14	Y	None	N/A	Y
Saltstone_Kds	\\DisposalUnits\\SDU4\\ConcreteDegradation	Updated to reflect new transition-time logic	Y	None	N/A	Y
Wall_Kds	\\DisposalUnits\\SDU4\\ConcreteDegradation	Updated to reflect new transition-time logic	Y	None	N/A	Y
Floor_Kds	\\DisposalUnits\\SDU4\\ConcreteDegradation	Updated to reflect new transition-time logic	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FFFloor_Kds	\\DisposalUnits\\SD U4\\ConcreteDegra dation	Updated to reflect new transition-time logic	Y	None	N/A	Y

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Waste Disposal Authority	FastZone_Kds_vec	\DisposalUnits\SDU4\ConcreteDegradation\SetColumnKdMatrix	Updated selector element to reflect new transition-time logic (Transition from Region I directly to Region III)	N	The fast zone through the SDU4 saltstone looks to be broken up into 11 material zones in GoldSim, FFGROUT2 – FFGROUT12. The saltstone monolith is discretized vertically into 20 rows, so one of these 11 material zones is assigned to each row (MatRow data element).  It appears that the purpose of the FastZone_Kds_vec is to help generate a Kd table of all species for a given material zone at a given time. The FastZone_Kds_vec is placed in a looping container that loops a total of 11 times (once for each material zone). Each of the 1-D Kd tables generated is placed in a 2-D array (FastZone_Kds_mat) that can then be used as a Kd lookup for any species in any material fast zone at a give time.  If this description is accurate, then my concern is that the 1-D lookup tables being used by the FastZone_Kds_vec (e.g., FFGROUT_Eha,	Yes your assumption of what the logic is supposed to do is correct. As far as the partitioning by 20 layers, the use of 20 layers here in FFGROUT_Eha, FFGROUT_pHa and FFGROUT_PVs) should have an array length = to the number of material zones (i.e., 11) since the logic reassigns the properties in the solid elements using the Solid Element line vector(Species,Column Kds_mat[Row,MatRow IRow]) assigns the layer by MatRow[IRow] where the assignments for each of the 20 layers is based on the 11 zones found in the concrete (not saltstone) fast zone representing the SDU columns.	Y
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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
				FFGrout_pHa) should have an array length = to the number of material zones (i.e., 11) rather than an array length = to the number of rows through the monolith (i.e., 20).  The line 4 and line 8 "Then" statements should be grabbing old_concrete_kds_ox rather than old_concrete_kds_red. Should the element be grabbing the Saltstone_Kd values rather than the Concrete_Kd values?	See corrections are in SRS Saltstone v5.055.gsm (see also FFGrout_PVs)	
DeffPar_vec	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\Deff_SDU4	Updated column pointers to reflect new diffusion coefficient files	Y	None	N/A	Y
Tortuosity	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\Deff_SDU4\\DiffusionCoefficientElements	Added container to hold expression elements calculating tortuosity for different material zones		Added by checker	Agreed.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FreeWaterDiffusionCoef	\\DisposalUnits\SDU4\SDU4PORFLO\WData\Diff_SDU4\DiffusionCoefficients\Tortuosity	Added expression element to initialize free water diffusion coefficient in tortuosity calculations	Y	None	N/A	Y
UZ_Tortuosity	\\DisposalUnits\SDU4\SDU4PORFLO\WData\Diff_SDU4\DiffusionCoefficients\Tortuosity	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the UZ	Y	None	N/A	Y
BackFill_Tortuosity	\\DisposalUnits\SDU4\SDU4PORFLO\WData\Diff_SDU4\DiffusionCoefficients\Tortuosity	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the Backfill	Y	None	N/A	Y
Floor_Tortuosity	\\DisposalUnits\SDU4\SDU4PORFLO\WData\Diff_SDU4\DiffusionCoefficients\Tortuosity	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the Floor	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FFFloor_Tortuosity	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WDData\\Defl_SDU4\\DiffusionCoefficients\\Tortuosity	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the fast flow section in the floor	Y	None	N/A	Y
Joint_Tortuosity	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WDData\\Defl_SDU4\\DiffusionCoefficients\\Tortuosity	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the joint elements	Y	Can you explain the (296/167) part of the expression? (296/167)*UZ_DCa/FreeWaterDiffusionCoef	Yes, it's the ratio of joint to UZ effective diffusion coefficients in the PORFLOW Model	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDFZ_Tortuosity	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WDData\\Defl_SDU4\\DiffusionCoefficients\\Tortuosity	Added expression elements to calculate tortuosity based on effective diffusion coefficient and free water diffusion coefficients to assign to solid elements for the fast zone in the within the saltstone.	Y	Can you explain why the floor diffusion coefficient is used in this expression?  Floor_DCa/FreeWaterDiffusionCoef	Because I made copies of the floor element and the renamed and relinked all (except for this one). Corrected the error, but the solid element using this does not feed that information anywhere, and will not unless the sheet drain is reinstalled as a fast zone	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FileIndex	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\Deff_SDU4\\DLLData_Deif	Deleted data property element and replaced with selector element to reflect line in SDU 4 general input file (ReadPFData4.in) that points to diffusion coefficient file for specified scenario.	Y	For the probabilistic runs (i.e., Realization_a<>0), the ReadPFData4.in file points to C:\\SDF_FY19Data\\1V4\\RLZ001\\Transport\\De_I-129.tab but the only file I only found De_Tc-99.tab file (not De_I-129 tab file).	The present input files point to De_Tc-99.tab files for stochastic runs. De_I-129.tab are presently used for deterministic runs only. Note that to De_Tc-99.tab and De_I-129.tab which define the time-dependent diffusion coefficients used in the model are radionuclide independent and will be the same for any individual SDU and scenario/realization	Y
szTable	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\Deff_SDU4\\DLLData_Deif	Data updated to reflect changed number (28 to 30) of columns in PORFLOW generated effective diffusion files (De_I-129.tab)	Y	None	N/A	Y
ATWT_ND	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\IPORFLO\\WFluxToUZ	Added data element to scale Tc-99 flux in mols by the atomic weight of Tc-99	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Tc99FluxToUZ_SDU4	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\PORFLO\\WFluxToUZ	Logic added to convert from mols to grams using ATWT_ND	Y	None	N/A	Y
Tc99Row	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\PORFLO\\WFluxToUZ	Added pointer to assign Tc-99 data based on position in species element	Y	None	N/A	Y
FileIndex	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\PORFLO\\WFluxToUZ	Deleted data property element and replaced with selector element to reflect line in SDU 4 general input file (ReadPFData4.in) that points to flow data file for specified scenario.	N	Couldn't find "FileIndex" selector in specified location. There is a "FileIndex" selector located here:  \\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFiles\\DLLData.  The "FileIndex" element located here points to the correct flow data files for a specified scenario.	Mistake in location accidentally copied from row above.  Should be \\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFiles\\DLLData.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FloPar_vec	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles	Reassigned flow field column locations based on new PA flow field output	Y	Joint_DV and Joint_sat (#39 and #68 under the Input Interface, respectively) refer back to values for material zone "Group0019" in the GoldSim.tab file. Is Group0019 = SDU4 joints?  CleanGrout pH (#116 under the Input Interface) refers to CleanGroutl_pH (column 405) when I think you want it to refer to CleanGrout_pH (column 404).	The influence of the joints is combined into a single release column and "Group0019" is the combined flow and saturation data.  I agree with the second comment and will implement change in SRS Saltstone v5.055.gsm. Note, this will not influence results because the clean grout is not simulated in the model.	Y
RFFSDU4	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles	Updated flow field column locations and flow data output in Input Interface and Output Interface Definitions based on new PA flow field output	Y	Input #108 Floor_pH2 is defined as FloPar_vec[99] which references column 456 in the flow data file. I believe the value in FloPar_vec[99] should be 455.	The model assumes that the floor pH change is consistent with the saltstone pH change	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
pH2	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlow\\FieldFiles\\FlowData	Copied container pH and its contents, renamed container pH2, and contents *pH2a. Contents are now used to capture chemical environment transition time for Region III to Region IV transition	Y	Logic in the selectors renamed "XXX_pH2a" needs to be updated. The If statement currently reads "XXX_pH>=0yr" when it should read "XXX_pH2>=0yr".	In theory your correct but using "XXX_pH>=0yr" also works, but wouldn't if the element was set to -999. The logic here was based on earlier assumptions, but now only the Saltstone_pH2a is used and that is to indicate when the sand and clay properties are no longer leachate impacted. I put all the other elements into a container called UnusedElements in case the logic changes. I did correct the if clause. I also repeated the move to a storage container for SDU1 and the cylindrical SDUs.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
xx_pH2	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles\\ScalarData	Copied 15 xx_pH elements, renamed them to _xx_pH2, and linked them to external element RFFSDU4 output	Y	None	N/A	Y
Wall_pH2	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles\\ScalarData	Copied Wall_pH and renamed element	Y	None	N/A	Y
FileIndex	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles2\\DLLData	Deleted data property element and replaced with selector element to reflect line in SDU 4 general input file (ReadPFData4.in) that points to flow data file for specified scenario.	Y	None	N/A	Y
szTable	\\DisposalUnits\\SDU4\\SDU4PORFLO\\WData\\ReadFlowFieldFiles2\\DLLData	Data updated to reflect changed number (452 to 516) of columns in PORFLOW generated <b>effective diffusion files</b> (GoldSim.tab)	Y	Do you mean "Flow field files"?	Yes	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UZCellVolume	\\DisposalUnits\\SD U4\\SiteGeometry	No change.		Added by checker.  It appears that the UZCellVolume under SDU4 is half of what it should be:  0.5*UZ_Cell_Thickness * SDU_Area	Actually, the logic is a bit convoluted, but fine. This was the number of UZ cells was set to 10 (its original value) That logic was restructured so that seemingly redundant divide by 2 no longer exists.	Y
UZDiffThickness	\\DisposalUnits\\SD U4\\UnsatZone	Added diffusive length term for diffusive flux links.	Y	It appears that the UZ Cell Thickness is divided by 2 twice (i.e., divided by 4). Was this intended?  0.5*UZ_Cell_Thickness/2  I see why this was done now. The number of cells used was changed from 10 to 20 at some point so the extra "/2" in the function is to account for this. No changes needed.	This was fine but is now redone for the sake of transparency	Y
DiffusiveSink	\\DisposalUnits\\SD U4\\UnsatZone	Added cell-pathway sink element to allow for diffusion from the UZ to the SZ	Y	The mass transported to the diffusive sink isn't considered in the "MassToSaturatedZone" integrator element. Was this intentional?	That was an oversight corrected in later versions	Y
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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DiffusiveSink_Volume	\\DisposalUnits\\SD U4\\UnsatZone	Added expression element to define volume of the DiffusiveSink element as the product of the bottom area of the SDU and the saturated zone thickness.		Added by checker.	Agreed.	Y
UZCell_*; *-In,2-9	\\DisposalUnits\\SD U4\\UnsatZone	Connected diffusive mass flux links between UZ cell pathway elements and from UZCell_09 into the cell pathway element UZCell_In in \\DisposalUnits\\SDU4\\Uns atZone\\UZADD	Y	None	N/A	Y
UZCell_Out	\\DisposalUnits\\SD U4\\UnsatZone	Connected diffusive mass flux link into the new cell pathway cell element DiffusiveSink which is set to be a zero-concentration boundary	Y	None	N/A	Y
UZKd	\\DisposalUnits\\SD U4\\UnsatZone	Updated selector element to reflect 2019 PA conceptual model with the transition from Region III to Region IV chemistry marking the end of leachate impacted water seeping into the UZ		Added by checker.	Agreed.	Y
SandySoil	\\DisposalUnits\\SD U4\\UnsatZone	Added a tortuosity term to the solid properties element		Added by checker.	Agreed.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ZeroFlux_BC	\\DisposalUnits\\SD U4\\UnsatZone	Set up a condition data element to choose whether the bottom of the UZ has a zero-diffusive flux boundary condition or a zero-concentration boundary condition	Y	None	N/A	Y
ZeroFlux_BCa	\\DisposalUnits\\SD U4\\UnsatZone	Added a binary selector element used to set up a zero-diffusive flux boundary condition or a zero-concentration boundary condition	Y	None	N/A	Y
ReleaseFlux_mass	\\DisposalUnits\\SD U4\\UnsatZone	Added element to sum up the rad flux from the UZ to the SZ (WasteFootprint)		Added by checker.	Agreed.	Y
UZCell_*, *-In, 2-9, Out	\\DisposalUnits\\SD U4\\UnsatZone\\UZ ADD	Connected diffusive mass flux links between UZ cell pathway elements and from UZCell_Out into the cell pathway element UZCell_Out in \\DisposalUnits\\SDU4\\Uns atZone	Y	None	N/A	Y
FloorDiff_thickness	\\DisposalUnits\\SD U4\\Waste\\SDU_C ells	Added expression element to define the diffusive distance between floor cells	Y	Does the thickness need to be divided by 2?  FloorThickness/Number_of_cells	Corrected Logic	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WallPorosity	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells	Linked to SDU1_SDU4_FloorWallPorosity_Walls14	Y	GoldSim doesn't note this change in the versioning report, but the change description is correct.	N/A	Y
ClayKd	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells	Deleted previous element and created a new selector element to reflect 2019 PA conceptual model with the transition from Region III to Region IV chemistry marking the end of leachate impacted water seeping into the UZ		Added by checker.	Agreed.	Y
WallDiff_thickness	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells	Added expression element to define the diffusive distance between Wall cells		Added by checker.	Agreed.	Y
SDDiff_thickness	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells	Added expression element to define the diffusive distance between sheet drain cells		Added by checker.	Agreed.	Y
GroutDiff_thickness	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells	Added expression element to define the diffusive distance between grout cells		Added by checker.	Agreed.	Y
FZDiff_thickness	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells	Added expression element to define the diffusive distance between fast zone cells		Added by checker.	Agreed.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
BackFillDiff_thickness	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells	Added expression element to define the diffusive distance between backfill cells		Added by checker.	Agreed.	Y
CellRow_20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_20\\FastZone	Vertical diffusive mass links were added from SaltStoneFast_XJY1 to SaltStoneFast_XJY1 for J=15-17 between row 20 and FZ1 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\FastZone	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xls	See corrections in model.	Y
JBCArea	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_20\\Grouth	Moved element from \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\Joints		Added by checker	Agreed.	Y
CellRow_20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_20\\Grouth\\InnerZone	Vertical diffusive mass links were added from SaltStone_XJY1 to SaltStone_XJY1 for J=7, 14 between row 20 and SDU_F1 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1	Y	The diffusive area used in going from SaltStone_XJY1 to SDU_F1 is set to CellFloorArea[J] but should it instead be CellFloorArea[J] - JBCArea[J] to account for the joint area in the floor?	Since the joint fraction was just a small percentage of the floor area it was disregarded (2.7%).	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CellRow_20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_20\\Growth\\OuterZone	Vertical diffusive mass links were added from SaltStone_XJY1 to SaltStone_XJY1 for J=18-25 between row 20 and SDU_F1 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2	Y	None	N/A	Y
CellRow_20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_20\\SheetDrainRow\\InnerZone	Vertical diffusive mass links were added from SheetDrain_XJY1 to SheetDrain_XJY1 for J=4-6 between row 20 and SD1 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SheetDrain1	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xlsx	See corrections in model.	Y
CellRow_K; K=01-20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_K\\FastZone	Vertical diffusive mass links were added from SaltStoneFast_XJY1 to SaltStoneFast_XJY1 for J=15-17 between rows K and K+1 for K=1-19)	Y	None	N/A	Y
CellRow_K; K=01-20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_K\\Fill	Vertical diffusive mass links were added from Fill_XJY1 to Fill_XJY1 for J=35-38 between rows K and K+1 for K=1-19)	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xlsx	See corrections in model.	Y

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Waste Disposal Authority		Changed Model Check Form				
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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CellRow_20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_K\\Fill	Vertical diffusive mass links were added from Fill_XJY1 to Fill_XJY1 for J=35-38 between row 20 and WFD01 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2a and Backfill	Y	None	N/A	Y
CellRow_K; K=01-20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_K\\Grout\\InnerZone	Vertical diffusive mass links were added from SaltStone_XJY1 to SaltStone_XJY1 for J=7-14 between rows K and K+1 for K=1-19	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xls	See corrections in model.	Y
CellRow_K; K=01-20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_K\\Grout\\OuterZone	Vertical diffusive mass links were added from SaltStone_XJY1 to SaltStone_XJY1 for J=18-25 between rows K and K+1 for K=1-19	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xls	See corrections in model.	Y
CellRow_K; K=01-20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_K\\SheetDrainRow\\InnerZone	Vertical diffusive mass links were added from SheetDrain_XJY1 to SheetDrain_XJY1 for J=4-6 between rows K and K+1 for K=1-19	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xls	See corrections in model.	Y
CellRow_K; K=01-20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_K\\SheetDrainRow\\OuterZone	Vertical diffusive mass links were added from SheetDrain_XJY1 to SheetDrain_XJY1 for J=26-28 between rows K and K+1 for K=1-19	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xls	See corrections in model.	Y

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New Model File Date: 4/10/2019			Source Model File Date: 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CellRow_20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_K\\SheetDrainRow\\OuterZone	Vertical diffusive mass links were added from SheetDrain_XJY1 to SheetDrain_XJY1 for J=26-28 between row 20 and SD1 in DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SheetDrainRow	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xls x	See corrections in model.	Y
CellRow_K; K=01-20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_K\\Wall\\InnerZone	Vertical diffusive mass links were added from Wall_XJY1 to Wall_XJY1 for J=1-3 between rows K and K+1 for K=1-19)	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xls x	See corrections in model.	Y
CellRow_20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_K\\Wall\\InnerZone	Vertical diffusive mass links were added from Wall_XJY1 to Wall_XJY1 for J=1-3 between row 20 and WF01 in DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor1	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xls x	See corrections in model.	Y
CellRow_K; K=01-20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_K\\Wall\\OuterZone	Vertical diffusive mass links were added from Wall_XJY1 to Wall_XJY1 for J=29-34 between rows K and K+1 for K=1-19)	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xls x	See corrections in model.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CellRow_20	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_KIW\\all\\OuterZone	Vertical diffusive mass links were added from Wall_XJY1 to Wall_XJY1 for J=29-34 between row 20 and WF01 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2a\\ndBackfill	Y	Refer to the "SDU 4" worksheet in <i>GoldSim_links_check.xls</i>	See corrections in model.	Y
wastegROUT_fast	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_xx\\FastZone xx=1-20	Linked to: SDU1_SDU4_FloorWall.D ryBulkDensity_Column14 and SDU1_SDU4_FloorWall.P orosity_Column14*FFGro ut_Sata[MatRow[Row]]	Y	Seems that the function for the porosity should read: SDU1_SDU4_FloorWall.Porosity_Column14*FFG rout_Sata[Row]	Porosity corrected as noted	Y
SDU1_SDU4_concrete _wall	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_xx\\W all\\InnerZone; xx=1-20	Linked to : SDU1_SDU4_FloorWall.D ryBulkDensity_Walls14 And SDU1_SDU4_FloorWall.P orosity_Walls14	Y	SDU1_SDU4_FloorWall.Porosity_Walls14*Wall_S ata	Presently set to SDU1_SDU4_Floor Wall.Porosity_Walls 14*Wall_Sata	Y
SDU1_SDU4_concrete _wall	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\CellRow_xx\\W all\\OuterZone; xx=1-20	Linked to : SDU1_SDU4_FloorWall.D ryBulkDensity_Walls14 And SDU1_SDU4_FloorWall.P orosity_Walls14	Y	SDU1_SDU4_FloorWall.Porosity_Walls14*Wall_S ata	Presently set to SDU1_SDU4_Floor Wall.Porosity_Walls 14*WallIO_Sata	Y
SDU_Area	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\FastZone	Element's name was changed from "FZArea"		Added by checker	Agreed.	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FZK; K=1-9	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\FastZone	Connected vertical diffusive mass links between FZK and FZK+1 for K=1-8.	Y	None	N/A	Y
FZ9	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\FastZone	Connected vertical diffusive mass links between FZ9 and FZ1 \\DisposalUnits\\SDU4\\Was te\\SDU_Cells\\FastZone\\F ZADD.	Y	None	N/A	Y
FZ10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\FastZone	Connected vertical diffusive mass link between SDU F10 and \\DisposalUnits\\SDU4\\Uns atZone\\UZCell_In	Y	Refer to the "SDU 4" worksheet in GoldSim links check.xls x Diffusive length to UZCell. In uses diffusive length = FloorDiff_thickness rather than UZDiff_thickness	Change is implemented in SRS Saltstone v5.055.gsm	Y
FZK; K=1-10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\FastZone\\FZADD	Connected vertical diffusive mass links between FZK and FZK+1 for K=1-9. Connected the link between FZ10 and FZ10 in \\DisposalUnits\\SDU4\\Was te\\SDU_Cells\\FastZone	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
JointDiffThick	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\Joints	Added expression element to define the diffusive distance between floor cells	Y	None	N/A	Y
Joints	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\Joints	Set tortuosity equal to "Joint_Tortuosity"		Added by checker	Agreed.	Y
JointCellMass	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\Joints	Changed expression from JointCellVolume*ConcreteDensity To JointCellVolume*JointsDensity		Added by checker	Agreed.	Y
JointsK; K=1-6	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\Joints	Connected vertical diffusive mass links between JointsK and JointsK+1 for K=1-5.	Y	None	N/A	Y
Joints6	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\Joints	Connected vertical diffusive mass links between Joints6 and Joints6+1 for K=1-5.	Y	None	N/A	Y
SDU_FK; K=1-10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-8.	Y	None	N/A	Y
SDU_F9	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1	Connected vertical diffusive mass links between SDU_F9 and SDU_F1 \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1\\SDU_FADD.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_F10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1	Connected vertical diffusive mass link between SDU_F10 and \\DisposalUnits\\SDU4\\Units atZone\\UZCell_In	Y	None	N/A	Y
SDU_FK; K=1-10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1\\SDU_FADD	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-9. Connected the link between SDU_F10 and SDU_F10 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor1	Y	None	N/A	Y
SDU_FK; K=1-10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-8.	Y	None	N/A	Y
SDU_F9	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2	Connected vertical diffusive mass links between SDU_F9 and SDU_F1 \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2 \\SDU_FADD.	Y	None	N/A	Y
SDU_F10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2	Connected vertical diffusive mass link between SDU_F10 and \\DisposalUnits\\SDU4\\Units atZone\\UZCell_In	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_FK; K=1-10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2\\SDU_FADD	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-9. Connected the link between SDU_F10 and SDU_F10 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SDU_Floor2	Y	None	N/A	Y
SDK; K=1-9	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SheetDrain1	Connected vertical diffusive mass links between SDK and SDK+1 for K=1-8. .	Y	None	N/A	Y
SD9	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SheetDrain1	Connected vertical diffusive mass links between SD9 and SD1 \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SheetDrain1\\SDADD.	Y	None	N/A	Y
SD10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SheetDrain1	Connected vertical diffusive mass link between SD10 and \\DisposalUnits\\SDU4\\UnsatZone\\UZCell_In	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDK; K=1-10	\\DisposalUnits\SDU4\Waste\SDU_Cells\SheetDrain1\SDADD	Connected vertical diffusive mass links between SDK and SDK+1 for K=1-9. Connected the link between SD10 and SD10 in \\DisposalUnits\SDU4\Waste\SDU_Cells\SheetDrain1	Y	The floor portion beneath the sheet drain (SheetDrain1) uses SheetDrainFastZone for the material properties of the solid phase. Was this intended or was this supposed to be SDU1_SDU4_concrete_floor?	Corrected to reflect floor values and repeated for SheetDrain2	Y
SDK; K=1-9	\\DisposalUnits\SDU4\Waste\SDU_Cells\SheetDrain2	Connected vertical diffusive mass links between SDK and SDK+1 for K=1-8.	Y	Refer to the "SDU 4" worksheet in GoldSim_links_check.xls	See corrections in model.	Y
SD9	\\DisposalUnits\SDU4\Waste\SDU_Cells\SheetDrain2	Connected vertical diffusive mass links between SD9 and SD1 \\DisposalUnits\SDU4\Waste\SDU_Cells\SheetDrain2\SDADD.	Y	None	N/A	Y
SD10	\\DisposalUnits\SDU4\Waste\SDU_Cells\SheetDrain2	Connected vertical diffusive mass link between SD10 and \\DisposalUnits\SDU4\Waste\SDU_Cells\SheetDrain2\SDADD.	Y	None	N/A	Y

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New Model File Date: 4/10/2019			Source Model File Date: 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDK; K=1-10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SheetDrain2\\SDADD	Connected vertical diffusive mass links between SDK and SDK+1 for K=1-9. Connected the link between SD10 and SD10 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\SheetDrain2	Y	None	N/A	Y
SDU1_SDU4_concrete_wall	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor1	Linked to : SDU1_SDU4_FloorWall.DensityBulkDensity_Walls14 And SDU1_SDU4_FloorWall.Porosity_Walls14	Y	For porosity: SDU1_SDU4_FloorWall.Porosity_Walls14FFFloor_Sets	Set porosity to SDU1_SDU4_FloorWall.Porosity_Walls14FFFloor_Sets, renamed SDU1_SDU4_concrete_wallfloor, changed bulk density to floor bulk density, Tortuosity was changed to Floor_Tortuosity, and changed Kds to Floor_Kds	Y
SDU_Area	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor1	Added expression to calculate total diffusive area in WallFloor01 section CellFloorArea[1]+CellFloorArea[2]+CellFloorArea[3]		Added by checker	Agreed.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WFK; K=01-09	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor1	Connected vertical diffusive mass links between WFK and WFK+1 for K=01-08. . .	Y	The WallFloor uses SDU1_SDU4_concrete_wall for the material properties of the solid phase media. Was this intended or was this supposed to be SDU1_SDU4_concrete_floor?	Set porosity to SDU1_SDU4_FloorWallPorosity_Floor14Floor1_Sata, renamed SDU1_SDU4_concrete_wallfloor, changed bulk density to floor bulk density, Tortuosity was changed to Floor_Tortuosity, and changed Kds to Floor_Kds	Y
WF09	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor1	Connected vertical diffusive mass links between WF09 and WF01 \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor1\\WFADD.	Y	None	N/A	Y
WF10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor1	Connected vertical diffusive mass link between WF10 and \\DisposalUnits\\SDU4\\Waste\\UZCell_In	Y	None	N/A	Y
WFK; K=01-10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor1\\WFADD	Connected vertical diffusive mass links between WFK and WFK+1 for K=01-09. Connected the link between WF10 and WF10 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor1	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WallFloor2andBackfill	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells	Changed container's name. Previously named "WallFloor2"		Added by checker	Agreed.	Y
SDU1_SDU4_concrete_wall	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Linked to : SDU1_SDU4_FloorWall.D BulkDensity_Walls14 And SDU1_SDU4_FloorWall.P porosity_Walls14	Y	Tortuosity was changed from 1 to Backfill_Tortuosity  For porosity: SDU1_SDU4_FloorWall.Porosity_Walls14FFFloor_Seta	Set porosity to SDU1_SDU4_FloorWall.Porosity_Floor14Floor_Tortuosity_Seta, renamed SDU1_SDU4_concrete_wallfloor, Changed bulk density to floor bulk density, Tortuosity was changed to Floor_Tortuosity and changed Kds to Floor_Kds	Y
SDU_Area	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Added expression to calculate total diffusive area for WallFloor2 cells CellFloorArea[29]+CellFloorArea[30]+CellFloorArea[31]+CellFloorArea[32]+CellFloorArea[33]+CellFloorArea[34]		Added by checker	Agreed.	Y
BF_Area	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Added expression to calculate total diffusive area for Backfill cells CellFloorArea[35]+CellFloorArea[36]+CellFloorArea[37]+CellFloorArea[38]		Added by checker	Agreed.	Y
ClayeySoil	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Added solid phase "ClayeySoil" for Backfill cells (WFDK cells) to reference		Added by checker	Agreed.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WFDVolume	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Changed expression from FloorThickness * WallFlowArea/NumWallCells To FloorThickness * BF_Area/NumWallCells		Added by checker	Agreed.	Y
WFK; K=01-09	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Connected vertical diffusive mass links between WFK and WFK+1 for K=01-08.	Y	None	N/A	Y
WF09	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Connected vertical diffusive mass links between WF09 and WF01 \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill\\WFADD.	Y	None	N/A	Y
WF10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Connected vertical diffusive mass link between WF10 and \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill\\WFADD.	Y	None	N/A	Y
WFK; K=01-10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill\\WFADD	Connected vertical diffusive mass links between WFK and WFK+1 for K=01-09. Connected the link between WF10 and WF10 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Y	None	N/A	Y

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New Model ID (or filename): SRS Saltstone v5.051.gsm			Source Model ID (or filename): SRS Saltstone v5.038.gsm			
New Model File Date: 4/10/2019			Source Model File Date: 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WFDK; K=01-09	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Connected vertical diffusive mass links between WFDK and WFDK+1 for K=01-09.	Y	None	N/A	Y
WFD09	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Connected vertical diffusive mass links between WFD09 and WFD01 \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill\\WFDADD.	Y	None	N/A	Y
WFD10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Connected vertical diffusive mass link between WFD10 and \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill\\WFDADD.	Y	None	N/A	Y
WFDK; K=01-10	\\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill\\WFDADD	Connected vertical diffusive mass links between WFDK and WFDK+1 for K=01-09. Connected the link between WFD10 and WFD10 in \\DisposalUnits\\SDU4\\Waste\\SDU_Cells\\WallFloor2andBackfill	Y	None	N/A	Y
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Added Scenario_switch to interface	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FileIndexSelect	\\DisposalUnits\\Tc9 9\\Input\\FluxToUJ SDU4\\DLLData_FI ux	Updated to reflect new input files which define the PORFLOW Tc99 file output names in the 9th and 10th file name positions.	Y	It looks like the file name in the 9 <sup>th</sup> and 10 <sup>th</sup> positions are identical in the ReadPFData1.in file (both read "SDUXXRelease.txt"). Is there a difference between these files so that one is appropriate for deterministic runs and the other for probabilistic runs?	These files have all been redone (see me)	Y
FileIndexSelect	\\DisposalUnits\\Tc9 9\\Input\\FluxToUJ SDU4\\DLLData_FI ux	Updated to reflect new input files which define the PORFLOW Tc99 file output names in the 9th and 10th file name positions.	Y	It looks like the file name in the 9 <sup>th</sup> and 10 <sup>th</sup> positions are identical in the ReadPFData4.in file (both read "SDUXXRelease.txt"). Is there a difference between these files so that one is appropriate for deterministic runs and the other for probabilistic runs?	These files have all been redone (see me)	Y
DevelopmentInput	\\GlobalModel_Inp ut\\DevelopmentIn put	Added new container	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UZKd	InputData\Materia Is\Kds	Updated selector element to reflect 2019 PA conceptual model with the transition from Region III to Region IV chemistry marking the end of leachate impacted water seeping into the UZ	Y	None	N/A	Y
PVReqCon_EhNegtoEh Pos	InputData\Materia Is\Kds	Changed element's name (previously "PoreVolumesReqCon_R RltoORII") and linked to ~PVReqCon_EhNegtoEhPos		Added by checker	Agreed.	Y
PoreVolumesReqCon_ pHlIttopHIV	InputData\Materia Is\Kds	Changed element's name (previously "PoreVolumesReqCon_O RltoORIII") and linked to ~PoreVolumesReqCon_pHlItto pHIV		Added by checker	Agreed.	Y
PoreVolumesReqCon_ pHlIttopHIII	InputData\Materia Is\Kds	Changed element's name (previously "PoreVolumesReqCon_R RltoRRII") and linked to ~PoreVolumesReqCon_pHlIttop HIII		Added by checker	Agreed.	Y
PVReqSS_EhNegtoEh Pos	InputData\Materia Is\Kds	Changed element's name (previously "PoreVolumesReqSS_RRI ItoORII") and linked to ~PVReqSS_EhNegtoEhPos		Added by checker	Agreed.	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PoreVolumesReqSS_p HilltopHIV	\\InputData\\Material Is\\Kds	Changed element's name (previously "PoreVolumesReqSS_OR ltoORlII") and linked to ~PoreVolumesReqSS_philltop HIV		Added by checker	Agreed.	Y
PoreVolumesReqSS_p HilltopHIII	\\InputData\\Material Is\\Kds	Changed element's name (previously "PoreVolumesReqSS_RRI toRRII") and linked to ~PoreVolumesReqSS_philltop HIII		Added by checker	Agreed.	Y
Concrete_Kd_Old_Red	\\InputData\\Material Is\\Kds	Added in function element to capture Kd values for Old Reduced concrete		Added by checker	Agreed.	Y
Concrete_Kd_Young_O x	\\InputData\\Material Is\\Kds	Added in function element to capture Kd values for Young Oxidized concrete		Added by checker	Agreed.	Y
Saltstone_Kd_Old_Red	\\InputData\\Material Is\\Kds	Added in function element to capture Kd values for Old Reduced saltstone		Added by checker	Agreed.	Y
Saltstone_Kd_Young_O x	\\InputData\\Material Is\\Kds	Added in function element to capture Kd values for Young Oxidized saltstone		Added by checker	Agreed.	Y
ClayKd	\\InputData\\Material Is\\Kds	Deleted old "ClayKd" element and replaced it with a new one to reflect 2019 PA conceptual model with the transition from Region III to Region IV chemistry marking the end of leachate impacted water seeping into the IIZ		Added by checker	Agreed.	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
NSDU67_add	\\InputData\\SDU_Data\\Geometry	Renamed pointer NSDU6_add Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDU_CRadius	\\InputData\\SDU_Data\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDU_CRadius_a	\\InputData\\SDU_Data\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDU_Floor_Thickness	\\InputData\\SDU_Data\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDU_HDPE_Thickness	\\InputData\\SDU_Data\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDU_HDPE_LMM_Ratio	\\InputData\\SDU_Data\\Geometry	Used to help reflect influence of the HDPE on diffusion by taking into account the change in gradient due to the change in diffusive length	Y	None	N/A	Y

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<b>New Model File Date:</b> 4/10/2019			<b>Source Model File Date:</b> 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_Height	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDU_JointHWidth	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDU_LMM_Thickness	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDU_Radius	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDU_RSspace	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDU_RSspace_a	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_SatWidth	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDU_UMM_Thickness	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDUJoint1Area	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness). Not presently used.	Y	None	N/A	Y
SDUJoint2Area	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness). Not presently used.	Y	None	N/A	Y
SDUJoint3Area	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness). Not presently used.	Y	None	N/A	Y

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New Model File Date: 4/10/2019			Source Model File Date: 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDUJoint14Area	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
SDUJoint01Area	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness). Not presently used.	Y	None	N/A	Y
SDUJoint02Area	\\InputData\\SDU_D ata\\Geometry	Selector used to differentiate SDU 6 from SDU 7 Types (which include SDU 9 except for UZ thickness).	Y	None	N/A	Y
ReadDeffData	\\InputData\\SDUP ORFLOWData\\Def f_SDUs	Reconnected FileExt and FileIndex	Y	None	N/A	Y
DeffPar_vec_2	\\InputData\\SDUP ORFLOWData\\Def f_SDUs	PORFLOW diffusion coefficient file (De_I- 129.tab) columns for reading effective diffusion coefficient data for 150- foot diameter SDUs assigned in this data element. Files are stored in the folder SDF_EX19Data01	Y	None	N/A	Y

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<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DeffPar_vec_6	\\InputData\\SDUP ORFLOWData\\Def f_SDUs	PORFLOW diffusion coefficient file (De_I- 129 tab) columns for reading effective diffusion coefficient data for 375- foot diameter SDUs assigned in this data element. Files are stored in the folder SDF_FY19Data01.	Y	Deff_VHDPE is set equal to Backfill de. Deff_Sheetdrain is set equal to Saltstone_de. Is this correct?  What is Deff_VHDPE supposed to represent? If it's Deff for HDPE above the roof I'd think we would want to use "Roof HDPE GCL de" (Column 18). I would also think the Deff_Sheetdrain value would be closer to FF GROUT de (column 23) but I guess that depends on if we still consider the sheet drain a fast flow path.	Deff_Sheetdrain should be set to the Saltstone Deff. Deff_VHDPE is a little more complicated. Diffusivity HDPE (now called Diffusivity_VHDPE) and Diffusivity_VHDPE TC are used to define the diffusivities in the Type2 and Type7 (also 6 and 9) SDU (Submodel) HDPE Cells. If the SDU is a Type 2 SDU, the diffusivity is VHDPE_DCa and if it is a 375-foot diameter SDU it is BackFill_DCa.	Y
DeffPar_vec	\\InputData\\SDUP ORFLOWData\\Def f_SDUs	Selector for choosing which data element to use for Deff column assignments was rewritten for compatibility with the 2019 PA data.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FileExt	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DefDLLD ata	Selector element updated to reflect choices of SDUs and/or SDU-Types and associated control file for reading DLL	Y	None	N/A	Y
FileIndex	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DefDLLD ata	Selector element updated to reflect choice of scenario as reflected in line read from control file to point to correct flow field file found in the folder SDF_FY19Data01	Y	None	N/A	Y
szTable	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DefDLLD ata	Selector element updated to reflect the number of columns in the effective diffusion files selected based on the SDU size (150-foot versus 375-foot diameters).	Y	None	N/A	Y
Tortosity	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DiffusionC oefficientElements	Added container within which tortuosities for specific materials are solved for	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
AppTortuosity_LMM	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DiffusionC oefficientElements	Added expression element that creates an apparent tortuosity factor defined as the ratio between the harmonic mean of the HDPE and LMM Def values and the LMM Def. This factor is used to multiply the LMM tortuosity in specified solid property elements used for the LMM to reflect the influence of the HDPE on diffusion in the system.	Y	None	N/A	Y
Backfill_ Tortuosity	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DiffusionC oefficientElements \\Tortuosity	Tortuosity generated to use in conjunction with free-water diffusion coefficient. Note for some materials such as saltstone, effective diffusion coefficients and cloned fluid elements are used instead of tortuosities, free-water diffusion coefficients and solid property elements.	Y	None	N/A	Y
FFFloor_ Tortuosity	\\InputData\\SDUP ORFLOWData\\Def f_SDUs\\DiffusionC oefficientElements \\Tortuosity	Tortuosity generated to use in conjunction with free-water diffusion coefficient.	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FFLMM_Tortuosity	InputData\SDUP ORFLOWData\Def f SDUs\DiffusionC oefficientElements \Tortuosity	Tortuosity generated to use in conjunction with free-water diffusion coefficient.	Y	None	N/A	Y
FFUMM_Tortuosity	InputData\SDUP ORFLOWData\Def f SDUs\DiffusionC oefficientElements \Tortuosity	Tortuosity generated to use in conjunction with free-water diffusion coefficient.	Y	None	N/A	Y
Floor_Tortuosity	InputData\SDUP ORFLOWData\Def f SDUs\DiffusionC oefficientElements \Tortuosity	Tortuosity generated to use in conjunction with free-water diffusion coefficient.	Y	None	N/A	Y
Joint_Tortuosity	InputData\SDUP ORFLOWData\Def f SDUs\DiffusionC oefficientElements \Tortuosity	Tortuosity generated to use in conjunction with free-water diffusion coefficient. The ratio (296/167) represents the ratio between gravel and sand (UZ_DCa) effective diffusion coefficients in cm/yr as found in the PORFLOW model. PORFLOW assumes a gravel Def for joints and a sand Def for the UZ sand in the vadose zone	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
LMM_Tortuosity	\\InputData\\SDUP ORFLOWData\\Def f SDUs\\DiffusionC oefficientElements \\Tortuosity	Tortuosity generated to use in conjunction with free-water diffusion coefficient.	Y	None	N/A	Y
UMM_Tortuosity	\\InputData\\SDUP ORFLOWData\\Def f SDUs\\DiffusionC oefficientElements \\Tortuosity	Tortuosity generated to use in conjunction with free-water diffusion coefficient.	Y	None	N/A	Y
UZ_Tortuosity	\\InputData\\SDUP ORFLOWData\\Def f SDUs\\DiffusionC oefficientElements \\Tortuosity	Added expression element for defining the tortuosity in the UZ	Y	None	N/A	Y
ATWT_ND	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs	Added data element for Tc-99 moles to grams conversion factor (atomic weight)	Y	None	N/A	Y
Tc99FluxToUZ_SDU	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs	Updated expression element to reflect the change from data read in being in grams to data read in being in moles for the 2019 PA GoldSim model	Y	None	N/A	Y
Tc99Row	\\InputData\\SDUP ORFLOWData\\Flu xToUZ_SDUs	Updated data element to reflect change in the position of Tc-99 in the GoldSim species element	Y	None	N/A	Y

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<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FileIndexSelect	\\InputData\\SDUP ORFLOWData\\FluxToUZ SDUs\\DLL Data_Flux	File index numbers reassigned for compatibility with the 2019 PA data found in the read control files ReadPFData1. Where i=1,2,4,6,7,9.	Y	It looks like the file name in the 9 <sup>th</sup> and 10 <sup>th</sup> positions are identical in the ReadPFData1.in file (both read "SDUXXRelease.txt"). Is there a difference between these files so that one is appropriate for deterministic runs and the other for probabilistic runs?	Please check the latest files	Y
RFFSDU	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles	Reconnected FileExt	Y	None	N/A	Y
FloPar_vec_6	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles	Updated 189 data entries to reflect properties of new velocity files and added 32 parameters to vector to reflect pH2 values in new velocity files	Y	None	N/A	Y
FloPar_vec_alt	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles	Delinked element and archived for later use	Y	None	N/A	Y
FloPar_vec	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles	Selector for choosing which data element to use for flow and transition time data column assignments was rewritten for compatibility with the 2019 PA data. Delinked FloPar_vec_alt	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
RFFSDU	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles	Added 32 input and output parameters to interface to reflect pH2 values in new velocity files	Y	None	N/A	Y
FloPar_vec_2	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles	Updated 189 data entries to reflect properties of new velocity files and added 32 parameters to vector to reflect pH2 values in new velocity files	Y	None	N/A	Y
Archive	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles	Container for saving no longer used element created.	Y	None	N/A	Y
FloPar_vec_alt	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ Archive	Data element moved from \\InputData\\SDUPORFLO WData\\ReadFlowFieldFile s into Archive container.	Y	None	N/A	Y
FileExt	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ DLLData	Adjusted selector element to choose SDU file indicating flow and diffusion coefficient files to be used.	Y	None	N/A	Y
FileIndex	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ DLLData	Replaced selector element to choose file location for stochastic flow realization case or deterministic scenario.	Y	None	N/A	Y
FileExt_1	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ DLLData	Deleted element	Y	None	N/A	Y
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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
szTable	\\InputData\\SDUP ORFLOWData\\ReadFlowFieldFiles\\ DLLData	Selector options changed to reflect the number of columns in cylindrical SDU flow field files.	Y	None	N/A	Y
pH2	\\InputData\\SDUP ORFLOWData\\ReadFlowFieldFiles\\ FlowData	Made copy of the container pH and its contents then renamed it pH2	Y	None	N/A	Y
pH2	\\InputData\\SDUP ORFLOWData\\ReadFlowFieldFiles\\ FlowData	Container pH copied, pasted, and renamed with variables in the container renamed to reflect the second (2) pH-based chemistry change. Data found in the container are linked to the analogous expression elements found in \\InputData\\SDUPORFLO WData\\ReadFlowFieldFile s\\ScalarData\\pHData2	Y	None	N/A	Y
xx_pH2a; xx=beginning of the file name	\\InputData\\SDUP ORFLOWData\\ReadFlowFieldFiles\\ FlowData\\pH2	Renamed the 32 expression elements, updated source elements, then globalized the container pH2	Y	None	N/A	Y
FFGrout_pH2a	\\InputData\\SDUP ORFLOWData\\ReadFlowFieldFiles\\ FlowData\\pH2	Renamed element FFGrout_pH2a	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
pHData2	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ ScalarData	Made copy of the container pHData and its contents then renamed it pHData2	Y	None	N/A	Y
pHData2	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ ScalarData	Container pHData copied, pasted, and renamed with variables in the container renamed to reflect the second (2) pH-based chemistry change. Data found in the container are linked to the appropriate output interface item in the external property element RFFSDU	Y	None	N/A	Y
xx_pH2; xx=beginning of the file name	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ ScalarData\\pHData a2	Renamed the 32 expression elements, updated flow data file column locations, then globalized the container pHData2	Y	None	N/A	Y
FFGrout_pHa	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles\\ FlowData\\pH	Renamed element FFGrout_pH2a then renamed back	Y	None	N/A	Y
RFFSDU	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles?	Reconnected FileIndex	Y	None	N/A	Y

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<b>New Model ID (or filename):</b> SRS Saltstone v5.051.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FloPar_vec_6	InputData\SDUP ORFLOWData\Re adFlowFieldFiles2	PORFLOW velocity field file (GoldSim.tab) columns for reading volumetric flow and pore volume data for 375-foot diameter SDUs assigned in this data element. Files are stored in the folder SDF_FY19Data01.	Y	I think this is just a difference between PORFLOW and GoldSim naming but the Wall1 flux corresponds to Wall5 in the GoldSim.tab file, Wall 2 flux corresponds to Wall4 etc.  The same naming issue appears to be present when looking at the FFGroutXX_Flux values.  There is the same potential issue in regards to the PV transitions for the Wall sections and the FFGrout sections.	The GoldSim Model is numbered from top to bottom and the PORFLOW Model is numbered from bottom to top.	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FloPar_vec_2	InputData\SDUP ORFLOWData\Re adFlowFieldFiles2	PORFLOW velocity field file (GoldSim.tab) columns for reading volumetric flow and pore volume data for 150-foot diameter SDUs assigned in this data element. Files are stored in the folder SDF_FY19Data01.	Y	In contrast to FloPar_vec_6, the FFGroutXX_Flux, the FFGrout1_Flux in GoldSim corresponds to the FF_Grout1_flow in GoldSim.tab file. There doesn't appear to be the naming issue between GoldSim and PORFLOW in this case. I just want to confirm that this is correct.  Also, FF_Grout11a_flow (in the GoldSim.tab file) is used for FFGrout20_Flux and FFGrout21_Flux. Do we just ignore the FF_Grout11b_flow that is also in the GoldSim.tab file?	My hiccup. The Type2 fast flow zones from PORFLOW are numbered from top to bottom and the Type 6's from bottom to top based on the PORFLOW post process input files GoldSimZones_XX. txt. This means that the resultant data is correct but transparency needs one more layer to follow.	Y
Archive	InputData\SDUP ORFLOWData\Re adFlowFieldFiles2	Container for saving no longer used element created.	Y	None	N/A	Y
FileExt	InputData\SDUP ORFLOWData\Re adFlowFieldFiles2	Selector element rewritten to reflect SDU Types modeled in the 2019 SDF PA	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FileIndex	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2	Selector element rewritten to reflect scenarios used in file structure of Files are stored in the folder SDF_FY19Data01	Y	None	N/A	Y
szTable	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2	Selector options changed to reflect the number of columns in cylindrical SDU flow field files.	Y	None	N/A	Y
FloPar_vec	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2	Selector for choosing which data element to use for volumetric flow and pore volume data column assignments was rewritten for compatibility with the 2019 PA data.	Y	None	N/A	Y
FloPar_vec_alt	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2\\ Archive	Data element moved from \\InputData\\SDUPORFLO WData\\ReadFlowFieldFile s2 into Archive container.	Y	None	N/A	Y
FileIndex	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2\\ DLLData	Adjusted selector element to choose file location for stochastic flow realization case or deterministic scenario.	Y	None	N/A	Y
FileExt	\\InputData\\SDUP ORFLOWData\\Re adFlowFieldFiles2\\ DLLData	Replaced selector element to choose SDU file indicating flow and diffusion coefficient files to be used.	Y	None	N/A	Y
Joint	\\InputData\\Solids	Linked to Joint_Tortuosity	Y	None	N/A	Y

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<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SandySoil	\\InputData\\Solids	Linked to UZ_Tortuosity	Y	None	N/A	Y
Scenario_switch	\\InputData\\UserInput	Linked to analogous item in submodel output interface list.	Y	None	N/A	Y
FreeWaterDiffusionCoef	\\Material	Added free water diffusion coefficient data element	Y	None	N/A	Y
Diffusivity_Water	\\Material	Removed data and linked to Diffusivity_Water	N	Linked to FreeWaterDiffusionCoef	That is fine except for the saturated zone where the advection dominance negates the influence of diffusion. For rigor, sand tortuosity (UZ_Tortuosity) added to solid element SatSandySoil in SRS Saltstone v5.055.gsm.	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PoreVolumesReqSS_p HltopHIII	Materials	Renamed and reset grout/saltstone Pore Volume count to reflect control transition time needed for pH based chemical environment data from Region I to Region III	N	Based on Section 4.4.3 of the revised PA (footnote for Table 4.4- 56), should the value be set at 1 rather than 6?	Please note that the present data was taken from the source data in SRNL-STI-2018- 00586 Table 4-1. Also note that SRNL-STI-2018- 00586 Table 4-1 pore volume differences were not recommended between BE, CE, and CV and the increase in the number of significant figures seen in the PA is not found in Table 4.1. The use of 1 PV was originally for I-129 only, but was adopted later for all species (Tc- 99 not included) as a conservative assumption.  The model data has been replaced by the PA data.	Y

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<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PoreVolumesReqCon_ pHItopHIII	Materials	Renamed and reset concrete Pore Volume count to reflect control transition time needed for pH based chemical environment data from Region I to Region III	N	The value is currently set to 5,850 pore volumes. Based on Section 4.4.3 of the revised PA (footnote for Table 4.4- 57), shouldn't the value be set to 1?	See above	Y
PoreVolumesReqSS_p HIIIItopHIV	Materials	Renamed and reset grout/saltstone Pore Volume count to reflect control transition time needed for pH based chemical environment data from Region III to Region IV	Y	Value is set to 1,400 which is correct for the CV case but I didn't see a selector to vary the value based on the case selected (i.e., BE, CV, CE cases). For BE, the value is 1390 PVs. For CE, the value is 1410 PVs.  I don't know if this really matters for the model since I believe the transition from pH Region III to Region IV is beyond 100k years.	See above	Y

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New Model File Date: 4/10/2019			Source Model File Date: 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PoreVolumesReqCon_ pHlittpHIV	Materials	Renamed and reset concrete Pore Volume count to reflect control transition time needed for pH based chemical environment data from Region III to Region IV	Y	Value is set to 7,600 but for the CV case the value is 7,590. I didn't see a selector to vary the value based on the case selected (i.e., BE, CV, CE cases). For BE, the value is 7570 PVs. For CE, the value is 7610 PVs.  I don't know if this really matters for the model since I believe the transition from pH Region III to Region IV is beyond 100k years.	See above	Y
PoreVolumesReqSS_E hNegtoEhPos	Materials	Renamed and reset grout/saltstone Pore Volume count to reflect control transition time needed for Eh based chemical environment data from reduced to oxidized for CV/BE, and CE scenarios	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PoreVolumesReqCon_ EhNegtoEhPos	Materials	Renamed and reset concrete Pore Volume count to reflect control transition time needed for Eh based chemical environment data from reduced to oxidized for CV, BE, and CE scenarios	N	Numbers for the BE and CE are slightly different from what is reported in Table 4.4-57 of the revised PA. For BE, the value should be 4,570 rather than 4600 and for CE the value should be 3415 rather than 3400.  I don't know if this really matters for the model since I believe the transition from pH Region III to Region IV is beyond 100k years.	See above. Also this has been changed in <b>SRS Saltstone v5.055.gsm</b> .	Y
PVReqSS_EhNegtoEhPos	Materials	Added selector element to choose correct grout/saltstone Pore Volume count to determine transition time needed for scenario specific Eh based chemical environment data from reduced to oxidized	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PVReqCon_EhNegtoEhPos	Materials	Added selector element to choose correct concrete Pore Volume count to determine transition time needed for scenario specific Eh based chemical environment data from reduced to oxidized	Y	None	N/A	Y
DiffusivityWater_a	Materials	Added data element to declare free water diffusion coefficient	Y	None	N/A	Y
Diffusivity_Water	Materials	Replaced number with variable input for structure using tortuosity	Y	None	N/A	Y
WasteKds	Materials	Reset saltstone Kd to young (Region I) environment used to initiate inventory distribution based initial conditions for SDU 1 and SDU 4	Y	None	N/A	Y
ParticleDensity_Concrete	Materials\SDU_Cylindrical_Concrete	Updated data as per Table 4.3-3 from SRR-CWDA-2019-00001 Draft A. Reset particle density to 2.45 g/cc	Y	None	N/A	Y
DryBulkDensity_Concrete	Materials\SDU1_SDU4_FloorWall	Deleted element	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
ParticleDensity_Walls14	Materials\SDU1-SDU4_FloorWall	Renamed element ParticleDensity_Concrete and set to 2.70	Y	None	N/A	Y
Porosity_Walls14	Materials\SDU1-SDU4_FloorWall	Renamed element Porosity_Concrete and set to 0.181	Y	None	N/A	Y
DryBulkDensity_Walls14	Materials\SDU1-SDU4_FloorWall	Added element to calculate bulk density	Y	None	N/A	Y
ParticleDensity_Floor14	Materials\SDU1-SDU4_FloorWall	Set particle density_ to 2.55	Y	None	N/A	Y
Porosity_Floor14	Materials\SDU1-SDU4_FloorWall	Set porosity to 0.106	Y	None	N/A	Y
DryBulkDensity_Floor14	Materials\SDU1-SDU4_FloorWall	Added element to calculate bulk density	Y	None	N/A	Y
ParticleDensity_Column14	Materials\SDU1-SDU4_FloorWall	Set particle density_ to 2.61	Y	None	N/A	Y
Porosity_Column14	Materials\SDU1-SDU4_FloorWall	Set porosity to 0.211	Y	None	N/A	Y
DryBulkDensity_Column14	Materials\SDU1-SDU4_FloorWall	Added element to calculate bulk density	Y	None	N/A	Y
Porosity_Waste	Materials\WasteP properties	Deleted element	Y	None	N/A	Y
Porosity_Waste	Materials\WasteP properties	Added data element and set to 0.656	Y	None	N/A	Y
ParticleDensity_Waste	Materials\WasteP properties	Updated value to 2.72 g/cm3 per Table 4.3-3 from SRR-CWDA-2019-00001 Draft A.		Added by checker.	Agreed.	Y
DryBulkDensity_Waste	Materials\WasteP properties	Reset expression element to: (1-Porosity_Waste)* ParticleDensity_Waste	Y	None	N/A	Y

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<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Flux_UZ	\\SDU_Transport_Results	Added link to diffusive release from the UZ (+SDUs, Water to Water in_DiffusiveSink)	Y	None	N/A	Y
GroutCellVolume_1_4	\\SDUs\\SiteGeome try	Defined Saltstone cell volume for inner grout	Y	Do we need to account for the 1A, 1B, and 1C grout cells as well?	No, this term is only used to sum up the grout volume for the inner and outer zones of grout not including the three added cells per row. See SDU6add_ratio.	Y

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<b>New Model File Date:</b> 4/10/2019			<b>Source Model File Date:</b> 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
GroutCellVolume_8_22	\\SDUs\\Site\\Geome try	Defined Saltstone cell volume for outer grout	Y	We include the sheet drain in the calc for GroutCellVolume 8_22, but there is a difference between the 150-ft and 375-ft diameter SDUs that may need to be addressed.  In looking at the CellLength Sum element (which references the CRadius element), the radius of the 375-ft SDUs (187.5 ft) is met at Cell 19 (the last cell in the Grout OuterZone region). Conversely, for the 150-ft diameter SDUs, the inner radius of 75-ft is met at Cell 22 (end of the sheet drain region). It seems that the inner radius of any cylindrical SDU should reach to the end of the sheet drain cells (as is done for 150-ft units but not the 375-ft units).	For simplicity and to leave an easy route for evaluating the influence of a crack along the wall I changed the radial length for the sheet drain cells to 0.1 cm each	Y
GroutCellVolume	\\SDUs\\Site\\Geome try	Redefined saltstone cell volume to more accurately exclude fast zone	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU6add_ratio	SDUs\SiteGeome try	Expression rewritten to reflect redefined Grout Cell Volume	Y	None	N/A	Y
UZThickness	SDUs\SiteGeome try	Updated to reflect present definitions updated based on Section 4.4.4 of SRR- CWDA-2019-00001 Draft A	Y	None	N/A	Y
UZDiff_Thickness	SDUs\UnsatZone	Added diffusive length term for diffusive flux links.	Y	None	N/A	Y
DiffusiveSink_volume	SDUs\UnsatZone	Added expression element to define volume of the DiffusiveSink element as the product of the bottom area of the SDU and the saturated zone thickness.	Y	None	N/A	Y
DiffusiveSink	SDUs\UnsatZone	Added cell-pathway sink element to allow for diffusion from the UZ to the SZ	Y	None	N/A	Y
UZCell_*; *In,2-9	SDUs\UnsatZone	Connected diffusive mass flux links between UZ cell pathway elements and from UZCell_09 into the cell pathway element UZCell_In in SDUs\UnsatZone\UZADD	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UZCell_Out	\\SDUs\\UnsatZone	Connected diffusive mass flux link into the new cell pathway cell element DiffusiveSink which is set to be a zero-concentration boundary	Y	None	N/A	Y
ZeroFlux_BC	\\SDUs\\UnsatZone	Set up a condition data element to choose whether the bottom of the UZ has a zero-diffusive flux boundary condition or a zero-concentration boundary condition	Y	None	N/A	Y
ZeroFlux_BCa	\\SDUs\\UnsatZone	Added a binary selector element used to set up a zero-diffusive flux boundary condition or a zero-concentration boundary condition	Y	None	N/A	Y
ReleaseFlux_mass	\\SDUs\\UnsatZone	Changed name from RechargeFlux mass and added the diffusive term to the radionuclide release rate at the bottom of the UZ	Y	None	N/A	Y
UZCell_*, *-In, 2-9, Out	\\SDUs\\UnsatZone\\UZADD	Connected diffusive mass flux links between UZ cell pathway elements and from UZCell_Out into the cell pathway element UZCell_Out in \\SDUs\\UnsatZone	Y	None	N/A	Y

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New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MasstoSaturatedZone	\SDUs\NearWell	Updated element to include mass transported from UZ to the diffusive sink		Added by checker	Agreed.	Y
CellRow_20	\SDUs\Waste\SDU_Cells\CellRow_20\FastZone	Vertical diffusive mass links were added from SaltStoneFast_XJY1 to SaltStoneFast_XJY1 for J=5-7 between row 20 and FZ1 in \SDUs\Waste\SDU_Cells\SDU_Cells\FastZone	Y	None	N/A	Y
CellRow_20	\SDUs\Waste\SDU_Cells\CellRow_20\Fill	Vertical diffusive mass links were added from Fill_XJY1 to Fill_XJY1 for J=32-35 between row 20 and UZCell in in \SDUs\UnsatZone	Y	None	N/A	Y
CellRow_20	\SDUs\Waste\SDU_Cells\CellRow_20\Grout\InnerZone	Vertical diffusive mass links were added from SaltStone_XJY1 to SaltStone_XJY1 for J=1,4 between row 20 and SDU_F1 in \SDUs\Waste\SDU_Cells\SDU_Floor1	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CellRow_20	\\SDUs\\Waste\\SDU Cells\\CellRow 20\\Grout\\InnerZone\\SDU6add	Vertical diffusive mass links were added from SaltStone_XJY1 to SaltStone_XJY1 for J=a, b, c between row 20 and SDU_F1 in \\SDUs\\Waste\\SDU_Cells\\SDU_Floor1	Y	None	N/A	Y
CellRow_20	\\SDUs\\Waste\\SDU Cells\\CellRow 20\\Grout\\OuterZone	Vertical diffusive mass links were added from SaltStone_XJY1 to SaltStone_XJY1 for J=8-19 between row 20 and SDU_F1 in \\SDUs\\Waste\\SDU_Cells\\SDU_Floor 2	Y	None	N/A	Y
CellRow_20	\\SDUs\\Waste\\SDU Cells\\CellRow 20\\HDPE	Vertical diffusive mass links were added from HDPE_XJY1 to HDPE_XJY1 for J=29-31 between row 20 and UZCell_In in \\SDUs\\UnsatZone	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CellRow_20	\\SDUs\\Waste\\SDU_Cells\\CellRow_20\\SheetDrain	Vertical diffusive mass links were added from SheetDrain_XJY1 to SheetDrain_XJY1 for J=20-22 between row 20 and SDU_F1 in \\SDUs\\Waste\\SDU_Cells\\SDU_Floor2		In the model, mixing cells SheetDrain_X21Y1 and SheetDrain_X22Y1 both have outflow to Joint1 in \\SDUs\\Waste\\SDU_Cells\\JointH_Bot.  SheetDrain_X21Y1 has a diffusive flux link to SDU_F1 in \\SDUs\\Waste\\SDU_Cells\\SDU_Floor2.  SheetDrain_X22Y1 has a diffusive link to SDU_F1 (diffusive area is currently multiplied by 0) in \\SDUs\\Waste\\SDU_Cells\\SDU_Floor2 AND Joint1 in \\SDUs\\Waste\\SDU_Cells\\JointH_Bot.	There is an assumption here that water at the bottom of the sheet drain will be directly pulled into the joint, almost like a short circuit conservative. It was done this way to avoid the need for horizontal flow in the floor	Y
CellRow_20	\\SDUs\\Waste\\SDU_Cells\\CellRow_20\\Wall	Vertical diffusive mass links were added from Wall_XJY1 to Wall_XJY1 for J=23-28 between row 20 and WF01 in \\SDUs\\Waste\\SDU_Cells\\WallFloor	Y	Diffusive mass flux links were also added from Wall_XJY1 between row 20 and Joint(J-22) in \\SDUs\\Waste\\SDU_Cells\\JointH_Bot	Vertical flow and diffusion go from wall to wall joint. cells Diffusive link to wall floor is zeroed out.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CellRow_K; K=01-20	\\SDUs\\Waste\\SD U_Cells\\CellRow_ K\\FastZone	Vertical diffusive mass links were added from SaltStoneFast_XJY1 to SaltStoneFast_XJY1 for J=5-7 between rows K and K+1 for K=1-19)	Y	Spot checked. Given results in Section 5.6 of the 2019 SDF PA, errors in diff. flux links are expected to have negligible impacts.	N/A	Y
CellRow_K; K=01-20	\\SDUs\\Waste\\SD U_Cells\\CellRow_ K\\Fill	Vertical diffusive mass links were added from Fill_XJY1 to Fill_XJY1 for J=32-35 between rows K and K+1 for K=1-19	Y	See above.	N/A	Y
CellRow_K; K=01-20	\\SDUs\\Waste\\SD U_Cells\\CellRow K\\Grout\\InnerZone	Vertical diffusive mass links were added from SaltStone_XJY1 to SaltStone_XJY1 for J=1,4 between rows K and K+1 for K=01-19	Y	See above.	N/A	Y
CellRow_K; K=01-20	\\SDUs\\Waste\\SD U_Cells\\CellRow_ K\\Grout\\InnerZone \\SDU6add	Vertical diffusive mass links were added from SaltStone_X1JY1 to SaltStone_X1JY1 for J=a, b, c between rows K and K+1 for K=01-19	Y	See above.	N/A	Y
CellRow_K; K=01-20	\\SDUs\\Waste\\SD U_Cells\\CellRow K\\Grout\\OuterZone	Vertical diffusive mass links were added from SaltStone_XJY1 to SaltStone_XJY1 for J=8- 19 between rows K and K+1 for K=01-19	Y	See above.	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CellRow_K; K=01-20	\\SDUs\\Waste\\SD U_Cells\\CellRow_ K\\HDPE	Vertical diffusive mass links were added from HDPE_XJY1 to HDPE_XJY1 for J=29-31 between rows K and K+1 for K=1-19	Y	See above.	N/A	Y
CellRow_K; K=01-20	\\SDUs\\Waste\\SD U_Cells\\CellRow K\\SheetDrain	Vertical diffusive mass links were added from SheetDrain_XJY1 to SheetDrain_XJY1 for J=20-22 between rows K and K+1 for K=1-19)	Y	See above.	N/A	Y
CellRow_K; K=01-20	\\SDUs\\Waste\\SD U_Cells\\CellRow_ K\\Wall	Vertical diffusive mass links were added from Wall_XJY1 to Wall_XJY1 for J=23-28 between rows K and K+1 for K=1-19	Y	See above.	N/A	Y
FloorDiffThick	\\SDUs\\Waste\\SD U_Cells\\FastZone	Added expression element to define the diffusive distance between floor cells	Y	None	N/A	Y
FZK; K=1-10	\\SDUs\\Waste\\SD U_Cells\\FastZone	Connected vertical diffusive mass links between FZK and FZK+1 for K=1-9.	Y	Spot checked. Given results in Section 5.6 of the 2019 SDF PA, errors in diff. flux links are expected to have negligible impacts.	N/A	Y
FZ10	\\SDUs\\Waste\\SD U_Cells\\FastZone	Connected vertical diffusive mass links between FZ10 and FZ1 in \\SDUs\\Waste\\SDU_Cells\\ FastZone\\FZ10.MMA	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Floor_fast	\SDUs\Waste\SD U_Cells\FastZone	Added tortuosity to solid properties element	Y	None	N/A	Y
LMMDiff_thickness	\SDUs\Waste\SD U_Cells\FastZone\ FZLMM	Added expression element to define the diffusive distance between LMM cells	Y	None	N/A	Y
SDU_FK; K=6-10	\SDUs\Waste\SD U_Cells\FastZone\ FZLMM	Connected vertical diffusive mass links between FZK and FZK+1 for K=6-9. Connected the link between FZ10 and UZCell_In in \SDUs\UnsatZone.	Y	None	N/A	Y
Floor_fast	\SDUs\Waste\SD U_Cells\FastZone\ FZLMM	Added tortuosity to solid properties element. This term also accounts for the influence of the HDPE on diffusion.	Y	None	N/A	Y
UMMDiff_thickness	\SDUs\Waste\SD U_Cells\FastZone\ FZUMM	Added expression element to define the diffusive distance between UMM cells	Y	None	N/A	Y
FZK; K=1-5	\SDUs\Waste\SD U_Cells\FastZone\ FZUMM	Connected vertical diffusive mass links between FZ and FZK+1 for K=1-4. Connected the link between FZ5 and FZ6 in \SDUs\Waste\SDU_Cells\ FastZone\FZLMM.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Floor_fast	SDUs\Waste\SD U_Cells\FastZone\ FZUMM	Added tortuosity to solid properties element	Y	None	N/A	Y
JointDiff_thickness	SDUs\Waste\SD U_Cells\JointH_B ot	Added expression element to define the diffusive distance between JointH_Bot cells	Y	None	N/A	Y
JointK; K=1-6	SDUs\Waste\SD U_Cells\JointH_B ot	Connected vertical diffusive mass links between JointK and WF01 in\SDUs\Waste\SDU_Cell s\WallFloor for K=1-6.	Y	None	N/A	Y
Joint	SDUs\Waste\SD U_Cells\JointH_B ot	Change tortuosity to Joint_Tortuosity	Y	None	N/A	Y
JointDiff_thickness	SDUs\Waste\SD U_Cells\JointH_To p	Added expression element to define the diffusive distance between JointH_Top cells	Y	None	N/A	Y
JointK; K=1-6	SDUs\Waste\SD U_Cells\JointH_To p	Connected vertical advective mass links between JointK and Wall XK+22Y1 \SDUs\Waste\SDU_Cells\ TopCap\Wall for K=1-6.	Y	None	N/A	Y
JointK; K=1-6	SDUs\Waste\SD U_Cells\JointH_To p	Deleted vertical advective mass links between JointK and WF01 \SDUs\Waste\SDU_Cells\ WallFloor for K=1-6.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
JointK; K=1-6	SDUs\Waste\SD U_Cells\JointH_To p	Deleted vertical diffusive mass links between JointK and WF01 \SDUs\Waste\SDU_Cells\ WallFloor for K=1-6.	Y	None	N/A	Y
Joint	SDUs\Waste\SD U_Cells\JointH_To p	Changed tortuosity to Joint_Tortuosity	Y	None	N/A	Y
Joint	SDUs\Waste\SD U_Cells\Joint1_1	Changed tortuosity to Joint_Tortuosity	Y	None	N/A	Y
Joint	SDUs\Waste\SD U_Cells\Joint1_2	Changed tortuosity to Joint_Tortuosity	Y	None	N/A	Y
Joint	SDUs\Waste\SD U_Cells\Joint1_3	Changed tortuosity to Joint_Tortuosity	Y	None	N/A	Y
Joint14Diff_thickness	SDUs\Waste\SD U_Cells\Joint1_4	Added expression element to define the diffusive distance between Joint1_4 cells	Y	None	N/A	Y
JointK; K=1-10	SDUs\Waste\SD U_Cells\Joint1_4	Connected vertical diffusive mass links between JointK and JointK+1 for K=1-9.	Y	None	N/A	Y
Joint10	SDUs\Waste\SD U_Cells\Joint1_4	Connected vertical diffusive mass links between Joint10 and SDU_F1 in \SDUs\Waste\SDU_Cells\ SDU_Floor1\SDU_FUMM.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
JointCellVolume	SDUs\Waste\SD U_Cells\Jointl_4	Added zero trap because a cell pathway element cannot have a zero volume when diffusive links occur. This allows Joint diffusive links to be turned off using diffusive area when SDU type dictates.	Y	None	N/A	Y
Joint	SDUs\Waste\SD U_Cells\Jointl_4	Changed tortuosity to Joint_Tortuosity	Y	None	N/A	Y
Joint	SDUs\Waste\SD U_Cells\JointO_1	Changed tortuosity to Joint_Tortuosity	Y	None	N/A	Y
JointO2Diff_thickness	SDUs\Waste\SD U_Cells\JointO_2	Added expression element to define the diffusive distance between JointO_2 cells	Y	None	N/A	Y
JointK; K=1-10	SDUs\Waste\SD U_Cells\JointO_2	Connected vertical diffusive mass links between JointK and JointK+1 for K=1-9.	Y	None	N/A	Y
Joint10	SDUs\Waste\SD U_Cells\JointO_2	Connected vertical diffusive mass links between Joint10 and SDU_F1 in SDUs\Waste\SDU_Cells\ SDU_Floor2\SDU_FUMM.	Y	Porous medium for SDU_F1 needs to be set to SDU_concrete_floor. Given results in Section 5.6 of the 2019 SDF PA, this error is expected to have negligible impact.	Fixed in SRS Saltstone v5.055.gsm.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
JointCellVolume	SDUs\Waste\SD U_Cells\JointO_2	Added zero trap because a cell pathway element cannot have a zero volume when diffusive links occur. This allows Joint diffusive links to be turned off using diffusive area when SDU type dictates.	Y	None	N/A	Y
Joint	SDUs\Waste\SD U_Cells\JointO_2	Changed tortuosity to Joint_Tortuosity	Y	None	N/A	Y
FloorDiffThick	SDUs\Waste\SD U_Cells\SDU_Flo or1	Added expression element to define the diffusive distance between floor cells	Y	None	N/A	Y
SDU_FK; K=1-10	SDUs\Waste\SD U_Cells\SDU_Flo or1	Connected vertical diffusive mass links between SDU FK and SDU FK+1 for K=1-9.	Y	None	N/A	Y
SDU_F10	SDUs\Waste\SD U_Cells\SDU_Flo or1	Connected vertical diffusive mass links between SDU F10 and SDU F1 in SDUs\Waste\SDU_Cells\ SDU_Floor1\SDU_FUMM.	Y	None	N/A	Y
SDU_concrete_floor	SDUs\Waste\SD U_Cells\SDU Flo or1	Added tortuosity to solid properties element	Y	None	N/A	Y
LMMDiff_thickness	SDUs\Waste\SD U_Cells\SDU_Flo or1\SDU_FLMM	Added expression element to define the diffusive distance between LMM cells	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_FK; K=6-10	\\SDUs\\Waste\\SD U_Cells\\SDU_Flo or1\\SDU_FLMM	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=6-9. Connected the link between SDU_F10 and UZCell In in \\SDUs\\UnsatZone.	Y	None	N/A	Y
SDU_concrete_floor	\\SDUs\\Waste\\SD U_Cells\\SDU_Flo or1\\SDU_FLMM	Added tortuosity to solid properties element. This term also accounts for the influence of the HDPE on diffusion.	Y	None	N/A	Y
UMMDiff_thickness	\\SDUs\\Waste\\SD U_Cells\\SDU_Flo or1\\SDU_FUMM	Added expression element to define the diffusive distance between UMM cells	Y	None	N/A	Y
SDU_FK; K=1-5	\\SDUs\\Waste\\SD U_Cells\\SDU_Flo or1\\SDU_FUMM	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-4. Connected the link between SDU_F5 and SDU_F6 in \\SDUs\\Waste\\SDU_Cells\\ SDU_Floor1\\SDU_FLMM.	Y	None	N/A	Y
SDU_concrete_floor	\\SDUs\\Waste\\SD U_Cells\\SDU_Flo or1\\SDU_FUMM	Added tortuosity to solid properties element	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
FloorDiffThick	SDUs\Waste\SD U_Cells\SDU_Flo or2	Added expression element to define the diffusive distance between floor cells	Y	None	N/A	Y
SDU_FK; K=1-10	SDUs\Waste\SD U_Cells\SDU_Flo or2	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-9.	Y	None	N/A	Y
SDU_F10	SDUs\Waste\SD U_Cells\SDU_Flo or2	Connected vertical diffusive mass links between SDU_F10 and SDU_F1 in SDUs\Waste\SDU_Cells\ SDU_Floor2\SDU_FUMM.	Y	None	N/A	Y
SDU_concrete_floor	SDUs\Waste\SD U_Cells\SDU_Flo or2	Added tortuosity to solid properties element	Y	None	N/A	Y
LMMDiff_thickness	SDUs\Waste\SD U_Cells\SDU_Flo or2\SDU_FLMM	Added expression element to define the diffusive distance between LMM cells	Y	None	N/A	Y
SDU_FK; K=6-10	SDUs\Waste\SD U_Cells\SDU_Flo or2\SDU_FLMM	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=6-9. Connected the link between SDU_F10 and UZCell_In in SDUs\UnsatZone.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SDU_concrete_floor	SDUs\Waste\SD U_Cells\SDU_Flo or2\SDU_FLMM	Added tortuosity to solid properties element. This term also accounts for the influence of the HDPE on diffusion.	Y	None	N/A	Y
UMMDiff_thickness	SDUs\Waste\SD U_Cells\SDU_Flo or2\SDU_FUMM	Added expression element to define the diffusive distance between UMM cells	Y	None	N/A	Y
SDU_FK; K=1-5	SDUs\Waste\SD U_Cells\SDU_Flo or2\SDU_FUMM	Connected vertical diffusive mass links between SDU_FK and SDU_FK+1 for K=1-4. Connected the link between SDU_F5 and SDU_F6 in SDUs\Waste\SDU_Cells\ SDU_Floor2\SDU_FLMM.	Y	None	N/A	Y
SDU_concrete_floor	SDUs\Waste\SD U_Cells\SDU_Flo or2\SDU_FUMM	Added tortuosity to solid properties element	Y	None	N/A	Y
TopCap	SDUs\Waste\SD U_Cells\TopCap\F asZone	Vertical diffusive mass links were added from SaltStoneFast_XJY1 in TopCap to analogous cell pathway SaltStoneFast_XJY1 in CellRow_01 for J=5-7	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
TopCap	\\SDUs\\Waste\\SD U_Cells\\TopCap\\Fill_XJY1	Vertical diffusive mass links were added from Fill_XJY1 in TopCat to analogous cell pathway Fill_XJY1 in CellRow_01 for J=32-35	Y	None	N/A	Y
TopCap	\\SDUs\\Waste\\SD U_Cells\\TopCap\\Grout\\InnerZone	Vertical diffusive mass links were added from SaltStone_XJY1 in TopCat to analogous cell pathway SaltStone_XJY1 in CellRow_01 for J=1,4	Y	None	N/A	Y
TopCap	\\SDUs\\Waste\\SD U_Cells\\TopCap\\Grout\\InnerZone\\SDU6add	Vertical diffusive mass links were added from SaltStone_XJY1 in TopCat to analogous cell pathway SaltStone_XJY1 in CellRow_01 for J=a, b, c	Y	None	N/A	Y
TopCap	\\SDUs\\Waste\\SD U_Cells\\TopCap\\Grout\\OuterZone	Vertical diffusive mass links were added from SaltStone_XJY1 in TopCat to analogous cell pathway SaltStone_XJY1 in CellRow_01 for J=8-19	Y	None	N/A	Y
TopCap	\\SDUs\\Waste\\SD U_Cells\\TopCap\\HDPE	Vertical diffusive mass links were added from HDPE_XJY1 in TopCat to analogous cell pathway HDPE_XJY1 in CellRow_01 for J=29-31	Y	No diffusive link between TopCap and Row1 for HDPE_X31Y1. Given results in Section 5.6 of the 2019 SDF PA, this error is expected to have negligible impact.	Fixed in SRS Saltstone v5.055.gsm.	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
TopCap	SDUs\Waste\SD U_Cells\TopCap\SheetDrain	Vertical diffusive mass links were added from SheetDrain_XJY1 in TopCat to analogous cell pathway SheetDrain_XJY1 in CellRow_01 for J=20-22	Y	None	N/A	Y
TopCap	SDUs\Waste\SD U_Cells\TopCap\Wall	Vertical diffusive mass links were added from Wall_XJY1 in TopCat to analogous cell pathway Wall_XJY1 in CellRow_01 for J=23-28	Y	None	N/A	Y
CellWaterVolumeX_TC	SDUs\Waste\SD U_Cells\TopCap\Wall	Renamed from CellWaterVolumeX_R20 which is the same expression to avoid confusion	Y	None	N/A	Y
WallDiff_thickness_TC	SDUs\Waste\SD U_Cells\TopCap\Wall	Renamed from WallDiff_thickness_R20 which is the same expression to avoid confusion	Y	None	N/A	Y
CellMassX_TC	SDUs\Waste\SD U_Cells\TopCap\Wall	Renamed from CellMassX_R20 which is the same expression to avoid confusion	Y	None	N/A	Y
FloorDiffThick	SDUs\Waste\SD U_Cells\Wall\Floor	Added expression element to define the diffusive distance between floor cells	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
WFK; K=01-10	SDUs\Waste\SD U_Cells\WallFloor	Connected vertical diffusive mass links between WFK and WFK+1 for K=01-09.	Y	None	N/A	Y
WF10	SDUs\Waste\SD U_Cells\WallFloor	Connected vertical diffusive mass links between WF10 and WF01 in SDUs\Waste\SDU_Cells\ WallFloor\WFLMM.	Y	None	N/A	Y
SDU_concrete_floor	SDUs\Waste\SD U_Cells\WallFloor	Added tortuosity to solid properties element	Y	None	N/A	Y
LMMDiff_thickness	SDUs\Waste\SD U_Cells\WallFloor\ WFLMM	Added expression element to define the diffusive distance between LMM cells	Y	None	N/A	Y
WFK; K=6-10	SDUs\Waste\SD U_Cells\WallFloor\ WFLMM	Connected vertical diffusive mass links between WFK and WFK+1 for K=06-09. Connected the link between WF10 and UZCell_In in SDUs\UnsatZone.	Y	None	N/A	Y
SDU_concrete_floor	SDUs\Waste\SD U_Cells\WallFloor\ WFLMM	Added tortuosity to solid properties element. This term also accounts for the influence of the HDPE on diffusion.	Y	None	N/A	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UMMDiff_thickness	SDUs\Waste\SD U_Cells\WallFloor\ WFUMM	Added expression element to define the diffusive distance between UMM cells	Y	None	N/A	Y
WFK; K=1-5	SDUs\Waste\SD U_Cells\WallFloor\ WFUMM	Connected vertical diffusive mass links between WFK and WFK+1 for K=1-4. Connected the link between WF5 and WF6 in SDUs\Waste\SDU_Cells\ WallFloor\WFLMM.	Y	None	N/A	Y
SDU_concrete_floor	SDUs\Waste\SD U_Cells\WallFloor\ WFUMM	Added tortuosity to solid properties element	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU	Transport\WaterT ransport\FlowField _PEST101	Changed name to MeanSatZonePoreVel_SD U_a	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU_a	Transport\WaterT ransport\FlowField _PEST101	Replaced data with average velocities based on tracer pulse data from 2018_SDF_PA_StreamTr aces_and_PlumeMeasure s.xlsx	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU_b	Transport\WaterT ransport\FlowField _PEST101	Added new element with data for average velocities based on streamtrace data from 2018_SDF_PA_StreamTr aces_and_PlumeMeasure s.xlsx	Y	Values are slightly different (4 <sup>th</sup> sig fig) compared to the current Excel spreadsheet Suggest updating the values at some point.	Changed units to ft/year and rentred from latest file 2018_SDF_PA_Str eamTraces_and_Pl umeMeasures-SPH BD.xlsx	Y

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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Velocity_Option	\\Transport\\WaterT ransport\\FlowField _PEST101	Added data element to select origin of pore velocity based on tracer pulse derived values, streamtrace derived values, or maximum value of the two vectors.	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU	\\Transport\\WaterT ransport\\FlowField _PEST101	Added selector element to choose pore velocity assigned values based on Velocity_Option	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU1	\\Transport\\WaterT ransport\\FlowField _PEST101	Changed name to MeanSatZonePoreVel_SD U1_a	Y	None	N/A	Y
MeanSatZonePoreVel_ SDU1_a	\\Transport\\WaterT ransport\\FlowField _PEST101	Replaced data with average velocities based on tracer pulse data from 2018_SDF_PA_StreamTr aces_and_PlumeMeasure s.xlsx	Y	Values are slightly different (4 <sup>th</sup> sig fig) compared to the current Excel spreadsheet. Suggest updating the values at some point.	Changed units to ft/year and rentred from latest file 2018_SDF_PA_Str eamTraces_and_Pl umeMeasures-SPH BD.xlsx	Y
MeanSatZonePoreVel_ SDU1_b	\\Transport\\WaterT ransport\\FlowField _PEST101	Added new element with data for average velocities based on streamtrace data from 2018_SDF_PA_StreamTr aces_and_PlumeMeasure s.xlsx	Y	Values are slightly different (4 <sup>th</sup> sig fig) compared to the current Excel spreadsheet. Suggest updating the values at some point.	Changed units to ft/year and rentred from latest file 2018_SDF_PA_Str eamTraces_and_Pl umeMeasures-SPH BD.xlsx	Y
MeanSatZonePoreVel_ SDU1	\\Transport\\WaterT ransport\\FlowField _PEST101	Added selector element to choose pore velocity assigned values based on Velocity_Option	Y	None	N/A	Y
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Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZonePoreVel_SDU4	\\Transport\\WaterTransport\\FlowField_PEST101	Changed name to MeanSatZonePoreVel_SDU4_a	Y	None	N/A	Y
MeanSatZonePoreVel_SDU4_a	\\Transport\\WaterTransport\\FlowField_PEST101	Replaced data with average velocities based on tracer pulse data from 2018_SDF_PA_StreamTraces_and_PlumeMeasure s.xlsx	Y	Values are slightly different (4 <sup>th</sup> sig fig) compared to the current Excel spreadsheet. Suggest updating the values at some point.	Changed units to ft/year and rentred from latest file 2018_SDF_PA_StreamTraces_and_PlumeMeasures-SPH BD.xlsx	Y
MeanSatZonePoreVel_SDU4_b	\\Transport\\WaterTransport\\FlowField_PEST101	Added new element with data for average velocities based on streamtrace data from 2018_SDF_PA_StreamTraces_and_PlumeMeasure s.xlsx	Y	Values are slightly different (4 <sup>th</sup> sig fig) compared to the current Excel spreadsheet. Suggest updating the values at some point.	Changed units to ft/year and rentred from latest file 2018_SDF_PA_StreamTraces_and_PlumeMeasures-SPH BD.xlsx	Y
MeanSatZonePoreVel_SDU4	\\Transport\\WaterTransport\\FlowField_PEST101	Added selector element to choose pore velocity assigned values based on Velocity Option	Y	None	N/A	Y
PathLengths_SDU	\\Transport\\WaterTransport\\FlowField_PEST101	Updated element with data for particle-track distance from SDU center to the 100-meter boundary for cylindrical SDUs from 2018_SDF_PA_StreamTraces_and_PlumeMeasure s.xlsx	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038.gsm			
<b>New Model File Date:</b> 4/10/2019			<b>Source Model File Date:</b> 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
PathLength_SDUI1	\\Transport\\WaterT ransport\\FlowField _PEST101	Updated element with data for particle-track distance from SDU center to the 100-meter boundary for SDU 1 from 2018_SDF_PA_StreamTr aces_and_PlumeMeasure s.xlsx	Y	None	N/A	Y
PathLength_SDUI4	\\Transport\\WaterT ransport\\FlowField _PEST101	Updated element with data for particle-track distance from SDU center to the 100-meter boundary for SDU 1 from 2018_SDF_PA_StreamTr aces_and_PlumeMeasure s.xlsx	Y	None	N/A	Y
CLDist_North	\\Transport\\WaterT ransport\\FlowField Picked	Selector adjusted so that default selection is the present 2019 PA choice	Y	None	N/A	Y
CLDist_NorthAdd	\\Transport\\WaterT ransport\\FlowField Picked	Selector adjusted so that default selection is the present 2019 PA choice	Y	None	N/A	Y
CLDist_South	\\Transport\\WaterT ransport\\FlowField Picked	Selector adjusted so that default selection is the present 2019 PA choice	Y	None	N/A	Y
CLDist_SouthAdd	\\Transport\\WaterT ransport\\FlowField Picked	Selector adjusted so that default selection is the present 2019 PA choice	Y	None	N/A	Y
CLOffset_North	\\Transport\\WaterT ransport\\FlowField Picked	Selector adjusted so that default selection is the present 2019 PA choice	Y	None	N/A	Y

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051.gsm			Source Model ID (or filename): SRS Saltstone v5.038.gsm			
New Model File Date: 4/10/2019			Source Model File Date: 11/5/2018			
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
CLOffset_NorthAdd	\\Transport\\WaterT ransport\\FlowField Picked	Selector adjusted so that default selection is the present 2019 PA choice	Y	None	N/A	Y
CLOffset_South	\\Transport\\WaterT ransport\\FlowField Picked	Selector adjusted so that default selection is the present 2019 PA choice	Y	None	N/A	Y
CLOffset_SouthAdd	\\Transport\\WaterT ransport\\FlowField Picked	Selector adjusted so that default selection is the present 2019 PA choice	Y	None	N/A	Y
DilutionMask_North	\\Transport\\WaterT ransport\\FlowField Picked	Data unavailable so dilution factor set to 1	Y	None	N/A	Y
DilutionMask_NorthAdd	\\Transport\\WaterT ransport\\FlowField Picked	Data unavailable so dilution factor set to 1	Y	None	N/A	Y
DilutionMask_South	\\Transport\\WaterT ransport\\FlowField Picked	Data unavailable so dilution factor set to 1	Y	None	N/A	Y
DilutionMask_SouthAdd	\\Transport\\WaterT ransport\\FlowField Picked	Data unavailable so dilution factor set to 1	Y	None	N/A	Y
FlowFieldPicker	\\Transport\\WaterT ransport\\FlowField Picked	Choice reset to be hardwired to 2019 SZ Data field	Y	None	N/A	Y
MeanSatZoneDarcyVel _SDU	\\Transport\\WaterT ransport\\FlowField Picked	Selector adjusted so that default selection is the present 2019 PA choice	Y	None	N/A	Y
MeanSatZoneDarcyVel SDU1	\\Transport\\WaterT ransport\\FlowField Picked	Selector adjusted so that default selection is the present 2019 PA choice	Y	None	N/A	Y

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038.gsm				
<b>New Model File Date:</b> 4/10/2019		<b>Source Model File Date:</b> 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MeanSatZoneDarcyVel _SDU4	\\Transport\\WaterT ransport\\FlowField _Picked	Selector adjusted so that default selection is the present 2019 PA choice	Y	None	N/A	Y
PreviousDilutionMasks	\\Transport\\WaterT ransport\\FlowField _Picked	Container added to save old data from the \\Transport\\WaterTransport \\FlowField_Picked container	Y	None	N/A	Y
AQCaseType	\\User_Input	Moved data element to \\GlobalModel_Input\\Devel opment\\Input and set to zero to choose present option.	Y	None	N/A	Y
SelectAquiferTransport Field	\\GlobalModel_Inp ut\\Development\\In put	Set to choose the present saturated zone flow data for the 2019 PA	Y	None	N/A	Y
Scenario_switch	\\User_Input	Added switch to choose scenario for deterministic runs: 1 = use Best Estimate (BE) 2 = use Compliance Value (CV) 3 = use Conservative Estimate (CE)	Y	None	N/A	Y
FloPar	Menu	Updated array size to 250	Y	None	N/A	Y
Scenario	Model/Array Labels	Added array label Scenario	Y	None	N/A	Y
If checker has no comments, check here: <input type="checkbox"/>						
Add additional rows above, as needed.						

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.051.gsm		Source Model ID (or filename): SRS Saltstone v5.038.gsm				
New Model File Date: 4/10/2019		Source Model File Date: 11/5/2018				
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Analyst Name (print): Barry Lester		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)  5/11/2019				
Checker Name (print): Jerry Mangold		E-Signature (or sign/date/scan hardcopy):  5/11/2019				

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SRS Saltstone v5.051\_Check\_jem\_bhl



SRS Saltstone v5.052.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.052.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051.gsm				
<b>New Model File Date:</b> 4/15/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y, N	Checker Comment	Analyst Response	Checker Concur? Y, N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Set SZ velocity field data choice to stream trace based data and assigned data to controlled container.						
Velocity_Option_a	GlobalModel_Inp utDevelopmentIn put	Copied from \\Transport\\WaterTransport\\ FlowField_PEST101, set to 2, and renamed	Y	None	N/A	Y
DilutionMask_Option_a	GlobalModel_Inp utDevelopmentIn put	Copied from \\Transport\\WaterTransport\\ FlowField_PEST101, kept at 2, and renamed	Y	None	N/A	Y
Velocity_Option	\\Transport\\WaterT ransport\\FlowField PEST101	Reset to Velocity_Option_a	Y	None	N/A	Y
DilutionMask_Option	\\Transport\\WaterT ransport\\FlowField PEST101	Reset to DilutionMask_Option	Y	None	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments) <i>Barry Lester</i> 4/15/2019				
<b>Checker Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Steve Hommel</i> 4/15/2019				

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SRS Saltstone v5.052\_Check.docx



SRS Saltstone v5.053.gsm Changed Model Check Form (2 Pages)

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.053.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.052.gsm				
<b>New Model File Date:</b> 4/15/2019		<b>Source Model File Date:</b> 4/15/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Setup option for GoldSim to use groundwater concentrations at 1-meter as the IHI drill-cutting inventory						
[not applicable]	[not applicable]	Model was renamed.	Y			
[Model Settings]	[not applicable]	Changed duration and timesteps for testing, then changed them to 20,000 years with 10-year time steps	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Changed duration and timesteps for testing, then changed them to 20,000 years with 10-year time steps	Y			
IntruderInventorySwitch	\\User_Input	Set value to 3 for testing and updated description, then reset value to 0 for benchmarking.	Y			
GW_Conc_1meter	\\Dose_Parameter_Calculations\\IHI_DrillCutConc_Calc	Added element to read the GoldSim-calculated groundwater concentrations for IHI, and to select the maximum well concentration over time.	Y			

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.053.gsm		Source Model ID (or filename): SRS Saltstone v5.052.gsm				
New Model File Date: 4/15/2019		Source Model File Date: 4/15/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
DrillInventory	\\Dose_Parameter Calculations\\IH_ DrillCutConc_Calc	Added selector to pick a drill cutting inventory either from the decayed values in DrillCell, or from the groundwater concentrations.	Y			
IHI_Event	\\Dose_Parameter Calculations\\IH_ DrillCutConc_Calc	Modified element to use the drill cutting inventory from DrillInventory (above)	Y			
IHI_DrillEventTime	\\Dose_Parameter Calculations\\IH_ DrillCutConc_Calc	Modified drill event time to include the 1-meter groundwater concentration option.	Y			
[Model Versionin]	[not applicable]	Model was versioned to v5.053	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments) <i>Steve Hommel 4/17/2019</i>				
Checker Name (print): Barry Lester		E-Signature (or sign/date/scan hardcopy): <i>Barry Lester 4/17/2019</i>				

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SRS Saltstone v5.054.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority				Changed Model Check Form			
<b>New Model ID (or filename):</b> SRS Saltstone v5.054.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.053.gsm					
<b>New Model File Date:</b> 4/16/2019		<b>Source Model File Date:</b> 4/15/2019					
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N	
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.							
<b>Purpose: Modified Kd_Dist_Sand</b>							
Kd_Dist_Sand	Materials\SandyS oilKds	Added Truncation Limits to Stochastic Element	Y	None	N/A	Y	
If checker has no comments, check here. <input checked="" type="checkbox"/>							
<b>Analyst Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments) <i>Barry Lester</i> 4/17/2019					
<b>Checker Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Steve Hommel</i> 4/17/2019					

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### **Appendix A-3**

#### **Check Sheets for Table 4.4-1:**

#### **Summary of Various GoldSim® Model Compliance Case Dose Calculation Checking**

SRS Saltstone v5.038\_CaseCV.7\_wSL\_and\_1-m.gsm Changed Model Check Form (6  
Pages)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 01/16/2019		Source Model File Date: 12/18/2018				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Dose results for the Compliance Modeling Case (to 20,000 years), with CaseCV.7 PORFLOW run.						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time stepping was revised to support 20kyr run.	Y			
[Run → Simulation Settings]	[not applicable]	Simulation settings revised to support deterministic run for 20kyr.	Y			
SectorA_100m	\\Model_Concentrations\\PORFLOW_Conc	Pasted PORFLOW data from: \\godzilla-01\\hpc_project\\projwork80\\srr19\\SaltstonePA4\\AquiferZ\\Transport\\CaseCV.7\\All	Y			
SectorB_100m	\\Model_Concentrations\\PORFLOW_Conc	Pasted PORFLOW data from: \\godzilla-01\\hpc_project\\projwork80\\srr19\\SaltstonePA4\\AquiferZ\\Transport\\CaseCV.7\\All	Y			

SRS Saltstone v5.038\_CaseCV.7\_wSL\_and\_1-m\_Check

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Waste Disposal Authority

**Changed Model Check Form**

Source Model ID (or filename):  
SRS Saltstone v5.038\_CaseCV\_wSL\_and\_1-m.gsm

Source Model File Date:  
12/18/2018

Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorC_100m	\\Model_Concentra tions\\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transpor\\CaseCV.7\\All	Y			
SectorD_100m	\\Model_Concentra tions\\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transpor\\CaseCV.7\\All	Y			
SectorE_100m	\\Model_Concentra tions\\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transpor\\CaseCV.7\\All	Y			
SectorF_100m	\\Model_Concentra tions\\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transpor\\CaseCV.7\\All	Y			
SectorG_100m	\\Model_Concentra tions\\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transpor\\CaseCV.7\\All	Y			

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### Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	
<b>New Model File Date:</b> 01/16/2019		<b>Source Model File Date:</b> 12/18/2018	

Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorH_100m	Model_Concentra tions\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer Z\TransportCaseCV.7\All	Y			
IHL_1m_Well1	Model_Concentra tions\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer Z\TransportCaseCV.7\All	Y			
IHL_1m_Well2	Model_Concentra tions\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer Z\TransportCaseCV.7\All	Y			
IHL_1m_Well3	Model_Concentra tions\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer Z\TransportCaseCV.7\All	Y			
IHL_1m_Well4	Model_Concentra tions\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer Z\TransportCaseCV.7\All	Y			

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**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 01/16/2019		<b>Source Model File Date:</b> 12/18/2018				
Parameter or Element	Location	Change Description	Correct ? Y/N	Checker Comment	Analyst Response	Checker Concur? Y/N
IHL_1m_Well5	\\Model_Concentra tions\\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseCV.7\\All	Y			
IHL_1m_Well6	\\Model_Concentra tions\\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseCV.7\\All	Y			
IHL_1m_Well7	\\Model_Concentra tions\\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseCV.7\\All	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseCV.7\\All	Y			
UTR_SleepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Pasted PORFLOW data from: \\godzilla- 01\\hpc_project\\projwork80\\ srr18\\SaltstonePA4\\Aquifer GSA\\Transport\\CaseCV.7\\ All	Y			

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**Changed Model Check Form**

Source Model ID (or filename):  
SRS Saltstone v5.038\_CaseCV\_wSL\_and\_1-m.gsm


Source Model File Date:  
12/18/2018

Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MQB_Seepline	Model_Concentra tions\PORFLOW_ Conc	Pasted PORFLOW data from: \godzilla- 01\hpc_project\projwork80\ srr18\SaltstonePA4\Aquifer GSA\Transport\CaseCV.7\ All	Y			
PORFLOW_Seepline	Model_Concentra tions\PORFLOW_ Conc	Added new element. This element is used to pick the max seepage value (either McQueen Branch (MQB) or Upper Three Runs (UTR)).	Y			
Available_Seepline_Data	Model_Concentra tions\PORFLOW_ Conc	Based on the model behavior from Case CV.6 (previous iteration of the PORFLOW model), it was determined that the short list of radionuclides (Ci-36, I-129, and Tc-99) is sufficient. Therefore, this element was modified to use the concentrations for the short list rad and to use the seepage ratio for all others	Y			
<p>If checker has no comments, check here. <input type="checkbox"/></p> <p><b>Analyst Name (print):</b> Steve Hommel</p>						
<p style="text-align: right;">Add additional rows above, as needed.</p> <p><b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)</p>						

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 01/16/2019		Source Model File Date: 12/18/2018				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  1/30/2019				
SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m_Check		6 of 6		1/30/2019		

SRS Saltstone v5.038\_CaseCV.7\_100K\_wSL\_and\_1-m.gsm Changed Model Check Form (3  
Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_100K_wSL_and_1-m		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 1/29/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Dose results for the SDU source-specific PORFLOW runs for the Compliance Case for 100K						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 100,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Seepline_Data	Model_Concentrations\PORFLOW_Conc	Modified CI-36, I-129, and Tc-99 so that it will read actual data for the first 20,000 years and then switch to the seepline ratio. Input concentration data from \godzilla- 01\hpc_project\projwork\801 srr19\SaltstonePA4\Aquifer GSAITransportCaseCV.7\	Y			
MOB_Seepline UTR_Seepline	Model_Concentrations\PORFLOW_Conc	All	Y			

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_100K_wSL_and_1-m		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 1/29/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct Y/N	Checker Comment	Analyst Response	Checker Concur? Y/N
SectorXX_100m Where XX = A through H	Model_Concentra- tions\PORFLOW_ Conc	100,000 year concentrations pasted into each element from \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer Z\Transport\CaseCV.7_100 K\All	Y			
IHL_1m_WellXX Where XX = 1 through 7	Model_Concentra- tions\PORFLOW_ Conc	100,000 year concentrations pasted into each element from \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer Z\Transport\CaseCV.7_100 K\All	Y			
IHL_at_1m	Model_Concentra- tions\PORFLOW_ Conc	100,000 year concentrations pasted into each element from \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer Z\Transport\CaseCV.7_100 K\All	Y			
If checker has no comments, check here. <input type="checkbox"/>		Add additional rows above, as needed.				
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				


SRS Saltstone v5.038\_CaseCV.7\_100K\_wSL\_and\_1-m\_Check

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**Changed Model Check Form**

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<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_100K_wSL_and_1-m		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	
<b>New Model File Date:</b> 1/29/2019		<b>Source Model File Date:</b> 1/16/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
<b>Checker Name (print):</b> Ben Dean		<b>Checker Comment</b>	<b>Analyst Response</b>
		<b>E-Signature (or sign/date/scan hardcopy):</b>  1/30/2019	
		<b>Checker Concur?</b> Y,N	

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SRS Saltstone v5.038\_CaseCV.7\_100K\_wSL\_and\_1-m\_Check



SRS Saltstone v5.038\_CaseCV.7\_SDUXX.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_SDUXX.gsm Where XX = 01, 02A, 02B, 03A, 03B, 04, 05A, 05B, 06, 07, 08, 09, 10, 11, and 12		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 1/22/2019		Source Model File Date: 12/18/2018				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Dose results for the SDU source-specific PORFLOW runs for the Compliance Case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
PORFLOW_SeepLine	Model_Concentra tions\PORFLOW_ Conc	Modified IF logic in selector to force model to use zero concentrations for the seepLine so that only SDU- specific contributions are evaluated.	Y			
MQB_SeepLine UTR_SeepLine	Model_Concentra tions\PORFLOW_ Conc	Set concentration values to zero to reduce the file size since these won't be used.	Y			
SectorXX_100m Where XX = A through H	Model_Concentra tions\PORFLOW_ Conc	SDU source-specific concentrations pasted into each element.	Y			



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SRS Saltstone v5.038\_CaseCV.7\_SDUXX\_Check



Waste Disposal Authority  
**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_SDUXX.gsm Where XX = 01, 02A, 02B, 03A, 03B, 04, 05A, 05B, 06, 07, 08, 09, 10, 11, and 12			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 1/22/2019			<b>Source Model File Date:</b> 12/18/2018			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	Model_Concentra tions\PORFLOW_ Conc	SDU source-specific concentrations pasted into each element.	Y			
IHL_at_1m	Model_Concentra tions\PORFLOW_ Conc	SDU source-specific concentrations pasted into element.	Y			
IntruderInventorySwitch	User_Input	Set intruder inventory switch to zero so that only SDU-specific contributions are evaluated.	Y			
If checker has no comments, check here. <input type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel						
<b>Checker Name (print):</b> Ben Dean						
<b>E-Signature (or sign/date/scan hardcopy):</b>  1/30/2019						
<b>E-Signature (or sign/date/scan hardcopy):</b>  1/30/2019						

SRS Saltstone v5.038\_CaseCV.7\_SDUXX\_Check

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SRS Saltstone v5.038\_CaseF09.7\_Infil\_Low.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority



**Changed Model Check Form**

New Model ID (or filename): SRS Saltstone v5.038_CaseF09.7_Infil_Low.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseXX_template.gsm				
New Model File Date: 1/29/2019		Source Model File Date: 1/29/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Low Infiltration modeling case (Flow Case F09.7)						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Versioning shows this is changed. No change from source file.	NA			
IHL_1m_WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	Input PORFLOW concentrations from: \\godzilla-01\hpc_project\projwork\801\srr19\SaltstonePA4\AquiferZITransport\CaseF09.7\All	Y			
IHL_at_1m	Model_Concentrations\PORFLOW_Conc	Input PORFLOW concentrations from: \\godzilla-01\hpc_project\projwork\801\srr19\SaltstonePA4\AquiferZITransport\CaseF09.7\All	Y			
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	Input PORFLOW concentrations from: \\godzilla-01\hpc_project\projwork\801\srr19\SaltstonePA4\AquiferZITransport\CaseF09.7\All	Y			

SRS Saltstone v5.038\_CaseF09.7\_Infil\_Low\_Check

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseF09.7_Infil_Low.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseXX_template.gsm			
New Model File Date: 1/29/2019			Source Model File Date: 1/29/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UsePORFLOW_SLCon c	\User_Input	Versioning shows this is changed. No change from source file.	NA			
IntruderInventorySwitch	\User_Input	Versioning shows this is changed. No change from source file.	NA			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy):  2/4/2019				
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy):  2/4/19				

SRS Saltstone v5.038\_CaseF45.7\_Infil\_High.gsm Changed Model Check Form (2 Pages)

**Changed Model Check Form**

Waste Disposal Authority

New Model ID (or filename): SRS Saltstone v5.038_CaseF45.7_Infil_High.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseXX_template.gsm				
New Model File Date: 1/29/2019		Source Model File Date: 1/29/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the High Infiltration modeling case (Flow Case F45.7)						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Versioning shows this is changed. No change from source file.	NA			
IHL_1m_WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	Input PORFLOW concentrations from: \\godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4AquiferZITransportCaseF45.7All	Y			
IHL_at_1m	Model_Concentrations\PORFLOW_Conc	Input PORFLOW concentrations from: \\godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4AquiferZITransportCaseF45.7All	Y			
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	Input PORFLOW concentrations from: \\godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4AquiferZITransportCaseF45.7All	Y			



SRS Saltstone v5.038\_CaseF45.7\_Infil\_High\_Check

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Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseF45.7_Infil_High.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseXX_template.gsm			
<b>New Model File Date:</b> 1/29/2019			<b>Source Model File Date:</b> 1/29/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UsePORFLOW_SLCon c	\\User_Input	Versioning shows this is changed. No change from source file.	NA			
IntruderInventorySwitch	\\User_Input	Versioning shows this is changed. No change from source file.	NA			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel						
<b>E-Signature (or sign/date/scan hardcopy):</b>  2/4/2019						
<b>Checker Name (print):</b> David Watkins						
<b>E-Signature (or sign/date/scan hardcopy):</b>  2/4/19						

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SRS Saltstone v5.038\_CaseF45.7\_Infil\_High\_Check

SRS Saltstone v5.038\_CaseSA10.7\_Infil\_JonesAndPhifer.gsm Changed Model Check Form  
(3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA10.7_Infil_JonesAndPhifer.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 1/17/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
<p>Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&amp;DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&amp;DV Form 4) for this model.</p> <p><b>Objective:</b> Dose results for the Infiltration Sensitivity Analysis (CaseSA10.7) using the old infiltration rates from the 2008 HELP model (i.e., Jones and Phifer).</p>						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Seepline_Data	Model_Concentrations\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SILConc" (below) over-writes any impact from this element	NA			

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SRS Saltstone v5.038\_CaseSA10.7\_Infil\_JonesAndPhifer\_Check

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseSA10.7_Infil_JonesAndPhifer.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 1/17/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA10.7\\AI \\	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA10.7\\AI \\	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA10.7\\AI \\	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	These are not used. Replaced data with zero values. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	Y			

SRS Saltstone v5.038\_CaseSA10.7\_Infil\_JonesAndPhifer\_Check

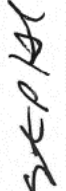

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA10.7_Infil_JonesAndPhifer.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 1/17/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UsePORFLOW_SLCon c	\\User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y			
IntruderInventorySwitch	\\User_Input	Set value to zero so the IHI results show groundwater only (no drill cuttings).	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel			<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  2/4/2017			
<b>Checker Name (print):</b> David Watkins			<b>E-Signature (or sign/date/scan hardcopy):</b>  2/4/19			

SRS Saltstone v5.038\_CaseSA10.7\_Infil\_JonesAndPhifer\_Check

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SRS Saltstone v5.038\_CaseCE.7\_Defense-in-Depth.gsm Changed Model Check Form (4  
Pages)

Waste Disposal Authority						Changed Model Check Form		
New Model ID (or filename): SRS Saltstone v5.038_CaseCE.7_Defense-in-Depth.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm					
New Model File Date: 1/24/2019			Source Model File Date: 1/16/2019					
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N		
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.								
<b>Objective:</b> Dose results for the Defense-in-Depth Case								
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y					
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y					
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y					
Available_Seepline_Data	Model_Concentrations\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA					

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SRS Saltstone v5.038\_CaseCE.7\_Defense-in-Depth\_Check

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseCE.7_Defense-in-Depth.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 1/24/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseCE.7\\All	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseCE.7\\All	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseCE.7\\All	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	Y			

SRS Saltstone v5.038\_CaseCE.7\_Defense-in-Depth\_Check

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Waste Disposal Authority

### Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCE.7_Defense-in-Depth.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 1/24/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Drill_Cutting_Inv_SDU	Model_Concentra tions	SDU-specific drill cutting inventories revised to reflect 1/3 of the value reported in the inventory document: SRR-CWDA-2018-00044 Rev 2 (Table 7). This 1/3 value reflects a correction to an error identified in the way the drill cutting inventory was estimated.	Y	Input data correct. Description says "From SRR-CWDA-2018-00041, Rev. 1". It should say "Rev. 2".	Noted.	Y
Drill_Cutting_Inv_Soil	Model_Concentra tions	Soil-specific drill cutting inventories revised as developed in SoilDrillCuttings_rev1.xlsx, which is based on the approach described in SRR-CWDA-2018-00093, but uses the corrected SDU drill cutting inventories (see previous entry).	Y	Input data correct. Description says "From SRR-CWDA-2018-0008X, Rev. 0". It should reference "SRR-CWDA-2018-00093, Rev. 1".	Noted.	Y
UsePORFLOW_SLCon c	User_Input	Set to False. For this case, the seepage concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepage dose contributions.	Y			

SRS Saltstone v5.038\_CaseCE.7\_Defense-in-Depth\_Check

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**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCE.7_Defense-in-Depth.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 1/24/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
InputSetSelector	\\User_Input	Changed value from 2 to 3. This forces the Dose Calculator inputs to assume the "conservative" inputs for human ingestion rates.	Y			
If checker has no comments, check here. <input type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel						
<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Steve Hommel</i> 2/4/2019						
<b>Checker Name (print):</b> David Watkins						
<b>E-Signature (or sign/date/scan hardcopy):</b> <i>David Watkins</i> 2/4/19						

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SRS Saltstone v5.038\_CaseCE.7\_Defense-in-Depth\_Check

SRS Saltstone v5.038\_CaseBE.7\_Realistic.gsm Changed Model Check Form (4 Pages)

Waste Disposal Authority						Changed Model Check Form		
New Model ID (or filename): SRS Saltstone v5.038_CaseBE.7_Realistic.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm					
New Model File Date: 1/24/2019			Source Model File Date: 1/16/2019					
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N		
<p>Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&amp;DV Form 4)?</p> <p>- If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&amp;DV Form 4) for this model.</p>								
<p><b>Objective:</b> Dose results for the Realistic Case</p>								
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y					
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y					
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y					
Available_SeepLine_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA					

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SRS Saltstone v5.038\_CaseBE.7\_Realistic\_Check

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseBE.7_Realistic.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 1/24/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WelXX Where XX = 1 through 7	Model_Concentra tions\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer ZITransport\CaseBE.7\All	Y			
IHL_at_1m	Model_Concentra tions\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer ZITransport\CaseBE.7\All	Y			
SectorXX_100m Where XX = A through H	Model_Concentra tions\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer ZITransport\CaseBE.7\All	Y			
MQB_Seepline UTR_Seepline	Model_Concentra tions\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseBE.7\_Realistic\_Check



**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseBE.7_Realistic.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 1/24/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Drill_Cutting_Inv_SDU	Model_Concentra tions	SDU-specific drill cutting inventories revised to reflect 1/3 of the value reported in the inventory document: SRR-CWDA-2018-00044 Rev 2 (Table 7). This 1/3 value reflects a correction to an error identified in the way the drill cutting inventory was estimated.	Y	Input data correct. Description says "From SRR-CWDA-2018-00041, Rev. 1". It should say "Rev. 2".	<i>Noted.</i>	Y
Drill_Cutting_Inv_Soil	Model_Concentra tions	Soil-specific drill cutting inventories revised as developed in SoilDrillCuttings_rev1.xlsx, which is based on the approach described in SRR-CWDA-2018-00093, but uses the corrected SDU drill cutting inventories (see previous entry).	Y	Input data correct. Description says "From SRR-CWDA-2018-0008X, Rev. 0". It should reference "SRR-CWDA-2018-00093, Rev. 1".	<i>Noted.</i>	Y
UsePORFLOW_SLCon c	User_Input	Set to False. For this case, the seepage concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepage dose contributions.	Y			



SRS Saltstone v5.038\_CaseBE.7\_Realistic\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseBE.7_Realistic.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 1/24/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
InputSetSelector	\\User_Input	Changed value from 2 to 1. This forces the Dose Calculator inputs to assume the "best estimate" inputs for human ingestion rates.	Y			
If checker has no comments, check here. <input type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel						
<b>Checker Name (print):</b> David Watkins						
		<b>E-Signature (or sign/date/scan comments)</b>  2/4/2019		<b>E-Signature (or sign/date/scan comments)</b>  2/4/19		

SRS Saltstone v5.038\_CaseBE.7\_Realistic\_Check

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SRS Saltstone v5.038\_CaseCV.7\_MQB.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						Changed Model Check Form		
New Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_MQB.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m.gsm					
New Model File Date: 01/17/2019			Source Model File Date: 01/16/2019					
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N		
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.								
<b>Objective:</b> Dose results for the MQB Seep line with CaseCV.7 PORFLOW run.								
[not applicable]	[not applicable]	Model was renamed.	Y					
[not applicable]	[not applicable]	Source Model was versioned as a first step, so that all changes could be easily identified and checked.	Y					
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop\	Submodel shows as changed but no change made.	NA					
PORFLOW_Seep line	Model_Concentrations\PORFLOW_Conc	Selector modified to use MQB concentrations.	Y					
If checker has no comments, check here. <input checked="" type="checkbox"/>								
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): <i>Steve Hommel</i> 2/4/2019			Add additional rows above, as needed.		
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy): <i>David Watkins</i> 1/31/19					



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SRS Saltstone v5.038\_CaseCV.7\_MQB\_Check

SRS Saltstone v5.038\_CaseCV.7\_UTR.gsm Changed Model Check Form (1 Page)

**Changed Model Check Form**



<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_UTR.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 01/17/2019		<b>Source Model File Date:</b> 01/16/2019			
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>	<b>Checker Comment</b>	<b>Analyst Response</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.					
<b>Objective:</b> Dose results for the UTR Seepage with CaseCV.7 PORFLOW run.					
[not applicable]	[not applicable]	Model was renamed.	Y		
[not applicable]	[not applicable]	Source Model was versioned as a first step, so that all changes could be easily identified and checked.	Y		
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop\	Submodel shows as changed but no change made.	NA		
PORFLOW_Seepage	Model Concentrations\PORFLOW_Conc	Selector modified to use UTR concentrations.	Y		
If checker has no comments, check here. <input checked="" type="checkbox"/>					
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  2/4/2019			
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  1/31/19			

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SRS Saltstone v5.038\_CaseCV.7\_UTR\_Check

SRS Saltstone v5.038\_CaseCV.7\_NoSL.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_NoSL.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_MQB.gsm			
New Model File Date: 01/22/2019			Source Model File Date: 01/17/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the no Seepline with CaseCV.7 PORFLOW run.						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	[not applicable]	Source Model was versioned as a first step, so that all changes could be easily identified and checked.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop\	Submodel shows as changed but no change made.	NA			
PORFLOW_Seepline	Model_Concentrations\PORFLOW_Conc	Selector modified to use zero concentrations at the seepline.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy):  2/4/2019			
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy):  1/31/19			



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SRS Saltstone v5.038\_CaseCV.7\_noSL\_check

SRS Saltstone v5.038\_CaseXX\_template.gsm Changed Model Check Form (1 Page)

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseXX_template.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	
<b>New Model File Date:</b> 1/29/2019		<b>Source Model File Date:</b> 1/16/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Versioned the dose calculator file and made some minor changes so this file can easily be used as a template for future dose calculators.			
[not applicable]	[not applicable]	Model was renamed.	Y
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y
UsePORFLOW_SLConc	\\User_Input	Set to False.	Y
IntruderInventorySwitch	\\User_Input	Set value to zero.	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  2/4/2019	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/4/19	

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SRS Saltstone v5.038\_CaseXX\_template\_Check

SRS Saltstone v5.038\_CaseSA11.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA11.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/8/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_SeepLine_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseSA11.7\_Check



Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA11.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA11.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA11.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA11.7\\AI _	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			


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SRS Saltstone v5.038\_CaseSA11.7\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA11.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon <sub>c</sub>	\\User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				

SRS Saltstone v5.038\_CaseSA11.7\_Check

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SRS Saltstone v5.038\_CaseSA12.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA12.7.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 2/8/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Sepline_Data	Model_Concentrations\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

SRS Saltstone v5.038\_CaseSA12.7\_Check

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseSA12.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA12.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA12.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA12.7\\AI _	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			


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SRS Saltstone v5.038\_CaseSA12.7\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA12.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon <sub>c</sub>	\\User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				

SRS Saltstone v5.038\_CaseSA12.7\_Check

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SRS Saltstone v5.038\_CaseSA15.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA15.7.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 2/8/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Sepline_Data	Model_Concentrations\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

SRS Saltstone v5.038\_CaseSA15.7\_Check

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseSA15.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA15.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA15.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA15.7\\AI _	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseSA15.7\_Check



Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA15.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon <sub>c</sub>	\\User_Input	Set to False. For this case, the seepage concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepage dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> comments				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				

SRS Saltstone v5.038\_CaseSA15.7\_Check

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SRS Saltstone v5.038\_CaseSA16.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>	<b>Checker Comment</b>	<b>Analyst Response</b>	<b>Checker Concur? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Sepline_Data	Model_Concentrations\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

SRS Saltstone v5.038\_CaseSA16.7\_Check

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI _	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			


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SRS Saltstone v5.038\_CaseSA16.7\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon c	\\User_Input	Set to False. For this case, the seep line concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seep line dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				

SRS Saltstone v5.038\_CaseSA16.7\_Check

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SRS Saltstone v5.038\_CaseSA16.7-SoilDrilling.gsm Changed Model Check Form (4 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-SoilDrilling.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm			
New Model File Date: 3/19/2019			Source Model File Date: 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
<p>Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&amp;DV Form 4)?</p> <p>- If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&amp;DV Form 4) for this model.</p> <p><b>Objective:</b> IHI sensitivity case (This one should be identical to the SRS Saltstone v5.038_CaseSA16.7, but with soil drill cuttings turned on.)</p> <p>[Note the source model was not versioned prior to making changes. So the changes in <b>BLUE</b> indicate changes that are copied from SRS Saltstone v5.038_CaseSA16.7.gsm.]</p>						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Drill_Cutting_Inv_SDU	\\Model_Concentrations	Updated inventory values from SRR-CWDA-2018- 00041 Rev.2	Y			
Drill_Cutting_Inv_Soil	\\Model_Concentrations	Updated inventory values from SRR-CWDA-2018- 00093 Rev.1	Y			
IHI_DrillEventTime	\\Dose_Parameter_Calculations\\IHI_DrillCutConc_Calc	Linked time of drill event to selection of drill inventory	Y			

SRS Saltstone v5.038\_CaseSA16.7-SoilDrilling\_Check

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4/1/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-SoilDrilling.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm			
<b>New Model File Date:</b> 3/19/2019			<b>Source Model File Date:</b> 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\P0RFLOW_ Conc	Input P0RFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI I	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\P0RFLOW_ Conc	Input P0RFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI I	Y			
IHL_at_1m	\\Model_Concentra tions\\P0RFLOW_ Conc	Input P0RFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI I	Y			

SRS Saltstone v5.038\_CaseSA16.7-SoilDrilling\_Check

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4/1/2019



Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-SoilDrilling.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm			
<b>New Model File Date:</b> 3/19/2019			<b>Source Model File Date:</b> 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Available_Seepline_Data	\\Model_Concentra tions\\PORFLOW_ Conc	Modified to use seepline concentrations for I-129, Tc-99 and Cl-36 for the first 20,000 years, then to switch these to the seepline ratio. But this change is superseded by UsePORFLOW_SLConc (see entry below) which sets the model to only use the seepline ratio, for all rads, at all times.	NA			
InputSetSelector	\\User_Input	Set to 2 for Compliance Case dose inputs	Y			
IntruderInventorySwitch	\\User_Input	Set to 1 for soil inventory in drill cuttings	Y			
UsePORFLOW_SLConc	\\User_Input	Set to False so model will use the seepline ratio.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel			<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)			

SRS Saltstone v5.038\_CaseSA16.7-SoilDrilling\_Check

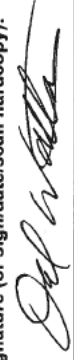
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Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-SoilDrilling.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm	
<b>New Model File Date:</b> 3/19/2019		<b>Source Model File Date:</b> 2/20/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct Y,N</b>
<b>Checker Name (print):</b> David Watkins		<b>Checker Comment</b>	<b>Analyst Response</b>
		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/1/19	
		<b>Checker Concur?</b> Y,N	

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SRS Saltstone v5.038\_CaseSA16.7-SoilDrilling\_Check

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAt200yr.gsm Changed Model  
Check Form (6 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAt200yr.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm			
<b>New Model File Date:</b> 3/19/2019			<b>Source Model File Date:</b> 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
<p>Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&amp;DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&amp;DV Form 4) for this model.</p> <p><b>Objective:</b> IHI sensitivity case (This one should be identical to the SRS Saltstone v5.038_CaseSA16.7-BasementDweller.gsm, but with a later drilling event time.) (Note the source model was not versioned prior to making changes. So the changes in <b>BLUE</b> indicate changes that are copied from SRS Saltstone v5.038_CaseSA16.7.gsm.)</p>						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
Drill_Cutting_Inv_SDU	\\Model_Concentra tions	Updated inventory values from SRR-CWDA-2018- 00041 Rev.2	Y			
Drill_Cutting_Inv_Soil	\\Model_Concentra tions	Updated inventory values from SRR-CWDA-2018- 00093 Rev.1	Y			
IHI_DrillEventTime	\\Dose_Parameter _Calculations\\IHI_ DrillCutConc_Calc	Linked time of drill event to selection of drill inventory Modified the drill time so the drill event will happen at 200 years.	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAt200yr\_Check

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4/1/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAI200yr.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm				
<b>New Model File Date:</b> 3/19/2019		<b>Source Model File Date:</b> 2/20/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorXX_100m Where XX = A through H	\\Model_Concentra- tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra- tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI	Y			
IHL_at_1m	\\Model_Concentra- tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAI200yr\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAI200yr.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm			
<b>New Model File Date:</b> 3/19/2019			<b>Source Model File Date:</b> 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Available_Seepline_Data	\\Model_Concentra tions\\PORFLOW_ Conc	Modified to use seepline concentrations for I-129, Tc-99 and Cl-36 for the first 20,000 years, then to switch these to the seepline ratio. But this change is superseded by UsePORFLOW_SLConc (see entry below) which sets the model to only use the seepline ratio, for all rads, at all times.	NA			
InputSetSelector	\\User_Input	Set to 2 for Compliance Case dose inputs	Y			
IntruderInventorySwitch	\\User_Input	Set to 1 for soil inventory in drill cuttings	Y			
UsePORFLOW_SLConc	\\User_Input	Set to False so model will use the seepline ratio.	Y			
EDF_BasementSoil_Exp EDF_BasementDust_Inh	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Added two effective dose factors (EDFs) for the basement dweller as described in the text of section 6.	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAI200yr\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAI200yr.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm			
New Model File Date: 3/19/2019			Source Model File Date: 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _1mBoundary\\Dose eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalExpDustDose_IHI_rads	\\Dose_Results\\IHI _1mBoundary\\Dose eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well1_Dose\\Dose eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalExpDustDose_IHI_rads	\\Dose_Results\\IHI _Well1_Dose\\Dose eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well2_Dose\\Dose eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalExpDustDose_IHI_rads	\\Dose_Results\\IHI _Well2_Dose\\Dose eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well3_Dose\\Dose eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAI200yr\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAI200yr.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm				
New Model File Date: 3/19/2019		Source Model File Date: 2/20/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
InhaleIrrDustDose_IHL_rads	\\Dose_Results\\IHL_Well3_Dose\\DoseCalcs_IHL\\Dose_IHL_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHL_rads	\\Dose_Results\\IHL_Well4_Dose\\DoseCalcs_IHL\\Dose_IHL_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhaleIrrDustDose_IHL_rads	\\Dose_Results\\IHL_Well4_Dose\\DoseCalcs_IHL\\Dose_IHL_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHL_rads	\\Dose_Results\\IHL_Well5_Dose\\DoseCalcs_IHL\\Dose_IHL_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhaleIrrDustDose_IHL_rads	\\Dose_Results\\IHL_Well5_Dose\\DoseCalcs_IHL\\Dose_IHL_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHL_rads	\\Dose_Results\\IHL_Well6_Dose\\DoseCalcs_IHL\\Dose_IHL_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhaleIrrDustDose_IHL_rads	\\Dose_Results\\IHL_Well6_Dose\\DoseCalcs_IHL\\Dose_IHL_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAI200yr\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAI200yr.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm		
New Model File Date: 3/19/2019		Source Model File Date: 2/20/2019		
Parameter or Element	Location	Change Description	Correct Y,N	Checker Concur? Y,N
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well7_Dose\\Dos eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y	
InhalerDustDose_IHI_ rads	\\Dose_Results\\IHI _Well7_Dose\\Dos eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y	
If checker has no comments, check here. <input checked="" type="checkbox"/>				
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)		
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy): 4/1/19		

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAI200yr\_Check

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SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAt120yr.gsm Changed Model  
Check Form (6 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAt120yr.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm			
<b>New Model File Date:</b> 3/19/2019			<b>Source Model File Date:</b> 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
<p>Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&amp;DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&amp;DV Form 4) for this model.</p> <p><b>Objective:</b> IHI sensitivity case (This one should be identical to the SRS Saltstone v5.038_CaseSA16.7-BasementDweller.gsm, but with a later drilling event time.) (Note the source model was not versioned prior to making changes. So the changes in <b>BLUE</b> indicate changes that are copied from SRS Saltstone v5.038_CaseSA16.7.gsm.)</p>						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
Drill_Cutting_Inv_SDU	\\Model_Concentra tions	Updated inventory values from SRR-CWDA-2018- 00041 Rev.2	Y			
Drill_Cutting_Inv_Soil	\\Model_Concentra tions	Updated inventory values from SRR-CWDA-2018- 00093 Rev.1	Y			
IHI_DrillEventTime	\\Dose_Parameter _Calculations\\IHI_ DrillCutConc_Calc	Linked time of drill event to selection of drill inventory Modified the drill time so the drill event will happen at 120 years.	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAt120yr\_Check

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4/1/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAt120yr.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm				
<b>New Model File Date:</b> 3/19/2019		<b>Source Model File Date:</b> 2/20/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorXX_100m Where XX = A through H	\\Model_Concentra- tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra- tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI	Y			
IHL_at_1m	\\Model_Concentra- tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAt120yr\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAt120yr.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm				
New Model File Date: 3/19/2019		Source Model File Date: 2/20/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Available_Seepline_Data	Model_Concentra tions\PORFLOW_ Conc	Modified to use seepiline concentrations for I-129, Tc-99 and Cl-36 for the first 20,000 years, then to switch these to the seepiline ratio. But this change is superseded by UsePORFLOW_SLConc (see entry below) which sets the model to only use the seepiline ratio, for all rads, at all times.	NA			
InputSetSelector	\\User_Input	Set to 2 for Compliance Case dose inputs	Y			
IntruderInventorySwitch	\\User_Input	Set to 1 for soil inventory in drill cuttings	Y			
UsePORFLOW_SLConc	\\User_Input	Set to False so model will use the seepiline ratio.	Y			
EDF_BasementSoil_Exp EDF_BasementDust_Inh	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Added two effective dose factors (EDFs) for the basement dweller as described in the text of section 6.	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAt120yr\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAt120yr.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm				
New Model File Date: 3/19/2019		Source Model File Date: 2/20/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _1mBoundary\\Dose _eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalExpDustDose_IHI_rads	\\Dose_Results\\IHI _1mBoundary\\Dose _eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well1_Dose\\Dose _eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalExpDustDose_IHI_rads	\\Dose_Results\\IHI _Well1_Dose\\Dose _eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well2_Dose\\Dose _eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalExpDustDose_IHI_rads	\\Dose_Results\\IHI _Well2_Dose\\Dose _eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well3_Dose\\Dose _eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAt120yr\_Check

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4/1/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAt120yr.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm				
New Model File Date: 3/19/2019		Source Model File Date: 2/20/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
InhaleIrrDustDose_IHL_rads	\\Dose_Results\\IHL_Well3_Dose\\DoseCalcs_IHL\\Dose_IHL_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHL_rads	\\Dose_Results\\IHL_Well4_Dose\\DoseCalcs_IHL\\Dose_IHL_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhaleIrrDustDose_IHL_rads	\\Dose_Results\\IHL_Well4_Dose\\DoseCalcs_IHL\\Dose_IHL_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHL_rads	\\Dose_Results\\IHL_Well5_Dose\\DoseCalcs_IHL\\Dose_IHL_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhaleIrrDustDose_IHL_rads	\\Dose_Results\\IHL_Well5_Dose\\DoseCalcs_IHL\\Dose_IHL_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHL_rads	\\Dose_Results\\IHL_Well6_Dose\\DoseCalcs_IHL\\Dose_IHL_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhaleIrrDustDose_IHL_rads	\\Dose_Results\\IHL_Well6_Dose\\DoseCalcs_IHL\\Dose_IHL_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			


SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAt120yr\_Check

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4/1/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller- SoilDrillAt120yr.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm		
<b>New Model File Date:</b> 3/19/2019		<b>Source Model File Date:</b> 2/20/2019		
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Concur? Y,N
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well7_Dose\\Dos eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y	
InhalerDustDose_IHI_ rads	\\Dose_Results\\IHI _Well7_Dose\\Dos eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y	
If checker has no comments, check here. <input checked="" type="checkbox"/>				
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)		
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/1/19		

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-SoilDrillAt120yr\_Check

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4/1/2019

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-NoDrill.gsm Changed Model Check  
Form (6 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller-NoDrill.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm			
New Model File Date: 3/19/2019			Source Model File Date: 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model. <b>Objective:</b> IHI sensitivity case (This one should be identical to the SRS Saltstone v5.038_CaseSA16.7-BasementDweller.gsm, but with no drill cuttings.) [Note the source model was not versioned prior to making changes. So the changes in <b>BLUE</b> indicate changes that are copied from SRS Saltstone v5.038_CaseSA16.7.gsm.]						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
Drill_Cutting_Inv_SD U	\\Model_Concentra tions	Updated inventory values from SRR-CWDA-2018- 00041 Rev.2	Y			
Drill_Cutting_Inv_Soil	\\Model_Concentra tions	Updated inventory values from SRR-CWDA-2018- 00093 Rev.1	Y			
IHI_DrillEventTime	\\Dose_Parameter _Calculations\\IHI_ DrillCutConc_Calc	Linked time of drill event to selection of drill inventory Modified the drill time so the drill event won't happen within 20,000 years.	Y			

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SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-NoDrill\_Check



Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller-NoDrill.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm			
<b>New Model File Date:</b> 3/19/2019			<b>Source Model File Date:</b> 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\POTFLOW_ Conc	Input POTFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI I	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\POTFLOW_ Conc	Input POTFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI I	Y			
IHL_at_1m	\\Model_Concentra tions\\POTFLOW_ Conc	Input POTFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI I	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-NoDrill\_Check

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4/1/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller-NoDrill.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm			
<b>New Model File Date:</b> 3/19/2019			<b>Source Model File Date:</b> 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Available_Seepline_Data	\\Model_Concentra tions\\PORFLOW_ Conc	Modified to use seepline concentrations for I-129, Tc-99 and Cl-36 for the first 20,000 years, then to switch these to the seepline ratio. But this change is superseded by UsePORFLOW_SLConc (see entry below) which sets the model to only use the seepline ratio, for all rads, at all times.	NA			
InputSetSelector	\\User_Input	Set to 2 for Compliance Case dose inputs	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 for no inventory in drill cuttings	N	Should be "0", but is set to "1"; however, this change is superseded by starting the drill time at 20,100 years	No response necessary.	
UsePORFLOW_SLConc	\\User_Input	Set to False so model will use the seepline ratio.	Y			
EDF_BasementSoil_Exp EDF_BasementDust_Inh	\\Dose_Parameter _Calculations\\Effe ctiveDoseFactors	Added two effective dose factors (EDFs) for the basement dweller as described in the text of section 6.	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-NoDrill\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller-NoDrill.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm				
New Model File Date: 3/19/2019		Source Model File Date: 2/20/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _1mBoundary\\Dose eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalerIrrDustDose_IHI_rads	\\Dose_Results\\IHI _1mBoundary\\Dose eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well1_Dose\\Dose eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalerIrrDustDose_IHI_rads	\\Dose_Results\\IHI _Well1_Dose\\Dose eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well2_Dose\\Dose eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalerIrrDustDose_IHI_rads	\\Dose_Results\\IHI _Well2_Dose\\Dose eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well3_Dose\\Dose eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalerIrrDustDose_IHI_rads	\\Dose_Results\\IHI _Well3_Dose\\Dose eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-NoDrill\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller-NoDrill.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm				
New Model File Date: 3/19/2019		Source Model File Date: 2/20/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SoilExpDose_IHI_rads	\\Dose_Results\\IHI_Weil4_Dose\\Dose_eCalcs_IHI\\Dose_IHI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhaleIrrDustDose_IHI_rads	\\Dose_Results\\IHI_Weil4_Dose\\Dose_eCalcs_IHI\\Dose_IHI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI_Weil5_Dose\\Dose_eCalcs_IHI\\Dose_IHI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhaleIrrDustDose_IHI_rads	\\Dose_Results\\IHI_Weil5_Dose\\Dose_eCalcs_IHI\\Dose_IHI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI_Weil6_Dose\\Dose_eCalcs_IHI\\Dose_IHI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhaleIrrDustDose_IHI_rads	\\Dose_Results\\IHI_Weil6_Dose\\Dose_eCalcs_IHI\\Dose_IHI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI_Weil7_Dose\\Dose_eCalcs_IHI\\Dose_IHI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhaleIrrDustDose_IHI_rads	\\Dose_Results\\IHI_Weil7_Dose\\Dose_eCalcs_IHI\\Dose_IHI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI_Weil7_Dose\\Dose_eCalcs_IHI\\Dose_IHI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhaleIrrDustDose_IHI_rads	\\Dose_Results\\IHI_Weil7_Dose\\Dose_eCalcs_IHI\\Dose_IHI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			


SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-NoDrill\_Check

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Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller-NoDrill.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm	
<b>New Model File Date:</b> 3/19/2019		<b>Source Model File Date:</b> 2/20/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
If checker has no comments, check here. <input checked="" type="checkbox"/>			<b>Checker Comment</b>
<b>Analyst Name (print):</b> Steve Hommel			<b>Analyst Response</b>
<b>Checker Name (print):</b> David Watkins			<b>Checker Concur? Y,N</b>
Add additional rows above, as needed.			
<b>E-Signature (or sign/date/scan hardcopy):</b>  4/1/19			

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SRS Saltstone v5.038\_CaseSA16.7-BasementDweller-NoDrill\_Check

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller.gsm Changed Model Check Form (6  
Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm			
New Model File Date: 3/19/2019			Source Model File Date: 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> IHI sensitivity case [Note the source model was not versioned prior to making changes. So the changes in <b>BLUE</b> indicate changes that are copied from SRS Saltstone v5.038_CaseSA16.7.gsm.]						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
Drill_Cutting_Inv_SDU	\\Model_Concentra tions	Updated inventory values from SRR-CWDA-2018- 00041 Rev.2	Y			
Drill_Cutting_Inv_Soil	\\Model_Concentra tions	Updated inventory values from SRR-CWDA-2018- 00093 Rev.1	Y			
IHI_DrillEventTime	\\Dose_Parameter _Calculations\\IHI_ Drill\\CutConc_Calc	Linked time of drill event to selection of drill inventory	Y			

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SRS Saltstone v5.038\_CaseSA16.7-BasementDweller\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm			
<b>New Model File Date:</b> 3/19/2019			<b>Source Model File Date:</b> 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\P0RFLOW_ Conc	Input P0RFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI I	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\P0RFLOW_ Conc	Input P0RFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI I	Y			
IHL_at_1m	\\Model_Concentra tions\\P0RFLOW_ Conc	Input P0RFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA16.7\\AI I	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm			
<b>New Model File Date:</b> 3/19/2019			<b>Source Model File Date:</b> 2/20/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Available_Seepline_Data	\\Model_Concentra tions\\PORFLOW_ Conc	Modified to use seepline concentrations for I-129, Tc-99 and Cl-36 for the first 20,000 years, then to switch these to the seepline ratio. But this change is superseded by UsePORFLOW_SLConc (see entry below) which sets the model to only use the seepline ratio, for all rads, at all times.	NA			
InputSetSelector	\\User_Input	Set to 2 for Compliance Case dose inputs	Y			
IntruderInventorySwitch	\\User_Input	Set to 1 for soil inventory in drill cuttings	Y			
UsePORFLOW_SLConc	\\User_Input	Set to False so model will use the seepline ratio.	Y			
EDF_BasementSoil_Exp EDF_BasementDust_Inh	\\Dose_Parameter Calculations\\Effe ctiveDoseFactors	Added two effective dose factors (EDFs) for the basement dweller as described in the text of section 6.	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm				
New Model File Date: 3/19/2019		Source Model File Date: 2/20/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _1mBoundary\\Dos eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalEirrDustDose_IHI_rads	\\Dose_Results\\IHI _1mBoundary\\Dos eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well1_Dose\\Dos eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalEirrDustDose_IHI_rads	\\Dose_Results\\IHI _Well1_Dose\\Dos eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well2_Dose\\Dos eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalEirrDustDose_IHI_rads	\\Dose_Results\\IHI _Well2_Dose\\Dos eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI _Well3_Dose\\Dos eCalcs_IHI\\Dose_I HI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalEirrDustDose_IHI_rads	\\Dose_Results\\IHI _Well3_Dose\\Dos eCalcs_IHI\\Dose_I HI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			

SRS Saltstone v5.038\_CaseSA16.7-BasementDweller\_Check

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4/1/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7-BasementDweller.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseSA16.7.gsm				
New Model File Date: 3/19/2019		Source Model File Date: 2/20/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SoilExpDose_IHI_rads	\\Dose_Results\\IHI_Well4_Dose\\DoseCalcs_IHI\\Dose_IHI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalExpDustDose_IHI_rads	\\Dose_Results\\IHI_Well4_Dose\\DoseCalcs_IHI\\Dose_IHI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI_Well5_Dose\\DoseCalcs_IHI\\Dose_IHI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalExpDustDose_IHI_rads	\\Dose_Results\\IHI_Well5_Dose\\DoseCalcs_IHI\\Dose_IHI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI_Well6_Dose\\DoseCalcs_IHI\\Dose_IHI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalExpDustDose_IHI_rads	\\Dose_Results\\IHI_Well6_Dose\\DoseCalcs_IHI\\Dose_IHI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI_Well7_Dose\\DoseCalcs_IHI\\Dose_IHI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalExpDustDose_IHI_rads	\\Dose_Results\\IHI_Well7_Dose\\DoseCalcs_IHI\\Dose_IHI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			
SoilExpDose_IHI_rads	\\Dose_Results\\IHI_Well8_Dose\\DoseCalcs_IHI\\Dose_IHI_Exp_Calcs	Added term for basement dose as described in the text of section 6.	Y			
InhalExpDustDose_IHI_rads	\\Dose_Results\\IHI_Well8_Dose\\DoseCalcs_IHI\\Dose_IHI_Inh_Calcs	Added term for basement dose as described in the text of section 6.	Y			


SRS Saltstone v5.038\_CaseSA16.7-BasementDweller\_Check

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**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7-BasementDweller.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA16.7.gsm	
<b>New Model File Date:</b> 3/19/2019		<b>Source Model File Date:</b> 2/20/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
If checker has no comments, check here. <input checked="" type="checkbox"/>		<b>Checker Comment</b>	<b>Analyst Response</b>
<b>Analyst Name (print):</b> Steve Hommel		<b>Checker Concur?</b> Y,N	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/1/19	

Add additional rows above, as needed.  
E-Signature (or sign/date/scan hardcopy): (Not required if no comments)

4/1/2019

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SRS Saltstone v5.038\_CaseSA16.7-BasementDweller\_Check

SRS Saltstone v5.038\_CaseSA17.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA17.7.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 2/8/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Sepline_Data	Model_Concentrations\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

SRS Saltstone v5.038\_CaseSA17.7\_Check

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2/21/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA17.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA17.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA17.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA17.7\\AI _	Y			
MOB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			


SRS Saltstone v5.038\_CaseSA17.7\_Check

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2/21/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA17.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon c	\\User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/24/19				

SRS Saltstone v5.038\_CaseSA17.7\_Check

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SRS Saltstone v5.038\_CaseSA18.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA18.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/8/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_SeepLine_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseSA18.7\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA18.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA18.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA18.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA18.7\\AI _	Y			
MOB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			


SRS Saltstone v5.038\_CaseSA18.7\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA18.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon c	\\User_Input	Set to False. For this case, the seep line concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seep line dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				

SRS Saltstone v5.038\_CaseSA18.7\_Check

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SRS Saltstone v5.038\_CaseSA19.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA19.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/8/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_SeepLine_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseSA19.7\_Check

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseSA19.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA19.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA19.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA19.7\\AI _	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			


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SRS Saltstone v5.038\_CaseSA19.7\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA19.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon	\\User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				

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SRS Saltstone v5.038\_CaseSA20.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA20.7.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 2/8/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Sepline_Data	Model_Concentrations\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseSA20.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA20.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA20.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA20.7\\AI _	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseSA20.7\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA20.7.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 2/8/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon <sub>c</sub>	\\User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean			<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)			
<b>Checker Name (print):</b> David Watkins			<b>E-Signature (or sign/date/scan hardcopy):</b> <i>David Watkins</i> 2/21/19			

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SRS Saltstone v5.038\_CaseSA21.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA21.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/8/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Seepline_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseSA21.7\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA21.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA21.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA21.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA21.7\\AI _	Y			
MOB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			


SRS Saltstone v5.038\_CaseSA21.7\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA21.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon c	\\User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				

SRS Saltstone v5.038\_CaseSA21.7\_Check

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SRS Saltstone v5.038\_CaseSA26.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA26.7.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 2/8/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Sepline_Data	Model_Concentrations\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

SRS Saltstone v5.038\_CaseSA26.7\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA26.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA26.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA26.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA26.7\\AI _	Y			
MOB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA26.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon <sub>c</sub>	User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/24/19				

SRS Saltstone v5.038\_CaseSA26.7\_Check

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SRS Saltstone v5.038\_CaseSA27.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA27.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/8/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_SeepLine_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseSA27.7\_Check

Changed Model Check Form						
Waste Disposal Authority						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA27.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/8/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA27.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA27.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA27.7\\AI _	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			


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SRS Saltstone v5.038\_CaseSA27.7\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA27.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon <sub>c</sub>	\\User_Input	Set to False. For this case, the seepage concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepage dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				

SRS Saltstone v5.038\_CaseSA27.7\_Check

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SRS Saltstone v5.038\_CaseSA28.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA28.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/8/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Seepline_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseSA28.7\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA28.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA28.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA28.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA28.7\\AI _	Y			
MOB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

SRS Saltstone v5.038\_CaseSA28.7\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA28.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon c	\\User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Carl Watkins</i> 2/21/19				

SRS Saltstone v5.038\_CaseSA28.7\_Check

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SRS Saltstone v5.038\_CaseSA29.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseSA29.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/8/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_SeepLine_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseSA29.7\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.038_CaseSA29.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA29.7\\AI _	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA29.7\\AI _	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA29.7\\AI _	Y			
MOB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			


SRS Saltstone v5.038\_CaseSA29.7\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseSA29.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IntruderInventorySwitch	User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon c	User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				

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SRS Saltstone v5.038\_CaseF21.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseF21.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/7/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_SeepLine_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseF21.7\_Check

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseF21.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/7/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF21.7\\All	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF21.7\\All	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF21.7\\All	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			


SRS Saltstone v5.038\_CaseF21.7\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseF21.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	
<b>New Model File Date:</b> 2/7/2019		<b>Source Model File Date:</b> 1/16/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
UsePORFLOW_SLCon c	User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>		<b>Checker Comment</b>	<b>Analyst Response</b>
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19	

SRS Saltstone v5.038\_CaseF21.7\_Check

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SRS Saltstone v5.038\_CaseF25.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseF25.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/8/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_SeepLine_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseF25.7\_Check



Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseF25.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/8/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF25.7\\All	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF25.7\\All	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF25.7\\All	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			



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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseF25.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UsePORFLOW_SLCon c	\\User_Input	Set to False. For this case, the seep line concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seep line dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean						
<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19						
<b>Checker Name (print):</b> David Watkins						
<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19						

SRS Saltstone v5.038\_CaseF25.7\_Check

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SRS Saltstone v5.038\_CaseF28.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseF28.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/7/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_SeepLine_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseF28.7\_Check

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseF28.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/7/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF28.7\\All	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF28.7\\All	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF28.7\\All	Y			
MQB_SleepLine UTR_SleepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			


SRS Saltstone v5.038\_CaseF28.7\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseF28.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/7/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UsePORFLOW_SLCon c	User_Input	Set to False. For this case, the seepage concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepage dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				

SRS Saltstone v5.038\_CaseF28.7\_Check

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SRS Saltstone v5.038\_CaseF29.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseF29.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/8/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_SeepLine_Data	Model_Concentrations\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseF29.7\_Check

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseF29.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/8/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF29.7\\All	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF29.7\\All	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF29.7\\All	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseF29.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/8/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UsePORFLOW_SLCon c	User_Input	Set to False. For this case, the seep line concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seep line dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				

SRS Saltstone v5.038\_CaseF29.7\_Check

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SRS Saltstone v5.038\_CaseF33.7.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseF33.7.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
New Model File Date: 2/7/2019			Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_SeepLine_Data	Model_Concentrations\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

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SRS Saltstone v5.038\_CaseF33.7\_Check

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseF33.7.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
New Model File Date: 2/7/2019		Source Model File Date: 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF33.7\\All	Y			
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF33.7\\All	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseF33.7\\All	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			


SRS Saltstone v5.038\_CaseF33.7\_Check

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2/21/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseF21.7.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 2/7/2019		<b>Source Model File Date:</b> 1/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UsePORFLOW_SLCon c	User_Input	Set to False. For this case, the seepine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/21/19				


SRS Saltstone v5.038\_CaseF21.7\_Check

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SRS Saltstone v5.038\_CaseCE.7\_wCVdosepar.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority  
Changed Model Check Form


<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCE.7_wCVdosepar.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCE.7_Defense-in-Depth.gsm				
<b>New Model File Date:</b> 2/20/2019		<b>Source Model File Date:</b> 1/24/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned.	Y			
InputSetSelector	\\User_Input	Changed value from 3 to 2. This forces the Dose Calculator inputs to assume the "most probable and defensible" inputs for human ingestion rates.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>		Add additional rows above, as needed.				
<b>Analyst Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> comments				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/25/19				

SRS Saltstone v5.038\_CaseCE.7\_wCVdosepar\_Check

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SRS Saltstone v5.038\_CaseBE.7\_wCVdosepar.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseBE.7_wCVdosepar.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseBE.7_Realistic.gsm			
New Model File Date: 2/20/2019			Source Model File Date: 1/24/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned.	Y			
InputSetSelector	\\User_Input	Changed value from 1 to 2. This forces the Dose Calculator inputs to assume the "most probable and defensible" inputs for human ingestion rates.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>			Add additional rows above, as needed.			
Analyst Name (print): Ben Dean			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)			
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy):  2/25/19			

SRS Saltstone v5.038\_CaseBE.7\_wCVdosepar\_Check

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SRS Saltstone v5.038\_CaseCV.7\_wBEdosepar.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_wBEdosepar.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 2/20/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Seepline_Data	\\Model_Concentrations\\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

SRS Saltstone v5.038\_CaseCV.7\_wBEdosepar\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_wBEDosepar.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 2/20/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			
InputSetSelector	\\User_Input	Set to 1. The Best Estimate values are used in this case.	Y			
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon c	\\User_Input	Set to False. For this case, the seepLine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepLine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Ben Dean			<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)			

SRS Saltstone v5.038\_CaseCV.7\_wBEDosepar\_Check

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**Changed Model Check Form**

Waste Disposal Authority		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_wBEdosepar.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	
New Model File Date: 2/20/2019		Source Model File Date: 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy): <i>Gal Watkins</i> 2/25/19		
			Checker Concur? Y,N		

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SRS Saltstone v5.038\_CaseCV.7\_wBEdosepar\_Check

SRS Saltstone v5.038\_CaseCV.7\_wCEdosepar.gsm Changed Model Check Form (3 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_wCEdosepar.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 2/20/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Realistic Case						
[not applicable]	[not applicable]	Model was renamed. Note that the model file was not versioned, so some entries here indicate no change from the source model file.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
Available_Sepline_Data	Model_Concentrations\PORFLOW_Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			

SRS Saltstone v5.038\_CaseCV.7\_wCEdosepar\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_wCEDosepar.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm			
<b>New Model File Date:</b> 2/20/2019			<b>Source Model File Date:</b> 1/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
MQB_SeepLine UTR_SeepLine	\\Model_Concentra tions\\PORFLOW_ Conc	Version history shows this as changed because this model file was not versioned prior to updating. No change from the source file. The entry for "UsePORFLOW_SLConc" (below) over-writes any impact from this element.	NA			
InputSetSelector	\\User_Input	Set to 3. The Defense_in_Depth values are used in this case.	Y			
IntruderInventorySwitch	\\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOW_SLCon c	\\User_Input	Set to False. For this case, the seepLine concentrations were not calculated in PORFLOW. This setting forces the dose calculator to apply the seep-to-well ratio to determine seepLine dose contributions.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>			Add additional rows above, as needed.			
<b>Analyst Name (print):</b> Ben Dean			<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)			

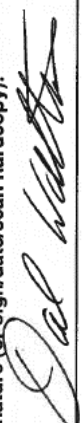
SRS Saltstone v5.038\_CaseCV.7\_wCEDosepar\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_wCEdosepar.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV_wSL_and_1-m.gsm	
<b>New Model File Date:</b> 2/20/2019		<b>Source Model File Date:</b> 1/16/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y, N</b>
<b>Checker Name (print):</b> David Watkins		<b>Checker Comment</b>	<b>Analyst Response</b>
		<b>E-Signature (or sign/date/scan hardcopy):</b>  2/25/19	
		<b>Checker Concur?</b> Y, N	

SRS Saltstone v5.038\_CaseCV.7\_wCEdosepar\_Check

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SRS Saltstone v5.038\_CaseCV.7\_IH1a.gsm Changed Model Check Form (2 Pages)



Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_IH1a.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m.gsm				
New Model File Date: 01/28/2019		Source Model File Date: 01/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y, N	Checker Comment	Analyst Response	Checker Concur? Y, N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Compliance Modeling for the IH1, with CaseCV.7 PORFLOW run.						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	[not applicable]	Model was versioned to facilitate checking of changes.	Y			
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop\	Submodel shows as changed, but no changes made.	N/A			
Drill_Cutting_Inv_SDU	\\Model_Concentrations	SDU-specific drill cutting inventories revised to reflect 1/3 of the value reported in the inventory document: SRR-CWDA-2018-00044 Rev 2 (Table 7). This 1/3 value reflects a correction to an error identified in the way the drill cutting inventory was estimated.	Y			

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SRS Saltstone v5.038\_CaseCV.7\_IH1a\_Check

Waste Disposal Authority  
**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_IH1a.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_wSL_and_1-m.gsm				
<b>New Model File Date:</b> 01/28/2019		<b>Source Model File Date:</b> 01/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Drill_Cutting_Inv_Soil	Model_Concentra tions	Soil-specific drill cutting inventories revised as developed in SoilDrillCuttings_rev1.xlsx, which is based on the approach described in SRR-CWDA-2018-00093, but uses the corrected SDU drill cutting inventories (see previous entry).	Y			
IntruderInventorySwitch	User_Input	Confirmed value is set to 1 (for soil drill cutting inventory).	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel						
<b>Checker Name (print):</b> David Watkins						
<b>E-Signature (or sign/date/scan hardcopy):</b> <div style="display: flex; justify-content: space-between;"> <div>   1/28/2019 </div> <div>   1/28/19 </div> </div>						


SRS Saltstone v5.038\_CaseCV.7\_IH1a\_Check

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SRS Saltstone v5.038\_CaseCV.7\_IH1b.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_IH1b.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_IH1a.gsm				
New Model File Date: 01/28/2019		Source Model File Date: 01/28/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Dose results for the bounding IH1, with CaseCV.7 PORFLOW run.						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop\\	Submodel shows as changed, but no changes made.	N/A			
Drill_Cutting_Inv_SDU	\\Model_Concentrations	Shows as changed because model was not versioned from source file.	Y			
Drill_Cutting_Inv_Soil	\\Model_Concentrations	Shows as changed because model was not versioned from source file.	Y			
IntruderInventorySwitch	\\User_Input	Set value to 2 (for SDU drill cutting inventory).	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)  1/28/2019				

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SRS Saltstone v5.038\_CaseCV.7\_IH1b\_Check


Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_IHlb.gsm		Source Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_IHla.gsm				
New Model File Date: 01/28/2019		Source Model File Date: 01/28/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy):  1/28/19				

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SRS Saltstone v5.038\_CaseCV.7\_IHlb\_Check

SRS Saltstone v5.038\_CaseCV.7\_IHlc.gsm Changed Model Check Form (2 Pages)


Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_IHlc.gsm			Source Model ID (or filename): SRS Saltstone v5.038_CaseCV.7_IHla.gsm			
New Model File Date: 01/28/2019			Source Model File Date: 01/28/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the bounding IHI, with CaseCV.7 PORFLOW run.						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUOuterLoop\InnerLoop	Submodel shows as changed, but no changes made.	N/A			
Drill_Cutting_Inv_SDU	Model_Concentrations	Shows as changed because model was not versioned from source file.	Y			
Drill_Cutting_Inv_Soil	Model_Concentrations	Shows as changed because model was not versioned from source file.	Y			
IntruderInventorySwitch	User_Input	Set value to 0 (for no drill cutting inventory).	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)  1/28/2019			

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SRS Saltstone v5.038\_CaseCV.7\_IHlc\_Check

Waste Disposal Authority  
**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_IHlc.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.038_CaseCV.7_IHla.gsm	
<b>New Model File Date:</b> 01/28/2019		<b>Source Model File Date:</b> 01/28/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
<b>Checker Name (print):</b> David Watkins			<b>Checker Concur? Y,N</b>
		<b>Checker Comment</b>	<b>Analyst Response</b>
		<b>E-Signature (or sign/date/scan hardcopy):</b>  1/28/19	

SRS Saltstone v5.038\_CaseCV.7\_IHlc\_Check

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SRS Saltstone v5.049\_CaseSA24.7.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

New Model ID (or filename): SRS Saltstone v5.049_CaseSA24.7.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/26/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for Case SA24.7						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDU\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\\PORFLOW_Conc	Input PORFLOW concentrations from: \\godzilla-01\\hpc_project\\projwork80\\srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA24.7\\AI	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\\PORFLOW_Conc	Input PORFLOW concentrations from: \\godzilla-01\\hpc_project\\projwork80\\srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA24.7\\AI	Y			

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SRS Saltstone v5.049\_CaseSA24.7\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049_CaseSA24.7.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/26/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_at_1m	Model_Concentra tions\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\hpc_project\proj\work80\ srr19\SaltstonePA4\Aquifer ZITransport\CaseSA24.7\AI	Y			
IntruderInventorySwitch	User_Input	Set to zero. The Intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOWConcent rations	User_Input	Set to True.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): comments			
Checker Name (print): Ben Dean			E-Signature (or sign/date/scan hardcopy): B.D. 4/1/2019			

SRS Saltstone v5.049\_CaseSA24.7\_Check

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SRS Saltstone v5.049\_CaseSA24.7b.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

New Model ID (or filename): SRS Saltstone v5.049_CaseSA24.7b.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/26/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for Case SA24.7b						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	Input PORFLOW concentrations from: \\godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\Aquifer Z\Transport\CaseSA24.7b\All	Y			
IHL_1m_WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	Input PORFLOW concentrations from: \\godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\Aquifer Z\Transport\CaseSA24.7b\All	Y			

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SRS Saltstone v5.049\_CaseSA24.7b\_Check



Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049_CaseSA24.7b.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/26/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_at_1m	\Model_Concentra tions\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4\Aquifer Z\Transport\CaseSA24.7b\ All	Y			
IntruderInventorySwitch	\User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UsePORFLOWConcent rations	\User_Input	Set to True.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)			
Checker Name (print): Ben Dean			E-Signature (or sign/date/scan hardcopy):  4/1/2019			

SRS Saltstone v5.049\_CaseSA24.7b\_Check

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SRS Saltstone v5.049\_CaseSA25.7.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority


**Changed Model Check Form**

New Model ID (or filename): SRS Saltstone v5.049_CaseSA25.7.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/26/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Case SA25.7						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDU\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra- tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA25.7\\AI	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra- tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA25.7\\AI	Y			

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SRS Saltstone v5.049\_CaseSA25.7\_Check

New Model ID (or filename): SRS Saltstone v5.049_CaseSA25.7.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/26/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_at_1m	Model_Concentra tions\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\hpc_project\projwork80\ srr19\SaltstonePA4A\aquifer Z1\Transport\CaseSA25.7AI	Y			
IntruderInventorySwitch	User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UserPORFLOWConcent rations	User_Input	Set to True.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/1/2019				

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SRS Saltstone v5.049\_CaseSA25.7\_Check

SRS Saltstone v5.049\_CaseSA25.7b.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.049_CaseSA25.7b.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 3/26/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose results for the Case SA25.7b						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA25.7b\\ All	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\\hpc_project\\projwork80\\ srr19\\SaltstonePA4\\Aquifer Z\\Transport\\CaseSA25.7b\\ All	Y			


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SRS Saltstone v5.049\_CaseSA25.7b\_Check

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.049_CaseSA25.7b.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 3/26/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_at_1m	Model_Concentra tions\PORFLOW_ Conc	Input PORFLOW concentrations from: \\godzilla- 01\hpc_project\projwork\80\ srr19\SaltstonePA4A\aquifer ZITransport\CaseSA25.7b\ All	Y			
IntruderInventorySwitch	User_Input	Set to zero. The intruder dose is not included in sensitivity analyses.	Y			
UserPORFLOWConcent rations	User_Input	Set to True.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/1/2019				

SRS Saltstone v5.049\_CaseSA25.7b\_Check

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SRS Saltstone v5.049\_IHI\_XXXyr.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.049_IHI_XXXyr.gsm where XXX = 00100, 00200, 00300, 00400, 00500, 00600, 00700, 00800, 00900, 01000, 02000, 03000, 04000, 05000, 06000, 07000, 08000, 09000, and 10000		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 3/18/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response (QA&DV Form 4)?	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> IHI sensitivity case run in GoldSim mode but change time of IHI events						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
IHI_DrillEventTime	\\Dose_Parameter_Calculations\\IHI_DrillCutConc_Calc	Modified logic to set IHI drilling event time as desired. [Note: This change was not needed for the 100-yr event file (XXX = 00100) because the default time is 100 years.]	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				


SRS Saltstone v5.049\_IHI\_XXXyr\_Check

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Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.049_IHL_XXXyr.gsm where XXX = 00100, 00200, 00300, 00400, 00500, 00600, 00700, 00800, 00900, 01000, 02000, 03000, 04000, 05000, 06000, 07000, 08000, 09000, and 10000		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm	
<b>New Model File Date:</b> 3/18/2019		<b>Source Model File Date:</b> 3/6/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
<b>Checker Name (print):</b> David Watkins		<b>Checker Comment</b>	<b>Checker Response</b>
		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/1/19	
		<b>Checker Concur?</b> Y,N	

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SRS Saltstone v5.049\_IHL\_XXXyr\_Check



SRS Saltstone v5.049\_IHI\_noDrillCutting.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049_IHI_noDrillCutting.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 3/18/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> IHI sensitivity case run in GoldSim mode but deactivates the IHI drill cuttings						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	User_Input	Set to 0 for no drill cuttings	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/1/19				

SRS Saltstone v5.049\_IHI\_noDrillCutting\_Check

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4/1/2019

SRS Saltstone v5.049\_IHI\_1MSoilInventory.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.049_IHI_1MSoilInventory.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm			
<b>New Model File Date:</b> 3/19/2019			<b>Source Model File Date:</b> 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> IHI sensitivity case run in GoldSim mode with latest GoldSim model and to use GoldSim groundwater concentrations for the IHI inventory						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
GW_Conc_1meter	\\Model_Concentrations	Added element to read the GoldSim calculated groundwater concentrations for IHI, and to select the maximum well concentration over time.	Y			
GW_Inv_1meter	\\Model_Concentrations	Added element to convert the IHI groundwater concentrations into a contaminated soil inventory.	Y			
IHI_DrillingInventory	\\Dose_Parameter_Calculations\\IHI_DrillCutConc_Calc	Modified element to use the groundwater concentration inventory from GW_Inv_1meter (above)	Y			


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SRS Saltstone v5.049\_IHI\_1MSoilInventory\_Check

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.049_IHI_1mSoilInventory.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 3/19/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHI_Contaminants	\\Dose_Parameter _Calculations\\IHI_ DrillCutConc_Calc	Modified trigger for event element so it would trigger an event at every time step.	Y			
IHI_Event	\\Dose_Parameter _Calculations\\IHI_ DrillCutConc_Calc	Modified trigger for event element so it would trigger an event at every time step.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/1/19				

SRS Saltstone v5.049\_IHI\_1mSoilInventory\_Check

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4/1/2019

SRS Saltstone v5.049-GS-ComplianceCase\_AssumeOxKds.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AssumeRegionIIKds.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/27/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_Rel	\\Materials\\Concret e_Kds_Reducing\\ young_concrete_k ds_red	Edited the distribution elements. Under "Other Settings" I linked the value to the Oxidized Region I Kds. This modifies all the downstream Kd values.	Y			
Saltstone_Kd	\\Materials\\Concret e_Kds_Reducing\\ young_concrete_k ds_red	Redefined the I-129 input to link to the Oxidized Kd.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AssumeOxKds\_Check

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4/5/2019

Waste Disposal Authority  
Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AssumeRegionIIKds.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/27/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct Y/N	Checker Comment	Analyst Response	Checker Concur? Y/N
Kd_Dist_Rel	Materials\Concrete e_Kds_ReducingI middle_concrete_ kds_red	Edited the distribution elements. Under "Other Settings" I linked the value to the Oxidized Region II Kds. This modifies all the downstream Kd values.	Y			
Saltstone_Kd	Materials\Concrete e_Kds_ReducingI middle_concrete_ kds_red	Redefined the I-129 input to link to the Oxidized Kd.	Y			
Kd_Dist_ReIII	Materials\Concrete e_Kds_ReducingI old_concrete_kds_ red	Edited the distribution elements. Under "Other Settings" I linked the value to the Oxidized Region III Kds. This modifies all the downstream Kd values.	Y			
Saltstone_Kd	Materials\Concrete e_Kds_ReducingI old_concrete_kds_ red	Redefined the I-129 input to link to the Oxidized Kd.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>		Add additional rows above, as needed.				
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): <i>Ben Dean</i> 4/5/2019				

SRS Saltstone v5.049-GS-ComplianceCase\_AssumeOxKds\_Check

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4/4/2019

SRS Saltstone v5.049-GS-ComplianceCase\_AssumeAllLeachateImpact.gsm Changed  
Model Check Form (2 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AssumeAllLeachateImpact.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/27/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_Clay	\\Materials\\ClayeyS oilKds	Edited the distribution elements. Under "Other Settings" I linked the value to the leachate impacted Kds. This modifies all the downstream Kd values.	Y			


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SRS Saltstone v5.049-GS-ComplianceCase\_AssumeAllLeachateImpact\_Check

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_AssumeAllLeachateImpact.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 3/27/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_Sand	Materials\SandyS oilKds	Edited the distribution elements. Under "Other Settings" I linked the value to the leachate impacted Kds. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel						
<b>Checker Name (print):</b> Ben Dean						
<b>E-Signature (or sign/date/scan hardcopy):</b> comments						
<b>E-Signature (or sign/date/scan hardcopy):</b> 						



SRS Saltstone v5.049-GS-ComplianceCase\_AssumeNoLeachateImpact.gsm Changed  
Model Check Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_AssumeNoLeachateImpact.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm			
<b>New Model File Date:</b> 3/27/2019			<b>Source Model File Date:</b> 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_ClayL	\\Materials\\ClayeyS oilKds_LeachateI mpacted	Edited the distribution elements. Under "Other Settings" I linked the value to the non leachate impacted Kds. This modifies all the downstream Kd values.	Y			

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SRS Saltstone v5.049-GS-ComplianceCase\_AssumeNoLeachateImpact\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS- ComplianceCase_AssumeNoLeachateImpact.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049 gsm				
<b>New Model File Date:</b> 3/27/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_SandL	Materials\SandyS oilKds_LeachateI mpacted	Edited the distribution elements. Under "Other Settings" I linked the value to the non leachate impacted Kds. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Ben Dean 4/5/2019</i>				

SRS Saltstone v5.049-GS-ComplianceCase\_AssumeNoLeachateImpact\_Check

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4/4/2019

SRS Saltstone v5.049-GS-ComplianceCase\_AssumeRegionIIKds.gsm Changed Model  
Check Form (2 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AssumeRegionIIKds.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/27/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_Oxl	\Materials\Concrete_Kds_Oxidizing\young_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I linked the value to the Oxidized Region II Kds. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Oxl SaltstoneKd_Dist_Ra_Oxl SaltstoneKd_Dist_Sr_Oxl	\Materials\Concrete_Kds_Oxidizing\young_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I linked the value to the Oxidized Region II Kds. This modifies all the downstream Kd values.	Y			

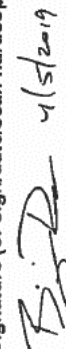
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SRS Saltstone v5.049-GS-ComplianceCase\_AssumeRegionIIKds\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AssumeRegionIIKds.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/27/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_Rel	Materials\Concrete_Kds_Young_Red	Edited the distribution elements. Under "Other Settings" I linked the value to the Reduced Region II Kds. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_R el SaltstoneKd_Dist_Sr_R el SaltstoneKd_Dist_Ra_R el SaltstoneKd_Dist_Sr_R el	Materials\Concrete_Kds_Young_Red	Edited the distribution elements. Under "Other Settings" I linked the value to the Reduced Region II Kds. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/5/2019				

SRS Saltstone v5.049-GS-ComplianceCase\_AssumeRegionIIKds\_Check

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4/4/2019

SRS Saltstone v5.049-GS-ComplianceCase\_AssumeRegionIIIKds.gsm Changed Model  
Check Form (2 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AssumeRegionIIIKds.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/27/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_Oxl	\\Materials\\Concrete_Kds_Oxidizing\\young_concrete_kd_s_ox	Edited the distribution elements. Under "Other Settings" I linked the value to the Oxidized Region III Kds. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Oxl SaltstoneKd_Dist_Ra_Oxl SaltstoneKd_Dist_Sr_Oxl	\\Materials\\Concrete_Kds_Oxidizing\\young_concrete_kd_s_ox	Edited the distribution elements. Under "Other Settings" I linked the value to the Oxidized Region III Kds. This modifies all the downstream Kd values.	Y			


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SRS Saltstone v5.049-GS-ComplianceCase\_AssumeRegionIIIKds\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_AssumeRegionIIIKds.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm			
<b>New Model File Date:</b> 3/27/2019			<b>Source Model File Date:</b> 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_Rel	Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I linked the value to the Reduced Region III Kds. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_R el SaltstoneKd_Dist_Sr_R el SaltstoneKd_Dist_Ra_R el SaltstoneKd_Dist_Sr_R el	Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I linked the value to the Reduced Region III Kds. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel			<b>E-Signature (or sign/date/scan hardcopy):</b> comments			
<b>Checker Name (print):</b> Ben Dean			<b>E-Signature (or sign/date/scan hardcopy):</b> 			

SRS Saltstone v5.049-GS-ComplianceCase\_AssumeRegionIIIKds\_Check

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SRS Saltstone v5.049-GS-ComplianceCase\_SoilKds\_xEpsilon.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority


**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_SoilKds_xEpsilon.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 3/26/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective: Kd sensitivity case</b>						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_Clay	\\Materials\\ClayeyS oilKds	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			



Waste Disposal Authority

### Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_SoilKds_xEpsilon.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 3/26/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_ClayL	Materials\ClayeyS oilKds_Leachatel impacted	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_Sand	Materials\SandyS oilKds	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_SandL	Materials\SandyS oilKds_Leachatel impacted	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/5/2019				

SRS Saltstone v5.049-GS-ComplianceCase\_SoilKds\_xEpsilon\_Check

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4/4/2019

SRS Saltstone v5.049-GS-ComplianceCase\_OxIKds\_xEpsilon.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_OxIKds_xEpsilon.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm			
<b>New Model File Date:</b> 3/26/2019			<b>Source Model File Date:</b> 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_OxI	\\Materials\\Concret e_Kds_Oxidizing\\y oung_concrete_kd s_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			


SRS Saltstone v5.049-GS-ComplianceCase\_OxIKds\_xEpsilon\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_OxiKds_xEpsilon.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/26/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_Oxi SaltstoneKd_Dist_Ra_Oxi SaltstoneKd_Dist_Sr_Oxi	Materials/Concrete e_Kds_Oxidizingly ong_concrete_kd s_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  4/5/2019				

SRS Saltstone v5.049-GS-ComplianceCase\_OxiKds\_xEpsilon\_Check

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SRS Saltstone v5.049-GS-ComplianceCase\_RelKds\_xEpsilon.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_RelKds_xEpsilon.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/26/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_Rel	\Materials\Concret e_Kds_Reducing\ young_concrete_k ds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			

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SRS Saltstone v5.049-GS-ComplianceCase\_RelKds\_xEpsilon\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_RelKds_xEpsilon.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/26/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_R el SaltstoneKd_Dist_I_Rel SaltstoneKd_Dist_Ra_ Rel SaltstoneKd_Dist_Sr_R el	Materials(Concrete e_Kds_Reducing) young_concrete_k ds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): <i>Ben Dean</i> 4/5/2019				

SRS Saltstone v5.049-GS-ComplianceCase\_RelKds\_xEpsilon\_Check

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SRS Saltstone v5.049-GS-ComplianceCase\_OxIIIKds\_xEpsilon.gsm Changed Model  
Check Form (2 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_OxIIIKds_xEpsilon.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/26/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_OxIII	\Materials\Concret e_Kds_Oxidizing\o ld_concrete_kds_ ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			

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SRS Saltstone v5.049-GS-ComplianceCase\_OxIIIKds\_xEpsilon\_Check



Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_OxIIIKds_xEpsilon.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm	
<b>New Model File Date:</b> 3/26/2019		<b>Source Model File Date:</b> 3/6/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
SaltstoneKd_Dist_Ba_OxIII SaltstoneKd_Dist_Ra_OxIII SaltstoneKd_Dist_Sr_OxIII	Materials/Concrete e_Kds_Oxidizinglo Id_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>		Add additional rows above, as needed.	
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)	
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> Ben Dean 4/5/2019	
		<b>Analyst Response</b>	<b>Checker Concur? Y,N</b>

SRS Saltstone v5.049-GS-ComplianceCase\_OxIIIKds\_xEpsilon\_Check

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SRS Saltstone v5.049-GS-ComplianceCase\_ReIIIKds\_xEpsilon.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_ReIIIKds_xEpsilon.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 3/26/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_ReII	\\Materials\\Concrete e_Kds_Reducing\\ old_concrete_kds _red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_ReIIIKds\_xEpsilon\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_ReilIKds_xEpsilon.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/26/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_R eill SaltstoneKd_Dist_I_Rel II SaltstoneKd_Dist_Ra_ ReilI SaltstoneKd_Dist_Sr_R eill	Materials\Concrete e_Kds_Reducing\ old_concrete_kds _red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): <i>Ben Dean 4/5/2019</i>				

SRS Saltstone v5.049-GS-ComplianceCase\_ReilIKds\_xEpsilon\_Check

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SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_xEpsilon.gsm Changed Model Check  
Form (5 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_AllKds_xEpsilon.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm			
<b>New Model File Date:</b> 3/26/2019			<b>Source Model File Date:</b> 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_Clay	\\Materials\\ClayeyS oilKds	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_xEpsilon\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AllKds_xEpsilon.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/26/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_ClayL	\\Materials\ClayeyS oilKds_Leachatel impacted	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxII	\\Materials\Concret e_Kds_Oxidizing\ middle_concrete_ kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_ OxII SaltstoneKd_Dist_Ra_ OxII SaltstoneKd_Dist_Sr_O xII	\\Materials\Concret e_Kds_Oxidizing\ middle_concrete_ kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxIII	\\Materials\Concret e_Kds_Oxidizing\ ld_concrete_kds_ ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_xEpsilon\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AllKds_xEpsilon.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/26/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_OxIII SaltstoneKd_Dist_Ra_OxIII SaltstoneKd_Dist_Sr_OxIII	\\Materials\Concrete_Kds_Oxidizing\old_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxI	\\Materials\Concrete_Kds_Oxidizing\old_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_OxI SaltstoneKd_Dist_Ra_OxI SaltstoneKd_Dist_Sr_OxI	\\Materials\Concrete_Kds_Oxidizing\old_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_ReII	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_xEpsilon\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AllKds_xEpsilon.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/26/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_R ell SaltstoneKd_Dist_I_Rel I SaltstoneKd_Dist_Ra_ Rel SaltstoneKd_Dist_Sr_R ell	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_RelII	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_R ell SaltstoneKd_Dist_I_Rel II SaltstoneKd_Dist_Ra_ RelII SaltstoneKd_Dist_Sr_R ell	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_Rel	\\Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_xEpsilon\_Check

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4/5/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AIIKds_xEpsilon.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/26/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_R el SaltstoneKd_Dist_L_Rel SaltstoneKd_Dist_Ra_ Rel SaltstoneKd_Dist_Sr_R el	\\Materials\\Concrete e_Kds_Reducing\\ young_concrete_k ds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_Sand	\\Materials\\SandyS oilKds	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_SandL	\\Materials\\SandyS oilKds_Leachatel mpacted	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>		Add additional rows above, as needed.				
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): <i>Ben Dean 4/5/2019</i>				

SRS Saltstone v5.049-GS-ComplianceCase\_AIIKds\_xEpsilon\_Check

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4/4/2019



SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_x0.01.gsm Changed Model Check  
Form (5 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_AllKds_x0.01.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm			
<b>New Model File Date:</b> 3/26/2019			<b>Source Model File Date:</b> 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_Clay	\\Materials\\ClayeyS oilKds	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_ClayL	\\Materials\\ClayeyS oilKds_Leachatel impacted	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_x0.01\_Check

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4/5/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AllKds_x0.01.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/26/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_OxII	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_OxII SaltstoneKd_Dist_Ra_OxII SaltstoneKd_Dist_Sr_OxII	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxIII	\\Materials\Concrete_Kds_Oxidizing\ld_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_OxIII SaltstoneKd_Dist_Ra_OxIII SaltstoneKd_Dist_Sr_OxIII	\\Materials\Concrete_Kds_Oxidizing\ld_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxI	\\Materials\Concrete_Kds_Oxidizing\ld_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_x0.01\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AllKds_x0.01.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/26/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_Oxl SaltstoneKd_Dist_Ra_Oxl SaltstoneKd_Dist_Sr_Oxl	\\Materials\Concrete_Kds_Oxidizing\old_concrete_kds_oxl	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_ReII	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_ReII SaltstoneKd_Dist_I_ReII SaltstoneKd_Dist_Ra_ReII SaltstoneKd_Dist_Sr_ReII	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_ReIII	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_x0.01\_Check

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4/5/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_AllKds_x0.01.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm			
<b>New Model File Date:</b> 3/26/2019			<b>Source Model File Date:</b> 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_R el SaltstoneKd_Dist_I_Rel II SaltstoneKd_Dist_Ra_ RelII SaltstoneKd_Dist_Sr_R elII	\\Materials\\Concret e_Kds_Reducing\\ old_concrete_kds _red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_Rel	\\Materials\\Concret e_Kds_Reducing\\ young_concrete_k ds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_R el SaltstoneKd_Dist_I_Rel SaltstoneKd_Dist_Ra_ Rel SaltstoneKd_Dist_Sr_R el	\\Materials\\Concret e_Kds_Reducing\\ young_concrete_k ds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_Sand	\\Materials\\SandyS oilKds	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_x0.01\_Check

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4/5/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_AIKds_x0.01.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 3/26/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_SandL	Materials\Sandys oilKds_Leachatel impacted	Edited the distribution elements. Under "Other Settings" I divided the Deierministic Value by 100. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> Ben Dean		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>Ben Dean 4/5/2019</i>				

SRS Saltstone v5.049-GS-ComplianceCase\_AIKds\_x0.01\_Check

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4/4/2019

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_x0.001.gsm Changed Model Check  
Form (5 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AllKds_x0.001.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/27/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
Kd_Dist_Clay	\\Materials\\ClayeyS oilKds	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_ClayL	\\Materials\\ClayeyS oilKds_Leachatel impacted	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			

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SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_x0.001\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_AllKds_x0.001.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm				
<b>New Model File Date:</b> 3/27/2019		<b>Source Model File Date:</b> 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_OxII	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_OxII SaltstoneKd_Dist_Ra_OxII SaltstoneKd_Dist_Sr_OxII	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxIII	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_OxIII SaltstoneKd_Dist_Ra_OxIII SaltstoneKd_Dist_Sr_OxIII	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxI	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_x0.001\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_AllKds_x0.001.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm			
<b>New Model File Date:</b> 3/27/2019			<b>Source Model File Date:</b> 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_Oxl SaltstoneKd_Dist_Ra_Oxl SaltstoneKd_Dist_Sr_Oxl	\\Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_Rell	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Rell SaltstoneKd_Dist_I_Rell SaltstoneKd_Dist_Ra_Rell SaltstoneKd_Dist_Sr_Rell	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_Rell	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_x0.001\_Check

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4/5/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.049-GS-ComplianceCase_AllKds_x0.001.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.049.gsm			
<b>New Model File Date:</b> 3/27/2019			<b>Source Model File Date:</b> 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_R el SaltstoneKd_Dist_I_Rel II SaltstoneKd_Dist_Ra_ RelII SaltstoneKd_Dist_Sr_R elII	\\Materials\\Concret e_Kds_Reducing\\ old_concrete_kds_ _red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_Rel	\\Materials\\Concret e_Kds_Reducing\\ young_concrete_k ds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_R el SaltstoneKd_Dist_I_Rel SaltstoneKd_Dist_Ra_ Rel SaltstoneKd_Dist_Sr_R el	\\Materials\\Concret e_Kds_Reducing\\ young_concrete_k ds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_Sand	\\Materials\\SandyS oilKds	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_x0.001\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase_AllKds_x0.001.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/27/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_SandL	Materials\SandyS oilKds_Leachatel impacted	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy): <i>Ben Dean 4/5/2019</i>				

SRS Saltstone v5.049-GS-ComplianceCase\_AllKds\_x0.001\_Check

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4/4/2019

SRS Saltstone v5.049-GS-RealisticCase.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.049-GS-RealisticCase.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/22/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> GoldSim Version of the Realistic Case (using v5.049)						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
Scenario_switch	\\User_Input	Set to 1 for best estimate inputs/settings	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>			Add additional rows above, as needed.			
<b>Analyst Name (print):</b> Steve Hommel			<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)			


SRS Saltstone v5.049-GS-RealisticCase\_Check

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4/4/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-RealisticCase.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm	
New Model File Date: 3/22/2019		Source Model File Date: 3/6/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
Checker Name (print): Ben Dean		Checker Comment	Analyst Response
		E-Signature (or sign/date/scan hardcopy):  4/4/2019	
		Checker Concur? Y,N	

SRS Saltstone v5.049-GS-RealisticCase\_Check

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4/4/2019

SRS Saltstone v5.049-GS-Defense-in-DepthCase.gsm Changed Model Check Form (2  
Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.049-GS-Defense-in-DepthCase.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm				
New Model File Date: 3/22/2019		Source Model File Date: 3/6/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> GoldSim Version of the Defense-in-Depth Case (using v5.049)						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\User_Input	Set to 0 (no drill cutting inventory).	Y			
Scenario_switch	\User_Input	Set to 3 for conservative estimate inputs/settings	Y			
If checker has no comments, check here: <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				


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SRS Saltstone v5.049-GS-Defense-in-DepthCase\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.049-GS-Defense-in-DepthCase.gsm		Source Model ID (or filename): SRS Saltstone v5.049.gsm	
New Model File Date: 3/22/2019		Source Model File Date: 3/6/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
Checker Name (print): Ben Dean		Checker Comment	Analyst Response
		E-Signature (or sign/date/scan hardcopy):  4/4/2019	
		Checker Concur? Y,N	


SRS Saltstone v5.049-GS-Defense-in-DepthCase\_Check

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4/4/2019



SRS Saltstone v5.049-GS-ComplianceCase.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.049-GS-ComplianceCase.gsm			Source Model ID (or filename): SRS Saltstone v5.049.gsm			
New Model File Date: 3/22/2019			Source Model File Date: 3/6/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: GoldSim Version of the Compliance Case (using v5.049)						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time steps to 20,000 years	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel time steps reset to match model file time steps.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0 (no drill cutting inventory).	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)			
Checker Name (print): Ben Dean			E-Signature (or sign/date/scan hardcopy):  4/4/2019			

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SRS Saltstone v5.049-GS-ComplianceCase\_Check

SRS Saltstone v5.051\_PF\_DoseCalcTemplate.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm		Source Model ID (or filename): SRS Saltstone v5.051.gsm				
New Model File Date: 4/11/2019		Source Model File Date: 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model (Ds) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Develop a template that can support faster setup of PORFLOW-run dose calculations.						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time to 20,000 years	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel time reset to match model file time.	Y			
IntruderInventorySwitch	\\User_Input	Set to 0. PORFLOW is only used for groundwater. Other IHI sources will be handled separately from the PORFLOW dose calculations.	Y			
SeepToWellRatio	\\User_Input	Initially changed this value, then undid the change.	NA			
UsePORFLOWConcentrations	\\User_Input	Set to True because PORFLOW concentrations will be used.	Y			
[not applicable]	[not applicable]	Versioned the file as "DoseCalculator" so that all subsequent changes will be easy to check.	NA			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						

SRS Saltstone v5.051\_PF\_DoseCalcTemplate\_Check

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4/23/2019

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_DoseCalc_Template.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051.gsm	
<b>New Model File Date:</b> 4/11/2019		<b>Source Model File Date:</b> 4/10/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
<b>Analyst Name (print):</b> Steve Hommel		<b>Checker Comment</b>	<b>Checker Concur? Y,N</b>
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>David Watkins</i> 4/23/19	

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SRS Saltstone v5.051\_PF\_DoseCalcTemplate\_Check


SRS Saltstone v5.051\_PF\_CaseF09.8\_Infil\_Low.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseF09.8_Infil_Low.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/15/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y/N	Checker Comment	Analyst Response	Checker Concur? Y/N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \godzilla-01\hpc_project\projwork801srr19\SaltstonePA4\AquiferZ\TransportCaseF09.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX, 100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): Add additional rows above, as needed.				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				

SRS Saltstone v5.051\_PF\_CaseF21.8\_DegRate\_Real.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseF21.8_DegRate_Real.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
<b>New Model File Date:</b> 4/16/2019		<b>Source Model File Date:</b> 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport(CaseF21.8)\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA			
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/25/19				

SRS Saltstone v5.051\_PF\_CaseF21.8\_DegRate\_Real\_Check

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SRS Saltstone v5.051\_PF\_CaseF25.8\_BackFK\_Low.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority						Changed Model Check Form			
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseF25.8_BackFK_Low.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm							
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019							
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N			
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.									
Objective: Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\80\sr19\SaltstonePA4\AquiferZ\Transport\CaseF25.8\All									
[not applicable]	[not applicable]	Model was renamed.	Y						
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y						
SectorXX, 100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y						
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y						
IHL_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y						
If checker has no comments, check here. <input type="checkbox"/>									
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): <i>Steve Hommel</i> 4/29/2019				Add additional rows above, as needed.			
Checker Name (print): <i>G.P. Flach</i>		E-Signature (or sign/date/scan hardcopy): <i>G.P. Flach</i> 4/29/2019							

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SRS Saltstone v5.051\_PF\_CaseF25.8\_BackFK\_Low\_Check

SRS Saltstone v5.051\_PF\_CaseF28.8\_SaltstoneK\_High.gsm Changed Model Check Form  
(1 Page)

Waste Disposal Authority

**Changed Model Check Form**

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseF28.8_SaltstoneK_High.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y/N	Checker Comment	Analyst Response	Checker Concur? Y/N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Dose calculator results for PORFLOW run: \godzilla-01\hpc_project\projwork801srr19\SaltstonePA4AquiferZTransportCaseF28.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	Us\OuterLoopInnerLoop	Submodel shows as changed. No change was made.	Y			
Sector XX, 100m Where XX = A through H	Model Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL 1m Well XX Where XX = 1 through 7	Model Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	Model Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				

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SRS Saltstone v5.051\_PF\_CaseF28.8\_SaltstoneK\_High\_Check



SRS Saltstone v5.051\_PF\_CaseF29.8\_BackFK\_High.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseF29.8_BackFK_High.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\80\srr19\SaltstonePA4\AquiferZ\Transport\CaseF29.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\disposal\units\SDUs\OuterLoop\innerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	\\model_concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\model_concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\model_concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): <i>G.P. Flach 4/29/2019</i>				

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SRS Saltstone v5.051\_PF\_CaseF29.8\_BackFK\_High\_Check

SRS Saltstone v5.051\_PF\_CaseF33.8\_DegRate\_D-in-D.gsm Changed Model Check Form (1  
Page)

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseF21.8_DegRate_Real.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_DoseCalc_Template.gsm	
<b>New Model File Date:</b> 4/16/2019		<b>Source Model File Date:</b> 4/11/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport(CaseF21.8)\All			
[not applicable]	[not applicable]	Model was renamed.	Y
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y
IHL_1m WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y
IHL_at_1m	Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> Add additional rows above, as needed.	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/25/19	

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SRS Saltstone v5.051\_PF\_CaseF21.8\_DegRate\_Real\_Check

SRS Saltstone v5.051\_PF\_CaseF45.8\_Infil\_High.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority							Changed Model Check Form		
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseF45.8_Infil_High_SteveHommel.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm					Checker Concur? Y,N		
New Model File Date: 4/15/2019		Source Model File Date: 4/11/2019					Analyst Response		
Parameter or Element	Location	Change Description	Correct? Y,N	Checker Comment	Analyst Response				
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.									
<b>Objective:</b> Dose calculator results for PORFLOW run: \godzilla-01\hpc_project\work\801srr19\SaltstonePA4\AquiferZ\Transport\CaseF45.8\VAI									
[not applicable]	[not applicable]	Model was renamed.	Y						
SDU_TransportSubmodel	DisposalUnits\SDU\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y						
SectorXX, 100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y						
IHL_1m WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y						
IHL_at_1m	Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y						
If checker has no comments, check here. <input checked="" type="checkbox"/>									
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)							
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019							

SRS Saltstone v5.051\_PF\_CaseSA01.8\_LowSDUK.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA01.8_LowSDUK.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/15/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\801\sr19\SaltstonePA4\AquiferZ\Transport\CaseSA01.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				

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SRS Saltstone v5.051\_PF\_CaseSA01.8\_LowSDUK\_Check



SRS Saltstone v5.051\_PF\_CaseSA02.8\_BESDUK.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA02.8_BESDUK.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/15/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\80\sr19\SaltstonePA4\AquiferZ\Transport\CaseSA02.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX, 100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m WellXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): Add additional rows above, as needed.				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				

SRS Saltstone v5.051\_PF\_CaseSA03.8\_CESDUK.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA03.8_CESDUK.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/15/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\801srr19\SaltstonePA41\AquiferZ\Transport\CaseSA03.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): Add additional rows above, as needed.				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): 6/29/2019				

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SRS Saltstone v5.051\_PF\_CaseSA03.8\_CESDUK\_Check

SRS Saltstone v5.051\_PF\_CaseSA04.8\_HighSDUK.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseSA04.8_HighSDUK.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_DoseCalc_Template.gsm	
<b>New Model File Date:</b> 4/15/2019		<b>Source Model File Date:</b> 4/11/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\801srr\19\Saltstone\PA4\AquiferZ\Transport\CaseSA04.8\All			
[not applicable]	[not applicable]	Model was renamed.	Y
SDU_TransportSubmod el	DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel shows as changed. No change was made.	Y
SectorXX_100m Where XX = A through H	Model_Concentra tions\PORFLOW_ Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y
IHL_1m_WellXX Where XX = 1 through 7	Model_Concentra tions\PORFLOW_ Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y
IHL_at_1m	Model_Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.			
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)	
<b>Checker Name (print):</b> G.P. Flach		<b>E-Signature (or sign/date/scan hardcopy):</b> G.P. Flach 4/29/2019	

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SRS Saltstone v5.051\_PF\_CaseSA04.8\_HighSDUK\_Check



SRS Saltstone v5.051\_PF\_CaseSA05.8\_SDU1Soil.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA05.8_SDU1Soil.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\80\sr19\SaltstonePA4\AquiferZ_SDU1\Transport\CaseSA05.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				

SRS Saltstone v5.051\_PF\_CaseSA05.8\_SDU1Soil\_Check

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SRS Saltstone v5.051\_PF\_CaseSA08.8\_SDU4\_WasteBags.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA08.8_SDU4_WasteBags.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ.SDU4\TransportCaseSA08.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmod el	\DisposalUnits\SD UstOuterLoop\Inn erLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	\Model_Concentra tions\PORFLOW_ Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m WellXX Where XX = 1 through 7	\Model_Concentra tions\PORFLOW_ Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\Model_Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				

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SRS Saltstone v5.051\_PF\_CaseSA08.8\_SDU4\_WasteBags\_Check

SRS Saltstone v5.051\_PF\_CaseSA09.8\_SDUKE-7.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA09.8_SDUKE-7.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/15/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\80\srr\19\Saltstone\PA4\AquiferZ\Transport\Cases\SA09.8\VAI						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHI_1m WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	IHI concentrations pasted into each element from path identified in the Objective (above)	Y			
IHI_al_1m	Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				

SRS Saltstone v5.051\_PF\_CaseSA09.8\_SDUKE-7\_Check

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SRS Saltstone v5.051\_PF\_CaseSA10.8\_Infil\_JonesAndPhifer.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA10.8_Infil_JonesAndPhifer.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/15/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Dose calculator results for PORFLOW run: \vgodzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport\CaseSA10.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmod el	\DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	\Model_Concentra tions\PORFLOW_ Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\Model_Concentra tions\PORFLOW_ Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\Model_Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				

SRS Saltstone v5.051\_PF\_CaseSA10.8\_Infil\_JonesAndPhifer\_Check

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SRS Saltstone v5.051\_PF\_CaseSA11.8\_Infil\_SoilCap.gsm Changed Model Check Form (1  
Page)


Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA11.8_Infil_SoilCap.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/15/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork80\sr19\SaltstonePA4\AquiferZ\Transport\CaseSA11.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\disposal\units\SDUs\OuterLoop\innerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX, 100m Where XX = A through H	\\model\Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m WellXX Where XX = 1 through 7	\\model\Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\model\Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				

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SRS Saltstone v5.051\_PF\_CaseSA11.8\_Infil\_SoilCap\_Check

SRS Saltstone v5.051\_PF\_CaseSA12.8\_DegRate\_Linear.gsm Changed Model Check Form  
(1 Page)

Waste Disposal Authority						Changed Model Check Form			
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA12.8_DegRate_Linear.gsm			Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm						
New Model File Date: 4/16/2019			Source Model File Date: 4/11/2019						
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N			
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.									
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork80\sr19\SaltstonePA4\AquiferZ\Transport\CaseSA12.8\All									
[not applicable]	[not applicable]	Model was renamed.	Y						
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoopInnerLoop	Submodel shows as changed. No change was made.	NA						
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y						
IHL_1m_WelbXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y						
IHL_at_1m	Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y						
If checker has no comments, check here. <input checked="" type="checkbox"/>									
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): Add additional rows above, as needed.						
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy):  4/25/19						

4/25/2019



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SRS Saltstone v5.051\_PF\_CaseSA12.8\_DegRate\_Linear\_Check

SRS Saltstone v5.051\_PF\_CaseSA15.8\_DegRate\_Harmonic.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseSA15.8_DegRate_Harmonic.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_DoseCalc_Template.gsm	
<b>New Model File Date:</b> 4/16/2019		<b>Source Model File Date:</b> 4/11/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport\CaseSA15.8\All			
[not applicable]	[not applicable]	Model was renamed.	Y
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA
SectorXX_100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y
IHI_1m_WeiXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHI concentrations pasted into each element from path identified in the Objective (above)	Y
IHI_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/25/19	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/25/19	

SRS Saltstone v5.051\_PF\_CaseSA15.8\_DegRate\_Harmonic\_Check 1 of 1 4/25/2019



SRS Saltstone v5.051\_PF\_CaseSA16.8\_SoilCap\_AccDeg.gsm Changed Model Check Form  
(1 Page)

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA16.8_SoilCap_AccDeg.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/15/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport\CaseSA16.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\DisposalUnits\SDUOuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m WellXX Where XX = 1 through 7	\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				

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SRS Saltstone v5.051\_PF\_CaseSA16.8\_SoilCap\_AccDeg\_Check

SRS Saltstone v5.051\_PF\_CaseSA16.8\_SoilCap\_AccDeg\_SoilA.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseSA16.8_SoilCap_AccDeg_SoilA.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
<b>New Model File Date:</b> 4/19/2019		<b>Source Model File Date:</b> 4/11/2019				
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>	<b>Checker Comment</b>	<b>Analyst Response</b>	<b>Checker Concur? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: <a href="#">\gocdzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport\CaseSA16.8\All</a> Then modified to include soil drill cuttings.						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmod el	\DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel shows as changed. No change was made.	Y			
Dose_IHL_rads	\Dose_Results\Ac ute_IHL_Dose	While performing analysis of the acute IHL, a mistake was found in this element. Instead of pulling in the ingestion dose, it had inhalation twice. This mistake was corrected for IHL runs.	Y			
Drill_Cutting_Inv_Soil	\Model_Concentra tions	Data in element was updated. During the review of the PA text, an SRR reviewer rightfully pointed out that we have PORFLOW results with actual soil concentrations. From the PORFLOW data, a most probable and defensible (MPAD) inventory was developed for soil drill cuttings. See the Excel file: SoilDrillCuttings_rev3.xlsx	Y			
SectorXX_100m Where XX = A through H	\Model_Concentra tions\PORFLOW_ Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			

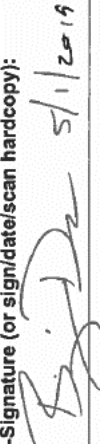
SRS Saltstone v5.051\_PF\_CaseSA16.8\_SoilCap\_AccDeg\_SoilA\_Check

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5/1/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA16.8_SoilCap_AccDeg_SoilA.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/19/2019		Source Model File Date: 4/1/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHL_1m_WellXX Where XX = 1 through 7	Model Concentra tions\PORFLOW_ Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	Model Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
IntruderInventorySwitch	User_Input	Set value to 1 so that the model will use the soil-based drill cutting inventory for IHL dose calcs.	Y			
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Ben Dean		E-Signature (or sign/date/scan hardcopy):  5/1/2019				

SRS Saltstone v5.051\_PF\_CaseSA16.8\_SoilCap\_AccDeg\_SoilA\_Check

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5/1/2019

SRS Saltstone v5.051\_PF\_CaseSA16.8\_SoilCap\_AccDeg\_Basement.gsm Changed Model  
Check Form (3 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename):		Source Model ID (or filename):				
SRS Saltstone v5.051_PF_CaseSA16.8_SoilCap_AccDeg_Basement.gsm		SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date:		Source Model File Date:				
4/22/2019		4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: <a href="#">\ugodzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport\CaseSA16.8\All</a> Then modified to include soil drill cuttings and to include "Basement" dose contributions.						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
EDF_BasementSoil_Exp	\Dose_Parameters\Calculations\EffectiveDoseFactors	Added element to calculate the effective dose factor for exposure to soils in a basement.	Y			
EDF_BasementDust_Inh	\Dose_Parameters\Calculations\EffectiveDoseFactors	Added element to calculate the effective dose factor for inhalation of dust in a basement.	Y			
Dose_IHI_rads	\Dose_Results\Accute_IHI_Dose	While performing analysis of the acute IHI, a mistake was found in this element. Instead of pulling in the ingestion dose, it had inhalation twice. This mistake was corrected for IHI runs.	Y			
SoilExpDose_IHI_rads	\Dose_Results\IHI_1mBoundaryDoseCalcs_IHI_Dose_IHI_Exp_Calcs	Added term to incorporate the basement exposure dose.	Y			
InhalerDustDose_IHI_rads	\Dose_Results\IHI_1mBoundaryDoseCalcs_IHI_Dose_IHI_Inh_Calcs	Added term to incorporate the basement inhalation dose.	Y			

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SRS Saltstone v5.051\_PF\_CaseSA16.8\_SoilCap\_AccDeg\_Basement\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA16.8_SoilCap_AccDeg_Basement.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm		
New Model File Date: 4/22/2019		Source Model File Date: 4/11/2019		
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Concur? Y,N
Drill_Cutting_Inv_Soil	\\Model_Concentra tions	Data in element was updated. During the review of the PA text, an SRR reviewer rightfully pointed out that we have PORFLOW results with actual soil concentrations. From the PORFLOW data, a most probable and defensible (MPAD) inventory was developed for soil drill cuttings. See the Excel file: SoilDrillCuttings_rev3.xlsx	Y	
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\\PORFLOW_ Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y	
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\\PORFLOW_ Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y	
IHL_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y	
IntruderInventorySwitch	\\User_Input	Set value to 1 so that the model will use the soil-based drill cutting inventory for IHL dose calcs.	Y	

SRS Saltstone v5.051\_PF\_CaseSA16.8\_SoilCap\_AccDeg\_Basement\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_Pf_CaseSA16.8_SoilCap_AccDeg_Basement.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_Pf_DoseCalc_Template.gsm	
<b>New Model File Date:</b> 4/22/2019		<b>Source Model File Date:</b> 4/11/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
If checker has no comments, check here. <input checked="" type="checkbox"/>		<b>Checker Comment</b>	<b>Analyst Response</b>
<b>Analyst Name (print):</b> Steve Hommel		<b>Checker Concur?</b> Y,N	
<b>Checker Name (print):</b> Ben Dean		Add additional rows above, as needed.	
		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)	
		<b>E-Signature (or sign/date/scan hardcopy):</b> BjD 5/1/2019	

SRS Saltstone v5.051\_Pf\_CaseSA16.8\_SoilCap\_AccDeg\_Basement\_Check

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SRS Saltstone v5.051\_PF\_CaseSA18.8\_StratSS.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA18.8_StratSS.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run. Ngodzil la-01\hpc_project\projwork\801srr19\SaltstonePA4\AquiferZ\Transport\CaseSA18.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	DisposalUnits\SDU\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX, 100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): Add additional rows above, as needed.				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				



SRS Saltstone v5.051\_PF\_CaseSA19.8\_RoofCollapse.gsm Changed Model Check Form (1  
Page)


Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA19.8_RoofCollapse		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y/N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \godzilla-01\hpc_project\projwork\80\sr19\SaltstonePA4\AquaiferZ\Transport\CaseSA19.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmod el	\DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel shows as changed. No change was made.	Y			
Sector XX_100m Where XX = A through H	\Model_Concentra tions\PORFLOW_ Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\Model_Concentra tions\PORFLOW_ Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\Model_Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/29/2019				

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SRS Saltstone v5.051\_PF\_CaseSA19.8\_RoofCollapse\_Check

SRS Saltstone v5.051\_PF\_CaseSA20.8\_EarlyRelease1.gsm Changed Model Check Form (1  
Page)

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA20.8_EarlyRelease1.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport(CaseSA20.8)\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA			
SectorXX_100m Where XX = A through H	\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy):  4/25/19				


SRS Saltstone v5.051\_PF\_CaseSA21.8\_EarlyRelease2.gsm Changed Model Check Form (1  
Page)

New Model ID (or filename):		Source Model ID (or filename):				
SRS Saltstone v5.051_PF_CaseSA21.8_EarlyRelease2.gsm		SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date:		Source Model File Date:				
4/16/2019		4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport\CaseSA21.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print):		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Steve Hommel						
Checker Name (print):		E-Signature (or sign/date/scan hardcopy):				
David Watkins		 4/25/19				

SRS Saltstone v5.051\_PF\_CaseSA24.8\_PartialCracks.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA24.8_PartialCracks.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport\CaseSA24.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmod el	\\DisposalUnits\SD Us\OuterLoop\Inn erLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentra tions\PORFLOW_ Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentra tions\PORFLOW_ Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\Model_Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): 				

SRS Saltstone v5.051\_PF\_CaseSA24.8\_PartialCracks\_Check

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SRS Saltstone v5.051\_PF\_CaseSA25.8\_FullCracks.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA25.8_FullCracks.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\80\srr19\SaltstonePA4\AquiferZ\Transport\CaseSA25.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/30/2019				


SRS Saltstone v5.051\_PF\_CaseSA25.8\_FullCracks\_Check

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SRS Saltstone v5.051\_PF\_CaseSA26.8\_DesignMargin.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA26.8_DesignMargin.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork80\sr19\SaltstonePA4\AquiferZ\Transport\CaseSA26.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmod el	DisposalUnits\SD Us\OuterLoop\In erLoop	Submodel shows as changed. No change was made.	NA			
SectorXX_100m Where XX = A through H	Model_Concentra tions\PORFLOW_ Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WelXX Where XX = 1 through 7	Model_Concentra tions\PORFLOW_ Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	Model_Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy):  4/25/19				

SRS Saltstone v5.051\_PF\_CaseSA27.8\_SandK\_High.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA27.8_SandK_High.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\80srr19\SaltstonePA4\AquiferZ\Transport\CasesSA27.8\All						
[not applicable]	[not applicable]	Model was renamed.				
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.				
SectorXX_100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)				
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)				
IHL_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)				
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): <i>G.P. Flach 4/29/2019</i>				

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SRS Saltstone v5.051\_PF\_CaseSA27.8\_SandK\_High\_Check



SRS Saltstone v5.051\_PF\_CaseSA28.8\_SandK\_Low.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA28.8_SandK_Low.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\801srr19\SaltstonePA4\AquiferZ\Transport\CaseSA28.8\AI						
[not applicable]	[not applicable]	Model was renamed.				
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.				
SectorXX_100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)				
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)				
IHL_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)				
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): Add additional rows above, as needed.				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/27/2019				

SRS Saltstone v5.051\_PF\_CaseSA28.8\_SandK\_Low\_Check

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SRS Saltstone v5.051\_PF\_CaseSA29.8\_SDU4\_CLSM.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA29.8_SDU4_CLSM.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y/N	Checker Comment	Analyst Response	Checker Concur? Y/N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\k80srr19\SaltstonePA4\AquiferZ\Transport\CaseSA29.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): B.P. Flach		E-Signature (or sign/date/scan hardcopy): B.P. Flach 4/29/2019				

SRS Saltstone v5.051\_PF\_CaseSA29.8\_SDU4\_CLSM\_Check

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SRS Saltstone v5.051\_PF\_CaseSA30.8\_StratSS\_wDisp.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA30.8_StratSS_wDisp.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport\CaseSA30.8\VAI						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P.F./ach		E-Signature (or sign/date/scan hardcopy): G.P.F./ach 4/29/2019				

SRS Saltstone v5.051\_PF\_CaseSA30.8\_StratSS\_wDisp\_Check

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SRS Saltstone v5.051\_PF\_CaseSA31.8\_Disp.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseSA31.8_Disp.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\80\sr19\SaltstonePA4\AquiferZ\Transport\CaseSA31.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\disposal\units\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
Sector XX_100m Where XX = A through H	\\model_concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_Well XX Where XX = 1 through 7	\\model_concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\model_concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): <i>G.P. Flach 4/29/2019</i>				

SRS Saltstone v5.051\_PF\_CaseSA31.8\_Disp\_Check

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SRS Saltstone v5.051\_PF\_CaseCV.8.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority  
Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/11/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\80\sr19\SaltstonePA4\AquiferZ\Transport\CaseCV.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
MQB_SeepLine UTR_SeepLine	\\Model_Concentrations\PORFLOW_Conc	SeepLine concentrations pasted into each element from path: \\godzilla-01\hpc_project\projwork\80\sr19\SaltstonePA4\AquiferGSA\Transport\CaseCV.8\All	Y			


SRS Saltstone v5.051\_PF\_CaseCV.8\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
<b>New Model File Date:</b> 4/11/2019		<b>Source Model File Date:</b> 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UsePORFLOW_SLCon c	User_Input	Set to TRUE. For the compliance case, we have seepage results (see previous entry) so this element is used to tell GoldSim to use the PORFLOW result instead of assuming the seepage ratio.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/23/19				

SRS Saltstone v5.051\_PF\_CaseCV.8\_Check

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SRS Saltstone v5.051\_Pf\_CaseBE.8.gsm Changed Model Check Form (1 Page)

New Model ID (or filename): SRS Saltstone v5.051_Pf_CaseBE.8.gsm		Source Model ID (or filename): SRS Saltstone v5.051_Pf_DoseCalc_Template.gsm				
New Model File Date: 4/11/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y, N	Checker Comment	Analyst Response	Checker Concur? Y, N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\801srr19\SaltstonePA4\AquiferZ\Transport\CaseBE.8\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\disposal\units\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA			
SectorXX_100m Where XX = A through H	\\model_concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m WellXX Where XX = 1 through 7	\\model_concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\model_concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
Scenario_switch	\\user_input	Set to 1 to apply realistic case inputs for the dose calculator	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy): <i>Carl Watkins</i> 4/23/19				



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SRS Saltstone v5.051\_Pf\_CaseBE.8\_Check



SRS Saltstone v5.051\_PF\_CaseCE.8.gsm Changed Model Check Form (1 Page)

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCE.8.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm	
New Model File Date: 4/11/2019		Source Model File Date: 4/11/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Dose calculator results for PORFLOW run: \godzilla-01\hpc_project\projwork80\srr19\SaltstonePA4\AquiferZ\Transport\CaseCE.8\All			
[not applicable]	[not applicable]	Model was renamed.	Y
SDU_TransportSubmodel	\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA
SectorXX_100m Where XX = A through H	\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y
IHL_1m_WellXX Where XX = 1 through 7	\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y
IHL_at_1m	\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y
Scenario_switch	\User_Input	Set to 3 to apply defn. in depth inputs for the dose calculator	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy):  4/23/19	
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy):  4/23/19	

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SRS Saltstone v5.051\_PF\_CaseCE.8\_Check

SRS Saltstone v5.051\_AllSDUs\_Vel2Dil2\_conc.gsm Changed Model Check Form (1 Page)

**Changed Model Check Form**

Waste Disposal Authority

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_AllSDUs_Vel2Dil2_conc.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051.gsm			
<b>New Model File Date:</b> 4/1/2019		<b>Source Model File Date:</b> 4/10/2019			
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>	<b>Checker Comment</b>	<b>Analyst Response</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.					
<b>DilutionMask_Option and Velocity_Option based on Stream Trace Analysis and MOP concentrations saved</b>					
Velocity_Option	\\Transport\\WaterT ransport\\FlowField PEST101	Set to 2.	Y		
DilutionMask_Option	\\Transport\\WaterT ransport\\FlowField PEST101	Set to 2.	Y		
SDU_Choice	\\Transport\\WaterT ransport\\FlowField PEST101	Not changed (left at 2)	NA		
If checker has no comments, check here. <input checked="" type="checkbox"/>					
<b>Analyst Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> Add additional rows above, as needed.			
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19			

SRS Saltstone v5.051\_AllSDUs\_Vel2Dil2\_conc\_Check

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4/29/2019

SRS Saltstone v5.051\_AllSDUs\_Vel2Dil2\_conc\_NoI129.gsm Changed Model Check Form  
(2 Pages)

Waste Disposal Authority  
Changed Model Check Form

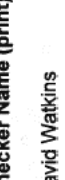
<b>New Model ID (or filename):</b> SRS Saltstone v5.051_AllSDUs_Vel2Dil2_conc_NoI129.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051.gsm				
<b>New Model File Date:</b> 4/15/2019		<b>Source Model File Date:</b> 4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>DilutionMask_Option and Velocity_Option based on Stream Trace Analysis and MOP concentrations saved (without I-129)</b>						
Velocity_Option	\\Transport\\WaterT ransport\\FlowField PEST101	Set to 2.	Y			
DilutionMask_Option	\\Transport\\WaterT ransport\\FlowField PEST101	Set to 2.	Y			
SDU_Choice	\\Transport\\WaterT ransport\\FlowField PEST101	Not changed (left at 2)	NA			
Conc_100m	\\Dose_Results\\Se ctA_100m_Dose	I-129 concentrations zeroed out	Y			
Conc_100m	\\Dose_Results\\Se ctB_100m_Dose	I-129 concentrations zeroed out	Y			
Conc_100m	\\Dose_Results\\Se ctC_100m_Dose	I-129 concentrations zeroed out	Y			
Conc_100m	\\Dose_Results\\Se ctD_100m_Dose	I-129 concentrations zeroed out	Y			
Conc_100m	\\Dose_Results\\Se ctE_100m_Dose	I-129 concentrations zeroed out	Y			
Conc_100m	\\Dose_Results\\Se ctF_100m_Dose	I-129 concentrations zeroed out	Y			
Conc_100m	\\Dose_Results\\Se ctG_100m_Dose	I-129 concentrations zeroed out	Y			
Conc_100m	\\Dose_Results\\Se ctH_100m_Dose	I-129 concentrations zeroed out	Y			
Conc_SL	\\Dose_Results	I-129 concentrations zeroed out	Y			

SRS Saltstone v5.051\_AllSDUs\_Vel2Dil2\_conc\_NoI129\_Check

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## Waste Disposal Authority

New Model ID (or filename):		Source Model ID (or filename):				
SRS Saltstone v5.051_AISDUs_Ver2DI2_conc_Nol129.gsm		SRS Saltstone v5.051.gsm				
New Model File Date:		Source Model File Date:				
4/15/2019		4/10/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
<p>If checker has no comments, check here. <input checked="" type="checkbox"/></p> <p>Add additional rows above, as needed.</p>						
Analyst Name (print):		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Barry Lester						
Checker Name (print):		E-Signature (or sign/date/scan hardcopy):				
David Watkins		 4/29/19				

SRS Saltstone v5.051\_PF\_CaseBE.8\_IHI\_SoilDrill\_A.gsm Changed Model Check Form (2  
Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseBE.8_IHI_SoilDrill_A.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseBE.8.gsm		
<b>New Model File Date:</b> 4/19/2019		<b>Source Model File Date:</b> 4/11/2019		
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.				
<b>Objective:</b> Realistic Case: IHI analysis using soil drill cuttings. Note: Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. These are identified in purple.				
[not applicable]	[not applicable]	Model was renamed.	Y	
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA	
Dose_IHI_rads	Dose_Results\Acute_IHI_Dose	While performing analysis of the acute IHI, a mistake was found in this element. Instead of pulling in the ingestion dose, it had inhalation twice. This mistake was corrected for IHI runs.	Y	
Drill_Cutting_Inv_Soil	Model_Concentrations	Data in element was updated. During the review of the PA text, an SRR reviewer rightfully pointed out that we have PORFLOW results with actual soil concentrations. From the PORFLOW data, a most probable and defensible (MPAD) inventory was developed for soil drill cuttings. See the Excel file: SoilDrillCuttings_rev3.xlsx	Y	
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the checking form for the source file.	Y	

SRS Saltstone v5.051\_PF\_CaseBE.8\_IHI\_SoilDrill\_A\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_Pf_CaseBE.8_IHI_SoilDrill_A.gsm		Source Model ID (or filename): SRS Saltstone v5.051_Pf_CaseBE.8.gsm				
New Model File Date: 4/19/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHI_1m_WellXX Where XX = 1 through 7	Model_Concentra tions\PORFLOW_ Conc	IHI concentrations pasted into each element from path identified in the checking form for the source file.	Y			
IHI_at_1m	Model_Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the checking form for the source file.	Y			
IntruderInventorySwitch	User_Input	Set value to 1 so that the model will use the soil-based drill cutting inventory for IHI dose calcs.	Y			
Scenario_switch	User_Input	Set to 1 to apply realistic (best estimate) inputs for the dose calculator	Y			
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/30/2019				

SRS Saltstone v5.051\_Pf\_CaseBE.8\_IHI\_SoilDrill\_A\_Check

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SRS Saltstone v5.051\_PF\_CaseCE.8\_IHI\_SoilDrill\_A.gsm Changed Model Check Form (2  
Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCE.8_IHI_SoilDrill_A.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCE.8.gsm				
<b>New Model File Date:</b> 4/19/2019		<b>Source Model File Date:</b> 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Defense-in-Depth Case: IHI analysis using soil drill cuttings. <b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. These are identified in purple.						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No change was made.	NA			
Dose_IHI_rads	\\Dose_Results\\Acute_IHI_Dose	While performing analysis of the acute IHI, a mistake was found in this element. Instead of pulling in the ingestion dose, it had inhalation twice. This mistake was corrected for IHI runs.	Y			
Drill_Cutting_Inv_Soil	\\Model_Concentrations	Data in element was updated. During the review of the PA text, an SRR reviewer rightfully pointed out that we have PORFLOW results with actual soil concentrations. From the PORFLOW data, a most probable and defensible (MPAD) inventory was developed for soil drill cuttings. See the Excel file: SoilDrillCuttings_rev3.xlsx	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the checking form for the source file.	Y			

SRS Saltstone v5.051\_PF\_CaseCE.8\_IHI\_SoilDrill\_A\_Check

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Waste Disposal Authority

Changed Model Check Form


New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCE.8_IHI_SoilDrill_A.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_CaseCE.8.gsm				
New Model File Date: 4/19/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHI_1m_WellXX Where XX = 1 through 7	Model_Concentra tions\PORFLOW_ Conc	IHI concentrations pasted into each element from path identified in the checking form for the source file.	Y			
IHI_at_1m	Model_Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the checking form for the source file.	Y			
IntruderInventorySwitch	User_Input	Set value to 1 so that the model will use the soil-based drill cutting inventory for IHI dose calcs.	Y			
Scenario_switch	User_Input	Set to 3 to apply defn. in depth inputs for the dose calculator	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/30/2019				

SRS Saltstone v5.051\_PF\_CaseCE.8\_IHI\_SoilDrill\_A\_Check

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SRS Saltstone v5.051\_PF\_CaseCV.8\_SDUXX.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8_SDXX.gsm (where XX = 01, 02A, 02B, 03A, 03B, 04, 05A, 05B, 06, 07, 08, 09, 10, 11, and 12)		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/11/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Evaluate individual SDU doses from PORFLOW runs at: \\godzilla-01\hpc_project\projwork\80\sr19\SaltstonePA4\AquiferZ\Transport\CaseCV.8\SDUXX (where XX = 1, 2A, 2B, 3A, 3B, 4, 5A, 5B, 6, 7, 8, 9, 10, 11, and 12)						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA			
SeepToWellRatio	\\User_Input	Multipled value by zero to change the seepine ratio to zero	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
UsePORFLOW_SLConc	\\User_Input	Changed to False to apply the zero seepine ratio.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy):  4/24/19				

SRS Saltstone v5.051\_PF\_CaseCV.8\_IHI\_SDUDrill.gsm Changed Model Check Form (3  
Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8_IHI_SDUDrill.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8.gsm				
<b>New Model File Date:</b> 4/18/2019		<b>Source Model File Date:</b> 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Compliance Case: IHI analysis using the SDU drill cuttings. Note: Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. These are identified in purple.						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDU\\OuterLoop\\InnerLoop	Submodel shows as changed. No change was made.	NA			
Dose_IHI_rads	\\Dose_Results\\Acute_IHI_Dose	While performing analysis of the acute IHI, a mistake was found in this element. Instead of pulling in the ingestion dose, it had inhalation twice. This mistake was corrected for IHI runs.	Y			
Drill_Cutting_Inv_SDU	\\Model_Concentrations	Data in element was updated. Data in the excel files developed in support of SRR-CWDA-2018-00041, Rev. 2 and SRR-CWDA-2018-00044, Rev 3 were copied into SoilDrillCuttings_rev3.xlsx (sheet: SDUCrillCutting) so it could be sorted by the GoldSim species list. Note that I used more sig figs than those in the report.	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\\PDRFLOW_Conc	100m concentrations pasted into each element from path identified in the checking form for the source file.	Y			

SRS Saltstone v5.051\_PF\_CaseCV.8\_IHI\_SDUDrill\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_Pf_CaseCV.8_IHI_SDUDrill.gsm			Source Model ID (or filename): SRS Saltstone v5.051_Pf_CaseCV.8.gsm			
New Model File Date: 4/18/2019			Source Model File Date: 4/11/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHI_1m_WellXX Where XX = 1 through 7	Model_Concentra tions\PORFLOW_ Conc	IHI concentrations pasted into each element from path identified in the checking form for the source file.	Y			
IHI_at_1m	Model_Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the checking form for the source file.	Y			
MQB_Seepline UTR_Seepline	Model_Concentra tions\PORFLOW_ Conc	Seepine concentrations pasted into each element from path: \\godzilla- 01\ipc_project\projwork80\sr19 \SaltstonePA4\AquiferGSA\Tran sport\CaseCV.8\AI	Y			
Available_Seepline_Dat a	Model_Concentra tions\PORFLOW_ Conc	Element was setup to use the PORFLOW-calculated seepine concentrations, but this does not affect the results because the effect of the user input: UsePORFLOW_SLConc (see entry below) over-writes this. The seepine ratio is used.	Y			
IntruderInventorySwitch	User_Input	Set value to 2 so that the model will use the SDU-based drill cutting inventory for IHI dose calcs.	Y			
UsePORFLOW_SLCon c	User_Input	Set to False so model will apply the seepine ratio instead of using the PORFLOW seepine concentrations.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Add additional rows above, as needed.						

SRS Saltstone v5.051\_Pf\_CaseCV.8\_IHI\_SDUDrill\_Check

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Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8_IHI_SDUDrill.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8.gsm	
<b>New Model File Date:</b> 4/18/2019		<b>Source Model File Date:</b> 4/11/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
<b>Analyst Name (print):</b> Steve Hommel		<b>Checker Comment</b>	<b>Checker Concur? Y,N</b>
<b>Checker Name (print):</b> G.P. Flach		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)	
		<b>E-Signature (or sign/date/scan hardcopy):</b> [Signature]	

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SRS Saltstone v5.051\_PF\_CaseCV.8\_IHI\_SDUDrill\_Check

SRS Saltstone v5.051\_PF\_CaseCV.8\_AltI129.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8_AltI129.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\80\sr19\SaltstonePA4\AquiferZ\Transport\CaseCV.8_AltI129\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	\\Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/30/2019				

SRS Saltstone v5.051\_PF\_CaseCV.8\_AltI129\_Check

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SRS Saltstone v5.051\_PF\_CaseCV.8\_100K.gsm Changed Model Check Form (2 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8_100K.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_DoseCalc_Template.gsm				
<b>New Model File Date:</b> 4/11/2019		<b>Source Model File Date:</b> 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Dose calculator results for PORFLOW run: \\godzilla-01\hpc_project\projwork\801srr19\SaltstonePA4\AquiferZ\Transport\CaseCV.8_100K\All						
[not applicable]	[not applicable]	Model was renamed.	Y			
[not applicable]	File menu: Run → Simulation Settings	Set time to 100,000 years	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel time reset to match model file time.	Y			
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_1m_WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	IHL concentrations pasted into each element from path identified in the Objective (above)	Y			
IHL_at_1m	Model_Concentrations\PORFLOW_Conc	1m concentrations pasted into each element from path identified in the Objective (above)	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel			<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)			


SRS Saltstone v5.051\_PF\_CaseCV.8\_100K\_Check

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**Changed Model Check Form**

Waste Disposal Authority		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_DoseCalc_Template.gsm	
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8_100K.gsm		New Model File Date: 4/11/2019		Source Model File Date: 4/11/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy):  4/23/19		
			Checker Concur? Y,N		

SRS Saltstone v5.051\_PF\_CaseCV.8\_100K\_Check

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SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_UTR.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						Changed Model Check Form			
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8_SL_UTR.gsm			Source Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8.gsm						
New Model File Date: 4/1/2019			Source Model File Date: 4/1/2019						
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N			
<p>Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&amp;DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&amp;DV Form 4) for this model.</p> <p><b>Objective:</b> Evaluate the UTR Seepage concentrations. <b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. Refer to the check sheet for the source file for more information.</p>									
[not applicable]	[not applicable]	Model was renamed.	Y						
PORFLOW_Seepline	Model_Concentra tions\PORFLOW_ Conc	Modified selector logic to force GoldSim to only use the Upper Three Runs concentrations.	Y						
<p>If checker has no comments, check here. <input checked="" type="checkbox"/></p> <p><b>Analyst Name (print):</b> Steve Hommel</p> <p><b>E-Signature (or sign/date/scan hardcopy):</b> Add additional rows above, as needed.</p>									
<p><b>Checker Name (print):</b> David Watkins</p> <p><b>E-Signature (or sign/date/scan hardcopy):</b> <i>David Watkins</i> 4/23/19</p>									

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_UTR\_Check

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SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_MQB.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						Changed Model Check Form			
New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8_SL_MQB.gsm			Source Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8.gsm						
New Model File Date: 4/1/2019			Source Model File Date: 4/1/2019						
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N			
<p>Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&amp;DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&amp;DV Form 4) for this model.</p> <p><b>Objective:</b> Evaluate the MQB Seepage concentrations. <b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. Refer to the check sheet for the source file for more information.</p>									
[not applicable]	[not applicable]	Model was renamed.	Y						
PORFLOW_Seepage	Model_Concentra tions\PORFLOW_ Conc	Modified selector logic to force GoldSim to only use the McQueen Branch concentrations.	Y						
<p>If checker has no comments, check here. <input checked="" type="checkbox"/></p> <p><b>Analyst Name (print):</b> Steve Hommel</p> <p><b>E-Signature (or sign/date/scan hardcopy):</b> Add additional rows above, as needed.</p>									
<p><b>Checker Name (print):</b> David Watkins</p> <p><b>E-Signature (or sign/date/scan hardcopy):</b> <i>David Watkins</i> 4/23/19</p>									

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SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_MQB\_Check

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8.gsm			
<b>New Model File Date:</b> 4/11/2019		<b>Source Model File Date:</b> 4/11/2019			
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct Y, N</b>	<b>Checker Comment</b>	<b>Analyst Response</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.					
<b>Objective:</b> Evaluate the seepage ratio. <b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. Refer to the check sheet for the source file for more information.					
[not applicable]	[not applicable]	Model was renamed.	Y		
UsePORFLOW_SLCon c	\\User_Input	Set to False so model will apply the seepage ratio instead of using the PORFLOW seepage concentrations.	Y		
If checker has no comments, check here. <input checked="" type="checkbox"/>					
<b>Analyst Name (print):</b> Steve Hommel			<b>E-Signature (or sign/date/scan hardcopy):</b>  4/23/19		
<b>Checker Name (print):</b> David Watkins			<b>E-Signature (or sign/date/scan hardcopy):</b>  4/23/19		

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_Check



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4/23/2019

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_LoUptake.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_LoUptake.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Evaluate human Uptake dose parameter. <b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. Refer to the check sheet for the source file for more information.						
[not applicable]	[not applicable]	Model was renamed.	Y			
Scenario_switch	\User_Input	Set to 1 to apply the lower uptake values. Note that this element effects a number of other elements, but when GoldSim is used as a PORFLOW dose calculator, this element only effects the uptake rates.	Y			
UsePORFLOW_SLConc	\User_Input	Set to false to use the seepiline concentration.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19				

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_LoUptake\_Check


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4/29/2019

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_LocFrac=1.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_LocFrac=1.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8.gsm	
<b>New Model File Date:</b> 4/18/2019		<b>Source Model File Date:</b> 4/11/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Evaluate Local Fractions dose parameter. <b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. Refer to the check sheet for the source file for more information.			
[not applicable]	[not applicable]	Model was renamed.	Y
ApplyLocalFractions	\\User_Input	Set to False. This changes the local fractions to be = 1 (i.e., assumed 100% of food is locally contaminated.)	Y
UsePORFLOW_SLConc	\\User_Input	Set to false to use the seepage concentration.	Y
If checker has no comments, check here. <input type="checkbox"/>			
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19	

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_LocFrac=1.gsm\_Check

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SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_LocFrac=0.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_LocFrac=0.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8.gsm	
<b>New Model File Date:</b> 4/18/2019		<b>Source Model File Date:</b> 4/11/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct Y, N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Evaluate Local Fractions dose parameter. <b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. Refer to the check sheet for the source file for more information.			
[not applicable]	[not applicable]	Model was renamed.	Y
FracLocal <del>XX</del> _MOP_det (where XX = Plants, Meat, Milk, Poultry, and Egg)	\\Dose_Parameter_C alculations\\DosePar ameters\\LocalFracti onParameters	Multipled value in first statement by zero to set local fraction values to 0	Y
FracLocal <del>XX</del> _JHI_det (where XX = Plants, Meat, Milk, Poultry, and Egg)	\\Dose_Parameter_C alculations\\DosePar ameters\\LocalFracti onParameters	Multipled value in first statement by zero to set local fraction values to 0	Y
FracLocal <del>Fished</del> _det	\\Dose_Parameter_C alculations\\DosePar ameters\\LocalFracti onParameters	Multipled value in first statement by zero to set local fraction values to 0	Y
UsePORFLOW_SLConc	User_Input	Set to false to use the seepline concentration.	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)	
<b>Checker Name (print):</b> G.P. Flach		<b>E-Signature (or sign/date/scan hardcopy):</b> G.P. Flach 4/30/2019	

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_LocFrac=0.gsm\_Check

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SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_HiUptake.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_HiUptake.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Evaluate human Uptake dose parameter. <b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. Refer to the check sheet for the source file for more information.						
[not applicable]	[not applicable]	Model was renamed.	Y			
Scenario_switch	\User_Input	Set to 3 to apply the higher uptake values. Note that this element effects a number of other elements, but when GoldSim is used as a PORFLOW dose calculator, this element only effects the uptake rates.	Y			
UsePORFLOW_SLConc	\User_Input	Set to false to use the seepiline concentration.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19				

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SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_HiUptake\_Check

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_BigGarden.gsm Changed Model Check  
Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_BigGarden.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8.gsm				
<b>New Model File Date:</b> 4/18/2019		<b>Source Model File Date:</b> 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
<p>Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&amp;DV Form 4) for this model?</p> <p>- If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&amp;DV Form 4) for this model.</p> <p><b>Objective:</b> Evaluate Garden Size dose parameter.</p> <p><b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. Refer to the check sheet for the source file for more information.</p>						
[not applicable]	[not applicable]	Model was renamed.	Y			
GardenSize	\\Dose_Parameter Calculations\\Dose Parameters\\Crop Parameters	Modified value to be ten times bigger (from 100 m <sup>2</sup> to 1000 m <sup>2</sup> )	Y			
UsePORFLOW_SLCon c	\\User_Input	Set to false to use the seep line concentration.	Y			
<p>If checker has no comments, check here. <input checked="" type="checkbox"/></p> <p><b>Analyst Name (print):</b> Steve Hommel</p> <p><b>Checker Name (print):</b> David Watkins</p> <p><b>E-Signature (or sign/date/scan hardcopy):</b> 4/29/19</p>						

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_BigGarden\_Check



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SRS Saltstone v5.051\_PF\_CaseCV.8\_noSL.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8_noSL.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8.gsm	
<b>New Model File Date:</b> 4/11/2019		<b>Source Model File Date:</b> 4/11/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Evaluate zero Seepage concentrations. <b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. Refer to the check sheet for the source file for more information.			
[not applicable]	[not applicable]	Model was renamed.	Y
SeepToWellRatio	\\User_Input	Multiplied value by zero to change the seepage ratio to zero	Y
UsePORFLOW_SLConc	\\User_Input	Changed to False to apply the zero seepage ratio.	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/23/19	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/23/19	

SRS Saltstone v5.051\_PF\_CaseCV.8\_noSL\_Check

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SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_A.gsm Changed Model  
Check Form (3 Pages)

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_IHI_SoilDrill_A.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.051_PF_CaseCV.8.gsm	
<b>New Model File Date:</b> 4/18/2019		<b>Source Model File Date:</b> 4/11/2019	

Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective: Compliance Case: IHI analysis using soil drill cuttings.</b> <b>Note: Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. These are identified in purple.</b>						
[not applicable]	[not applicable]	Model was renamed.				
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoopInnerLoop	Submodel shows as changed. No change was made.	NA			
Dose_IHI_rads	Dose_ResultsVac ute_IHI_Dose	While performing analysis of the acute IHI, a mistake was found in this element. Instead of pulling in the ingestion dose, it had inhalation twice. This mistake was corrected for IHI runs.	Y			
Drill_Cutting_Inv_Soil	Model_Concentrations	Data in element was updated. During the review of the PA text, an SRR reviewer rightfully pointed out that we have PORFLOW results with actual soil concentrations. From the PORFLOW data, a most probable and defensible (MPAD) inventory was developed for soil drill cuttings. See the Excel file: SoilDrillCuttings_rev3.xlsx	Y			
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the checking form for the source file.	Y			

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SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_A\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_IHI_SoilDrill_A.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8.gsm				
New Model File Date: 4/18/2019		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHI_1m_WellXX Where XX = 1 through 7	Model_Concentra tions\PORFLOW_ Conc	IHI concentrations pasted into each element from path identified in the checking form for the source file.	Y			
IHI_at_1m	Model_Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the checking form for the source file.	Y			
MOB_SeepLine UTR_SeepLine	Model_Concentra tions\PORFLOW_ Conc	SeepLine concentrations pasted into each element from path: \\godzilla- 01\hpc_project\projwork80\smr19 1\SaltstonePA44\AQUIFER\GSAITran sport\CaseCV.8\All	Y			
Available_SeepLine_Dat a	Model_Concentra tions\PORFLOW_ Conc	Element was setup to use the PORFLOW-calculated seepLine concentrations, but this does not affect the results because the effect of the user input: UsePORFLOW_SLConc (see entry below) over-writes this. The seepLine ratio is used.	Y			
IntruderInventorySwitch	User_Input	Set value to 1 so that the model will use the soil-based drill cutting inventory for IHI dose calcs.	Y			
UsePORFLOW_SLCon c	User_Input	Set to False so model will apply the seepLine ratio instead of using the PORFLOW seepLine concentrations.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>			Add additional rows above, as needed.			

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_A\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_IHI_SoilDrill_A.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8.gsm	
New Model File Date: 4/18/2019		Source Model File Date: 4/11/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
Analyst Name (print): Steve Hommel		Checker Comment	
Checker Name (print): G.P. Flach		E-Signature (or sign/date/scan hardcopy): 4/29/2019	
		Analyst Response	Checker Concur? Y,N
		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)	

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_A\_Check

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SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_B.gsm Changed Model  
Check Form (3 Pages)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_IHI_SoilDrill_B.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8.gsm				
New Model File Date: 4/18/2019 4/30/19 SPH		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Compliance Case: IHI analysis using soil drill cuttings. (Alternative Soil Drill Cutting: B) <b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. These are identified in purple.						
[not applicable]	[not applicable]	Model was renamed.				
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No change was made.	NA			
Dose_IHI_rads	\\Dose_Results\\Acute_IHI_Dose	While performing analysis of the acute IHI, a mistake was found in this element. Instead of pulling in the ingestion dose, it had inhalation twice. This mistake was corrected for IHI runs.	N	"Inhaled In-Dust Dose - IHI - rads" appears twice in this element	Error fixed. Model reran. No impact to PA because this is not used in discussion.	Y
Drill_Cutting_Inv_Soil	\\Model_Concentrations	Data in element was updated. Assumes alternative Soil Inventory: "SoilDrillB". See the Excel file: SoilDrillCuttings_rev3.xlsx	Y			
SectorXX_100m Where XX = A through H	\\Model_Concentrations\\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the checking form for the source file.	Y			
IHI_1m_WellXX Where XX = 1 through 7	\\Model_Concentrations\\PORFLOW_Conc	IHI concentrations pasted into each element from path identified in the checking form for the source file.	Y			

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_B\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_Pf_CaseCV.8_SL_Ratio_IHI_SoilDrill_B.gsm		Source Model ID (or filename): SRS Saltstone v5.051_Pf_CaseCV.8.gsm				
New Model File Date: <del>4/18/2019</del> 4/30/2019 SH		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHI_at_1m	Model_Concentra tions\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the checking form for the source file.	Y			
MQB_SeepLine UTR_SeepLine	Model_Concentra tions\PORFLOW_ Conc	SeepLine concentrations pasted into each element from path: \\godzilla- 01\hpc_project\projwork\80\lrr19 1\SaltstonePA4\AquiferGSAITran sport\CaseCV.8\All	Y			
Available_SeepLine_Dat a	Model_Concentra tions\PORFLOW_ Conc	Element was setup to use the PORFLOW-calculated seepLine concentrations, but this does not affect the results because the effect of the user input: UsePORFLOW_SLConc (see entry below) over-writes this. The seepLine ratio is used.	Y			
IntruderInventorySwitch	User_Input	Set value to 1 so that the model will use the soil-based drill cutting inventory for IHI dose calcs.	Y			
UsePORFLOW_SLCon c	User_Input	Set to False so model will apply the seepLine ratio instead of using the PORFLOW seepLine concentrations.	Y			
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)  SEPHC 4/30/2019				

SRS Saltstone v5.051\_Pf\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_B\_Check

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Waste Disposal Authority

**Changed Model Check Form**

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_IHI_SoilDrill_B.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8.gsm	
New Model File Date: 4/4/2019 4/30/19 SPH		Source Model File Date: 4/11/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
Checker Name (print): G.P. Flach			Checker Comment
		E-Signature (or sign/date/scan hardcopy): G.P. Flach 4/30/2019	
		Analyst Response	Checker Concur? Y,N

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SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_B\_Check

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_C.gsm Changed Model  
Check Form (3 Pages)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_IHI_SoilDrill_C.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8.gsm				
New Model File Date: 4/4/2019 4/30/2019 sph		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Compliance Case: IHI analysis using soil drill cuttings. (Alternative Soil Drill Cutting: C) <b>Note:</b> Because the source file was not versioned, the GoldSim-generated version report shows more changes than those documented here. These are identified in purple.						
[not applicable]	[not applicable]	Model was renamed.				
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoopInnerLoop	Submodel shows as changed. No change was made.	NA			
Dose_IHI_rads	Dose_Results\Vacuate_IHI_Dose	While performing analysis of the acute IHI, a mistake was found in this element. Instead of pulling in the ingestion dose, it had inhalation twice. This mistake was corrected for IHI runs.	N	"InhalationDose" - IHI_rads appears twice in this element	Error fixed. Model re-ran. No impact to PA because this is not used in discussion.	Y
Drill_Cutting_Inv_Soil	Model_Concentrations	Data in element was updated. Assumes alternative Soil Inventory: "SoilDrillC". See the Excel file: SoilDrillCuttings_rev3.xlsx	Y			
SectorXX_100m Where XX = A through H	Model_Concentrations\PORFLOW_Conc	100m concentrations pasted into each element from path identified in the checking form for the source file.	Y			
IHI_1m_WellXX Where XX = 1 through 7	Model_Concentrations\PORFLOW_Conc	IHI concentrations pasted into each element from path identified in the checking form for the source file.	Y			

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_C\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_Pf_CaseCV.8_SL_Ratio_IHI_SoilDrill_C.gsm		Source Model ID (or filename): SRS Saltstone v5.051_Pf_CaseCV.8.gsm				
New Model File Date: 4/18/2019 4/30/2019 SPH		Source Model File Date: 4/11/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
IHI_at_1m	\\Model_Concentra tions\\PORFLOW_ Conc	1m concentrations pasted into each element from path identified in the checking form for the source file.	Y			
MQB_Seepline UTR_Seepline	\\Model_Concentra tions\\PORFLOW_ Conc	Seepline concentrations pasted into each element from path: \\godzilla- 01\\hpc_project\\projwork80\\srr19 \\SaltstonePA4\\AquiferGSA\\Tran sport\\CaseCV.8\\All	Y			
Available_Seepline_Dat a	\\Model_Concentra tions\\PORFLOW_ Conc	Element was setup to use the PORFLOW-calculated seepline concentrations, but this does not affect the results because the effect of the user input: UsePORFLOW_SLConc (see entry below) over-writes this. The seepline ratio is used.	Y			
IntruderInventorySwitch	\\User_Input	Set value to 1 so that the model will use the soil-based drill cutting inventory for IHI dose calcs.	Y			
UsePORFLOW_SLCon c	\\User_Input	Set to False so model will apply the seepline ratio instead of using the PORFLOW seepline concentrations.	Y			
If checker has no comments, check here. <input type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments) SPH 4/30/2019				

SRS Saltstone v5.051\_Pf\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_C\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8_SL_Ratio_IHI_SoilDrill_C.gsm		Source Model ID (or filename): SRS Saltstone v5.051_PF_CaseCV.8.gsm	
New Model File Date: 4/4/2019 4/30/19 SPH		Source Model File Date: 4/11/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
Checker Name (print): G.P.Flach		Checker Comment	
		E-Signature (or sign/date/scan hardcopy): G.P.Flach 4/30/2019	
		Analyst Response	Checker Concur? Y,N

SRS Saltstone v5.051\_PF\_CaseCV.8\_SL\_Ratio\_IHI\_SoilDrill\_C\_Check

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SRS Saltstone v5.053\_RS1.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.053_RS1.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.053.gsm				
<b>New Model File Date:</b> 4/22/2019		<b>Source Model File Date:</b> 4/15/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Setup for probabilistic run						
InventoryChooser_switch	User_Input	Changed switch to 2	Y	None	N/A	Y
IntruderInventorySwitch	User_Input	Changed switch to 3	Y	None	N/A	Y
HumanUptakeChooser_switch	User_Input	Changed switch to 2	Y	None	N/A	Y
Monte Carlo	Menu/Run/Simulation Settings	Chose Probabilistic Simulations, set to 1,000 realizations, and left Random Seed at 1	Y	None	N/A	Y
Kd_Dist_Sand	Materials\SandyS oilKds	Added Truncation Limits to Stochastic Element	Y	None	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  4/23/2019				
<b>Checker Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/23/2019				

SRS Saltstone v5.053\_RS1\_Check.docx

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SRS Saltstone v5.053\_RS2.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.053_RS2.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.053.gsm				
<b>New Model File Date:</b> 4/22/2019		<b>Source Model File Date:</b> 4/15/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Setup for probabilistic run						
InventoryChooser_switch	User_Input	Changed switch to 2	Y	None	N/A	Y
IntruderInventorySwitch	User_Input	Changed switch to 3	Y	None	N/A	Y
HumanUptakeChooser_switch	User_Input	Changed switch to 2	Y	None	N/A	Y
Monte Carlo	Menu/Run/Simulation Settings	Chose Probabilistic Simulations, set to 1,000 realizations, and changed Random Seed to 2	Y	None	N/A	Y
Kd_Dist_Sand	Materials\SandyS oilKds	Added Truncation Limits to Stochastic Element	Y	None	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  <div style="text-align: right;"> <i>gc</i> 07/20 4/23/2019 </div>				
<b>Checker Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b>  <div style="text-align: right;"> <i>gc</i> 07/20 4/23/2019 </div>				

SRS Saltstone v5.053\_RS2\_Check.docx

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SRS Saltstone v5.053\_RS3.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.053_RS3.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.053.gsm				
<b>New Model File Date:</b> 4/22/2019		<b>Source Model File Date:</b> 4/15/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Setup for probabilistic run						
InventoryChooser_switch	\User_Input	Changed switch to 2	Y	None	N/A	Y
IntruderInventorySwitch	\User_Input	Changed switch to 3	Y	None	N/A	Y
HumanUptakeChooser_switch	\User_Input	Changed switch to 2	Y	None	N/A	Y
Monte Carlo	Menu/Run/Simulation Settings	Chose Probabilistic Simulations, set to 1,000 realizations, and changed Random Seed to 3	Y	None	N/A	Y
Kd_Dist_Sand	Materials\SandySoilKds	Added Truncation Limits to Stochastic Element	Y	None	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)  4/23/2019				
<b>Checker Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/23/2019				

SRS Saltstone v5.053\_RS3\_Check.docx

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SRS Saltstone v5.054-CV\_FullPen\_20k.gsm Changed Model Check Form (4 Pages)

**Changed Model Check Form**

Waste Disposal Authority

New Model ID (or filename): SRS Saltstone v5.054_CV_FullPen_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y, N	Checker Concur? Y, N	Analyst Response	Checker Concur? Y, N
<p>Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&amp;DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&amp;DV Form 4) for this model.</p> <p><b>Objective:</b> Create SA for Fully Penetrating Source and no Soft Zone.</p>						
SoftZoneSwitch	User_Input	Reset data element switch to "False"	Y	none	N/A	Y
Lines below were first implemented in SRS Saltstone v5.054_CV_SoftZones_FullPen_20k.gsm						
SoftZoneFactor	User_Input	Added data element to assign factor to reduce aquifer thickness to represent fast zones (for deterministic runs only). Set element to 0.1.	Y	none	N/A	Y
SZF	User_Input	Added selector element to assign SoftZoneFactor if SoftZoneSwitch or 1.0 if "not SoftZoneSwitch".	Y	none	N/A	Y
NearWellPipe_North	IDisposalUnits\SD U1\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness + 2* SatWidth/4.	Y	none	N/A	Y
NearWellPipe_North	IDisposalUnits\SD U1\NearWell	Changed pipe pathway element Area assignment to SZF*FlowArea/4.	Y	none	N/A	Y
NearWellPipe_South	IDisposalUnits\SD U1\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness + 2* SatWidth/4.	Y	none	N/A	Y

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SRS Saltstone v5.054\_CV\_FullPen\_20k\_Check

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.054_CV_FullPen_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
NearWellPipe_South	DisposalUnits\SD U1NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_Central	DisposalUnits\SD U1NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/2.	Y	none	N/A	Y
NearWellPipe_Central	DisposalUnits\SD U1NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/2.	Y	none	N/A	Y
NearWellPipe_North	DisposalUnits\SD U4NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y
NearWellPipe_North	DisposalUnits\SD U4NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_South	DisposalUnits\SD U4NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y
NearWellPipe_South	DisposalUnits\SD U4NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_Central	DisposalUnits\SD U4NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/2.	Y	none	N/A	Y

SRS Saltstone v5.054\_CV\_FullPen\_20k\_Check

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Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.054_CV_FullPen_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
NearWellPipe_Central	DisposalUnits\SDUs\NearWell	Changed pipe pathway element Area assignment to SZF-FlowfaceArea/2	Y	none	N/A	Y
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoopInnerLoop	Added SZF to submodel input interface	Y	none	N/A	Y
FlowfaceAreaMat_North	TransportWaterTransportPlumeCalc_Sectors\PlumeDataMatrices	Updated expression element by multiplying matrix by SZF	Y	none	N/A	Y
FlowfaceAreaMat_South	TransportWaterTransportPlumeCalc_Sectors\PlumeDataMatrices	Updated expression element by multiplying matrix by SZF	Y	none	N/A	Y
SatThicknessMat_North	TransportWaterTransportPlumeCalc_Sectors\PlumeDataMatrices	Updated expression element by multiplying saturated thickness by SZF	Y	none	N/A	Y
SatThicknessMat_South	TransportWaterTransportPlumeCalc_Sectors\PlumeDataMatrices	Updated expression element by multiplying saturated thickness by SZF	Y	none	N/A	Y
SourceThickness_a	TransportWaterTransportPlumeCalc_Sectors\PlumeDataMatrices	Changed Expression element to product of saturated thickness and SZF	Y	none	N/A	Y
Submodel						

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_FullPen_20k.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/17/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SZF	InputData\Material Is\Kds	Added selector element to capture SZF from submodel interface	Y	none	N/A	Y
NearWellPipe_Central	SDUs\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth	Y	none	N/A	Y
NearWellPipe_Central	SDUs\NearWell	Changed pipe pathway element Area assignment to SZF*FlowfaceArea.	Y	none	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Barry Lester			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)			
Checker Name (print): Steven Hummel			E-Signature (or sign/date/scan hardcopy):  4/29/2019			

SRS Saltstone v5.054\_CV\_FullPen\_20k\_Check

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SRS Saltstone v5.054-CV\_SoftZones\_FullPen\_20k.gsm Changed Model Check Form (4  
Pages)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_FullPen_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Create SA for Soft Zone with Fully Penetrating Source.						
SoftZoneSwitch	User_Input	Added data element switch to activate a soft-zone run (for deterministic runs only). Set conditional switch to "True"	Y	none	N/A	Y
SoftZoneFactor	User_Input	Added data element to assign factor to reduce aquifer thickness to represent fast zones (for deterministic runs only). Set element to 0.1.	Y	none	N/A	Y
SZF	User_Input	Added selector element to assign SoftZoneFactor if SoftZoneSwitch or 1.0 if "not SoftZoneSwitch"	Y	none	N/A	Y
NearWellPipe_North	\\DisposalUnits\\SD U1\\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y
NearWellPipe_North	\\DisposalUnits\\SD U1\\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_South	\\DisposalUnits\\SD U1\\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y

SRS Saltstone v5.054\_CV\_SoftZones\_FullPen\_20k\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_FullPen_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
NearWellPipe_South	DisposalUnits\SD U1\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_Central	DisposalUnits\SD U1\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/2.	Y	none	N/A	Y
NearWellPipe_Central	DisposalUnits\SD U1\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/2.	Y	none	N/A	Y
NearWellPipe_North	DisposalUnits\SD U4\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y
NearWellPipe_North	DisposalUnits\SD U4\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_South	DisposalUnits\SD U4\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y
NearWellPipe_South	DisposalUnits\SD U4\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_Central	DisposalUnits\SD U4\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/2.	Y	none	N/A	Y

SRS Saltstone v5.054\_CV\_SoftZones\_FullPen\_20k\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_FullPen_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm		Source Model File Date: 4/17/2019			
New Model File Date: 4/17/2019							
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N	
NearWellPipe_Central	DisposalUnits\SDU4\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/2.	Y	none	N/A	Y	
SDU_TransportSubmodel	DisposalUnits\SDU4\OuterLoop\InnerLoop	Added SZF to submodel input interface	Y	none	N/A	Y	
FlowFaceAreaMat_North	Transport\WaterTransport\PlumeCalc\Sectors\PlumeData\Matrices	Updated expression element by multiplying matrix by SZF	Y	none	N/A	Y	
FlowFaceAreaMat_South	Transport\WaterTransport\PlumeCalc\Sectors\PlumeData\Matrices	Updated expression element by multiplying matrix by SZF	Y	none	N/A	Y	
SatThicknessMat_North	Transport\WaterTransport\PlumeCalc\Sectors\PlumeData\Matrices	Updated expression element by multiplying saturated thickness by SZF	Y	none	N/A	Y	
SatThicknessMat_South	Transport\WaterTransport\PlumeCalc\Sectors\PlumeData\Matrices	Updated expression element by multiplying saturated thickness by SZF	Y	none	N/A	Y	
SourceThickness_a	Transport\WaterTransport\PlumeCalc\Sectors\PlumeData\Matrices	Changed Expression element to product of saturated thickness and SZF	Y	none	N/A	Y	
Submodel							

SRS Saltstone v5.054\_CV\_SoftZones\_FullPen\_20k\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_FullPen_20k.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/17/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SZF	InputDataMaterial IsKds	Added selector element to capture SZF from submodel interface	Y	none	N/A	Y
NearWellPipe_Central	ISDUsINearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth.	Y	none	N/A	Y
NearWellPipe_Central	ISDUsINearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea.	Y	none	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Barry Lester						
E-Signature (or sign/date/scan hardcopy): comments						
Checker Name (print): Steven P. Hammel						
E-Signature (or sign/date/scan hardcopy): see p121 4/30/2019						

SRS Saltstone v5.054\_CV\_SoftZones\_FullPen\_20k\_Check

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SRS Saltstone v5.054-CV\_SoftZones\_20k.gsm Changed Model Check Form (4 Pages)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/22/2019 SPH		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Create SA for Soft Zone with Partially Penetrating Source.						
SoftZoneSwitch	User_Input	Added data element switch to activate a soft-zone run (for deterministic runs only). Set conditional switch to "True"	Y	none	N/A	Y
SoftZoneFactor	User_Input	Added data element to assign factor to reduce aquifer thickness to represent fast zones (for deterministic runs only). Set element to 0.1.	Y	none	N/A	Y
SZF	User_Input	Added selector element to assign SoftZoneFactor if SoftZoneSwitch or 1.0 if "not SoftZoneSwitch".	Y	none	N/A	Y
NearWellPipe_North	DisposalUnits\SD U1\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y
NearWellPipe_North	DisposalUnits\SD U1\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_South	DisposalUnits\SD U1\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y

SRS Saltstone v5.054\_CV\_SoftZones\_20k\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_20k.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/17/2019			
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
NearWellPipe_South	\\DisposalUnits\\SD U1\\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_Central	\\DisposalUnits\\SD U1\\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/2.	Y	none	N/A	Y
NearWellPipe_Central	\\DisposalUnits\\SD U1\\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/2.	Y	none	N/A	Y
NearWellPipe_North	\\DisposalUnits\\SD U4\\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y
NearWellPipe_North	\\DisposalUnits\\SD U4\\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_South	\\DisposalUnits\\SD U4\\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y
NearWellPipe_South	\\DisposalUnits\\SD U4\\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_Central	\\DisposalUnits\\SD U4\\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/2.	Y	none	N/A	Y

SRS Saltstone v5.054\_CV\_SoftZones\_20k\_Check

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4/29/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
NearWellPipe_Central	DisposalUnits\SDU4\NearWell	Changed pipe pathway element Area assignment to SZF*FlowfaceArea/2.	Y	N/A	N/A	Y
SDU_TransportSubmodel	DisposalUnits\SDU4\OuterLoop\InnerLoop	Added SZF to submodel input interface	Y	N/A	N/A	Y
FlowfaceAreaMat_North	Transport\WaterTransport\PlumeCalc_Sectors\PlumeDataMatrices	Updated expression element by multiplying matrix by SZF	Y	N/A	N/A	Y
FlowfaceAreaMat_South	Transport\WaterTransport\PlumeCalc_Sectors\PlumeDataMatrices	Updated expression element by multiplying matrix by SZF	Y	N/A	N/A	Y
SatThicknessMat_North	Transport\WaterTransport\PlumeCalc_Sectors\PlumeDataMatrices	Updated expression element by multiplying saturated thickness by SZF	Y	N/A	N/A	Y
SatThicknessMat_South	Transport\WaterTransport\PlumeCalc_Sectors\PlumeDataMatrices	Updated expression element by multiplying saturated thickness by SZF	Y	N/A	N/A	Y
SourceThickness_a	Transport\WaterTransport\PlumeCalc_Sectors\PlumeDataMatrices	Updated expression element by multiplying source thickness by SZF	Y	N/A	N/A	Y
Submodel						

SRS Saltstone v5.054\_CV\_SoftZones\_20k\_Check

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4/29/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SZF	InputData\UserIn put	Added selector element to capture SZF from submodel interface	Y	none	N/A	Y
NearWellPipe_Central	SDUs\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth.	Y	none	N/A	Y
NearWellPipe_Central	SDUs\NearWell	Changed pipe pathway element Area assignment to SZF*FlowfaceArea.	Y	none	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Barry Lester						
E-Signature (or sign/date/scan hardcopy): (Not required if no comments)						
Checker Name (print): Steven P. Hommel						
E-Signature (or sign/date/scan hardcopy): SPH 4/22/2019						

SRS Saltstone v5.054\_CV\_SoftZones\_20k\_Check

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SRS Saltstone v5.054-CV\_SoftZones\_dv01\_20k.gsm Changed Model Check Form (5 Pages)

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_dv01_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Create SA for Soft Zone with Partially Penetrating Source and transverse vertical dispersivity divided by 100.						
SoftZoneSwitch	\User_Input	Added data element switch to activate a soft-zone run (for deterministic runs only). Set conditional switch to "True"	Y	none	N/A	Y
SoftZoneFactor	\User_Input	Added data element to assign factor to reduce aquifer thickness to represent fast zones (for deterministic runs only). Set element to 0.1.	Y	none	N/A	Y
SZF	\User_Input	Added selector element to assign SoftZoneFactor if SoftZoneSwitch or 1.0 if "not SoftZoneSwitch"	Y	none	N/A	Y
NearWellPipe_North	\DisposalUnits\SD U1\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness + 2*SatWidth/4.	Y	none	N/A	Y
NearWellPipe_North	\DisposalUnits\SD U1\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_South	\DisposalUnits\SD U1\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness + 2*SatWidth/4.	Y	none	N/A	Y

SRS Saltstone v5.054\_CV\_SoftZones\_dv01\_20k\_Check

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4/29/2019



Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_dv01_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019 4/22/2019 SPH		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
NearWellPipe_South	DisposalUnits\SD U1\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_Central	DisposalUnits\SD U1\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/2.	Y	none	N/A	Y
NearWellPipe_Central	DisposalUnits\SD U1\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/2.	Y	none	N/A	Y
NearWellPipe_North	DisposalUnits\SD U4\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y
NearWellPipe_North	DisposalUnits\SD U4\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_South	DisposalUnits\SD U4\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/4.	Y	none	N/A	Y
NearWellPipe_South	DisposalUnits\SD U4\NearWell	Changed pipe pathway element Area assignment to SZF*FlowFaceArea/4.	Y	none	N/A	Y
NearWellPipe_Central	DisposalUnits\SD U4\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth/2.	Y	none	N/A	Y

SRS Saltstone v5.054\_CV\_SoftZones\_dv01\_20k\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename):		Source Model ID (or filename):				
SRS Saltstone v5.054_CV_SoftZones_dv01_20k.gsm		SRS Saltstone v5.054.gsm				
New Model File Date:		Source Model File Date:				
4/17/2019- 4/22/2019 SPH		4/17/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
NearWellPipe_Central	\\DisposalUnits\\SDU4\\NearWell	Changed pipe pathway element Area assignment to SZF*FlowfaceArea/2.	Y	none	N/A	Y
SDU_TransportSubmodel	\\DisposalUnits\\SDU4\\OuterLoop\\InnerLoop	Added SZF to submodel input interface	Y	none	N/A	Y
FlowfaceAreaMat_North	\\Transport\\WaterTransport\\PlumeCalc_Sectors\\PlumeDataMatrices	Updated expression element by multiplying matrix by SZF	Y	none	N/A	Y
FlowfaceAreaMat_South	\\Transport\\WaterTransport\\PlumeCalc_Sectors\\PlumeDataMatrices	Updated expression element by multiplying matrix by SZF	Y	none	N/A	Y
SatThicknessMat_North	\\Transport\\WaterTransport\\PlumeCalc_Sectors\\PlumeDataMatrices	Updated expression element by multiplying saturated thickness by SZF	Y	none	N/A	Y
SatThicknessMat_South	\\Transport\\WaterTransport\\PlumeCalc_Sectors\\PlumeDataMatrices	Updated expression element by multiplying saturated thickness by SZF	Y	none	N/A	Y
SourceThickness_a	\\Transport\\WaterTransport\\PlumeCalc_Sectors\\PlumeDataMatrices	Updated expression element by multiplying source thickness by SZF	Y	none	N/A	Y
DispV_factor	\\Transport\\WaterTransport\\PlumeCalc_Sectors\\PlumeDataMatrices	Added data element to assign scaling factor for transverse vertical dispersivity	Y	none	N/A	Y

SRS Saltstone v5.054\_CV\_SoftZones\_dv01\_20k\_Check

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Waste Disposal Authority

### Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_dv01_20k.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/17/2019			
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SatDispVmat_North	I:\Transport\WaterT ransport\PlumeCal c_Sectors\PlumeD ataMatrices	Multiplied transverse vertical dispersivity by DispV_factor (if UsePORFLOWDispersivite s="True")	Y	none	N/A	Y
SatDispVmat_South	I:\Transport\WaterT ransport\PlumeCal c_Sectors\PlumeD ataMatrices	Multiplied transverse vertical dispersivity by DispV_factor (if UsePORFLOWDispersivite s="True")	Y	none	N/A	Y
Submodel						
SZF	I:\InputData\UserIn put	Added selector element to capture SZF from submodel interface	Y	none	N/A	Y
NearWellPipe_Central	ISDUs\NearWell	Changed pipe pathway element Perimeter assignment to 2*SZF*SatThickness +2* SatWidth.	Y	none	N/A	Y
NearWellPipe_Central	ISDUs\NearWell	Changed pipe pathway element Area assignment to SZF*FlowfaceArea.	Y	none	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			Add additional rows above, as needed.			
Analyst Name (print): Barry Lester			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)			

SRS Saltstone v5.054\_CV\_SoftZones\_dv01\_20k\_Check

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Waste Disposal Authority

**Changed Model Check Form**

New Model ID (or filename): SRS Saltstone v5.054_CV_SoftZones_dv01_20k.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm	
New Model File Date: 4/17/2019 4/22/2019 SH		Source Model File Date: 4/17/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
Checker Name (print): Steven P. Hommel		Checker Comment	Checker Concur? Y,N
		E-Signature (or sign/date/scan hardcopy): 4/30/2019	

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SRS Saltstone v5.054\_CV\_SoftZones\_dv01\_20k\_Check

SRS Saltstone v5.054-GS-ComplianceCase\_AssumeNoLeachateImpact.gsm Changed  
Model Check Form (1 Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_AssumeNoLeachateImpact.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm	
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective: Kd sensitivity case</b>			
[not applicable]	[not applicable]	Model was renamed.	Y
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No Change made.	NA
SeepToWellRatio	\\User_Input	Set to 0 (seepage ratio is not appropriate to consider in soil Kd sensitivities)	Y
Kd_Dist_ClayL	\\Materials\\ClayeySoil\\Kds_LeachateImpacted	Edited the distribution element. Linked the value to the non leachate impacted Kds. This modifies all the downstream Kd values.	Y
Kd_Dist_SandL	\\Materials\\SandySoil\\Kds_LeachateImpacted	Edited the distribution element. Linked the value to the non leachate impacted Kds. This modifies all the downstream Kd values.	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>	

SRS Saltstone v5.054-GS-ComplianceCase\_AssumeNoLeachateImpact\_Check 1 of 1 4/29/2019

SRS Saltstone v5.054-GS-ComplianceCase\_AssumeAllLeachateImpact.gsm Changed  
Model Check Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_AssumeAllLeachateImpact.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No Change made.	NA			
SeepToWellRatio	\\User_Input	Set to 0 (seepage ratio is not appropriate to consider in soil Kd sensitivities)	Y			
Kd_Dist_Clay	\\Materials\\ClayeySoil\\Kds	Edited the distribution element. Linked the value to the leachate impacted Kds. This modifies all the downstream Kd values.	Y			
Kd_Dist_Sand	\\Materials\\SandySoil\\Kds	Edited the distribution element. Linked the value to the leachate impacted Kds. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)			
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy):			

SRS Saltstone v5.054-GS-ComplianceCase\_AssumeAllLeachateImpact\_Check 1 of 1 4/29/2019

SRS Saltstone v5.054-GS-ComplianceCase\_AssumeOxKds.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_AssumeOxKds.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No change was made.	NA			
Kd_Dist_Rel	\\Materials\\Concrete_Kds\\Reducing\\young_concrete_kds_red	Edited the distribution elements. Linked the value to the Oxidized Region I Kds. This modifies all the downstream Kd values.	Y			
Saltstone_Kd	\\Materials\\Concrete_Kds\\Reducing\\young_concrete_kds_red	Redefined the I-129 input to link to the Oxidized Kd.	Y			
Kd_Dist_Rel	\\Materials\\Concrete_Kds\\Reducing\\middle_concrete_kds_red	Edited the distribution elements. Linked the value to the Oxidized Region II Kds. This modifies all the downstream Kd values.	Y			
Saltstone_Kd	\\Materials\\Concrete_Kds\\Reducing\\middle_concrete_kds_red	Redefined the I-129 input to link to the Oxidized Kd.	Y			


SRS Saltstone v5.054-GS-ComplianceCase\_AssumeOxKds\_Check

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Waste Disposal Authority  
**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_AssumeOxKds.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_Reill	Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Edited the distribution elements. Linked the value to the Oxidized Region III Kds. This modifies all the downstream Kd values.	Y			
Saltstone_Kd	Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Redefined the 1-129 input to link to the Oxidized Kd.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19				

SRS Saltstone v5.054-GS-ComplianceCase\_AssumeOxKds\_Check

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SRS Saltstone v5.054-GS-ComplianceCase\_AssumeRegionIIKds.gsm Changed Model  
Check Form (2 Pages)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_AssumeRegionIIKds.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Shows as changed. No change made.	NA			
Kd_Dist_OxI	\\Materials\\Concrete_Kds_Oxidizing\\young_concrete_kds_ox	Edited the distribution elements. Linked the value to the Oxidized Region II Kds. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_OxI SaltstoneKd_Dist_Ra_OxI SaltstoneKd_Dist_Sr_OxI	\\Materials\\Concrete_Kds_Oxidizing\\young_concrete_kds_ox	Edited the distribution elements. Linked the value to the Oxidized Region II Kds. This modifies all the downstream Kd values.	Y			
Kd_Dist_Rel	\\Materials\\Concrete_Kds_Reducing\\young_concrete_kds_red	Edited the distribution elements. Linked the value to the Reduced Region II Kds. This modifies all the downstream Kd values.	Y			



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SRS Saltstone v5.054-GS-ComplianceCase\_AssumeRegionIIKds\_Check

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_AssumeRegionIIKds.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm		
<b>New Model File Date:</b> 4/17/2019			<b>Source Model File Date:</b> 4/16/2019		
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>	<b>Checker Comment</b>	<b>Analyst Response</b>
SaltstoneKd_Dist_Ba_R el SaltstoneKd_Dist_Sr_R el SaltstoneKd_Dist_Ra_ Rel SaltstoneKd_Dist_Sr_R el	Materials\Concrete e_Kds_Reducing\ young_concrete_k ds_red	Edited the distribution elements. Linked the value to the Reduced Region II Kds. This modifies all the downstream Kd values.	Y		
If checker has no comments, check here. <input checked="" type="checkbox"/>					
<b>Analyst Name (print):</b> Steve Hommel					
<b>Checker Name (print):</b> David Watkins					
			<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19		
			<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19		
Add additional rows above, as needed.					
<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)					

SRS Saltstone v5.054-GS-ComplianceCase\_AssumeRegionIIKds\_Check

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SRS Saltstone v5.054-GS-ComplianceCase\_AssumeRegionIIIKds.gsm Changed Model  
Check Form (2 Pages)

Waste Disposal Authority

Changed Model Check Form


<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_AssumeRegionIIIKds.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA			
Kd_Dist_Oxl	Materials\Concrete_Kds_Oxidizing\young_concrete_kds_ox	Edited the distribution elements. Linked the value to the Oxidized Region III Kds. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Oxl SaltstoneKd_Dist_Ra_Oxl SaltstoneKd_Dist_Sr_Oxl	Materials\Concrete_Kds_Oxidizing\young_concrete_kds_ox	Edited the distribution elements. Linked the value to the Oxidized Region III Kds. This modifies all the downstream Kd values.	Y			
Kd_Dist_Rel	Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Edited the distribution elements. Linked the value to the Reduced Region III Kds. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.054-GS-ComplianceCase\_AssumeRegionIIIKds\_Check

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Waste Disposal Authority  
**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_AssumeRegionIIKds.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm	
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019	
Parameter or Element	Location	Change Description	Correct ? Y,N
SaltstoneKd_Dist_Ba_Rel SaltstoneKd_Dist_Sr_Rel SaltstoneKd_Dist_Ra_Rel SaltstoneKd_Dist_Sr_Rel	Materials\Concrete e_Kds_Reducing\ young_concrete_k ds_red	Edited the distribution elements. Linked the value to the Reduced Region III Kds. This modifies all the downstream Kd values.	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19	
		<b>Checker Comment</b>	<b>Analyst Response</b>
		<b>Checker Concur?</b> Y,N	

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SRS Saltstone v5.054-GS-ComplianceCase\_AssumeRegionIIKds\_Check

SRS Saltstone v5.054-GS-ComplianceCase\_noSL.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority						Changed Model Check Form			
New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_noSL.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm						
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019						
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N			
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.									
<b>Objective: Kd sensitivity case</b>									
[not applicable]	[not applicable]	Model was renamed.	Y						
SDU_TransportSubmodel	Us\OuterLoop\InnerLoop	Submodel shows as changed. No Change made.	NA						
SeepToWellRatio	User_Input	Set to 0.222 x 0 = 0.	Y						
If checker has no comments, check here. <input checked="" type="checkbox"/>									
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)						
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy): <i>David Watkins</i> 4/29/19						

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SRS Saltstone v5.054-GS-ComplianceCase\_noSL\_Check

SRS Saltstone v5.054-GS-ComplianceCase\_IHI\_SoilDrill\_1K.gsm Changed Model Check  
Form (1 Page)

New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_IHI_SoilDrill_1K.gsm		Source Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase.gsm				
New Model File Date: 4/18/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Compliance Case (GoldSim version): IHI analysis using groundwater concentrations for soil drill cuttings.						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No change was made.	NA			
IHI_DrillEventTime	\\Dose_ParameterCalculations\\IHI_DrillCutConc_Calc	Modified logic to delay the time of the drilling event (intrusion) to 1,000 years. InstitutionalControl=900yr	Y			
IntruderInventorySwitch	\\User_Input	Set value to 3 so that the model will use actual groundwater concentrations to determine the soil-based drill cutting inventory for IHI dose calcs.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> Add additional rows above, as needed.				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b> 4/19/19				


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SRS Saltstone v5.054-GS-ComplianceCase\_IHI\_SoilDrill\_1K\_Check



SRS Saltstone v5.054-GS-ComplianceCase\_IHI\_SoilDrill\_5K.gsm Changed Model Check  
Form (1 Page)

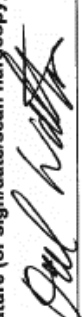
New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_IHI_SoilDrill_5K.gsm		Source Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase.gsm				
New Model File Date: 4/18/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y/N	Checker Comment	Analyst Response	Checker Concur? Y/N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Compliance Case (GoldSim version): IHI analysis using groundwater concentrations for soil drill cuttings.						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No change was made.	NA			
IHI_DrillEventTime	\\Dose_ParameterCalculations\\IHI_DrillCutConc_Calc	Modified logic to delay the time of the drilling event (intrusion) to 5,000 years. InstitutionalControl++4900yr	Y			
IntruderInventorySwitch	\\User_Input	Set value to 3 so that the model will use actual groundwater concentrations to determine the soil-based drill cutting inventory for IHI dose calcs.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy):  4/29/19				

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SRS Saltstone v5.054-GS-ComplianceCase\_IHI\_SoilDrill\_5K\_Check

SRS Saltstone v5.054-GS-ComplianceCase\_IHI\_SoilDrill\_10K.gsm Changed Model Check  
Form (1 Page)

New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_IHI_SoilDrill_10K.gsm		Source Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Compliance Case (GoldSim version): IHI analysis using groundwater concentrations for soil drill cuttings.						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No change was made.	NA			
IHI_DrillEventTime	\\Dose_ParameterCalculations\\IHI_DrillCutConc_Calc	Modified logic to delay the time of the drilling event (intrusion) to 10,000 years. InstitutionalControl+9900yr	Y			
IntruderInventorySwitch	\\User_Input	Set value to 3 so that the model will use actual groundwater concentrations to determine the soil-based drill cutting inventory for IHI dose calcs.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy):  4/29/19				

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SRS Saltstone v5.054-GS-ComplianceCase\_IHI\_SoilDrill\_10K\_Check

SRS Saltstone v5.054-GS-ComplianceCase\_IHI\_SoilDrill\_A.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_IHI_SoilDrill_A.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase.gsm				
<b>New Model File Date:</b> 4/24/2019		<b>Source Model File Date:</b> 4/17/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Compliance Case (GoldSim version): IHI analysis using the soil drill cuttings.						
[not applicable]	[not applicable]	Model was renamed.				
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No change was made.				
Drill_Cutting_Inv_Soil	\\Model_Concentrations	Data in element was updated. During the review of the PA text, an SRR reviewer rightfully pointed out that we have PORFLOW results with actual soil concentrations. From the PORFLOW data, a most probable and defensible (MPAD) inventory was developed for soil drill cuttings. See the Excel file: SoilDrillCuttings_rev3.xlsx Set value to 1 so that the model will use default the soil-based drill cutting inventory for IHI dose calcs.				
IntruderInventorySwitch	\\User_Input					
If checker has no comments, check here. <input type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				

SRS Saltstone v5.054-GS-ComplianceCase\_IHI\_SoilDrill\_A\_Check 1 of 2 4/29/2019



## Waste Disposal Authority

<b>New Model ID (or filename):</b>	<b>Source Model ID (or filename):</b>					
SRS Saltstone v5.054-GS-ComplianceCase_IHI_SoilDrill_A.gsm	SRS Saltstone v5.054-GS-ComplianceCase.gsm					
<b>New Model File Date:</b>	<b>Source Model File Date:</b>					
4/24/2019	4/17/2019					
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
<b>Checker Name (print):</b> _____ <b>E-Signature (or sign/date/scan hardcopy):</b> <i>[Signature]</i> 4/29/19						

SRS Saltstone v5.054-GS-ComplianceCase\_IHI\_SoilDrill.gsm Changed Model Check Form  
(1 Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_IHI_SoilDrill.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase.gsm			
<b>New Model File Date:</b> 4/16/2019		<b>Source Model File Date:</b> 4/17/2019			
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>	<b>Checker Comment</b>	<b>Analyst Response</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.					
<b>Objective:</b> Compliance Case (GoldSim version): IHI analysis using groundwater concentrations for soil drill cuttings.					
[not applicable]	[not applicable]	Model was renamed.	Y		
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No change was made.	NA		
IntruderInventorySwitch	\\User_Input	Set value to 3 so that the model will use actual groundwater concentrations to determine the soil-based drill cutting inventory for IHI dose calcs.	Y		
If checker has no comments, check here. <input checked="" type="checkbox"/>					
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19			
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19			

4/29/2019

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SRS Saltstone v5.054-GS-ComplianceCase\_IHI\_SoilDrill\_Check

SRS Saltstone v5.054-GS-ComplianceCase\_AssumeOxIKds\_xEpsilon.gsm Changed Model  
Check Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_OxIKds_xEpsilon.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No change was made.	NA			
Kd_Dist_OxI	\\Materials\\Concrete_Kds_Oxidizing\\young_concrete_kd_s_ox	Edited the distribution elements. Multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_OxI SaltstoneKd_Dist_Ra_OxI SaltstoneKd_Dist_Sr_OxI	\\Materials\\Concrete_Kds_Oxidizing\\young_concrete_kd_s_ox	Edited the distribution elements. Multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy):				



SRS Saltstone v5.054-GS-ComplianceCase\_AssumeReIKds\_xEpsilon.gsm Changed Model  
Check Form (1 Page)

Waste Disposal Authority		Changed Model Check Form				
New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_RelKds_xEpsilon.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/16/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model ID) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective: Kd sensitivity case</b>						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\SDU s\OuterLoop\InnerLo op	Submodel shows as changed. No change was made.	NA			
Kd_Dist_Rel	\\Materials\Concrete_ Kds_Reducingyoun g_concrete_kds_red	Edited the distribution elements. Multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Rel SaltstoneKd_Dist_I_Rel SaltstoneKd_Dist_Ra_Rel SaltstoneKd_Dist_Sr_Rel	\\Materials\Concrete_ Kds_Reducingyoun g_concrete_kds_red	Edited the distribution elements. Multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy):  4/30/19				

4/30/2019

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SRS Saltstone v5.054-GS-ComplianceCase\_RelKds\_xEpsilon\_Check




SRS Saltstone v5.054-GS-ComplianceCase\_AssumeOxIIIKds\_xEpsilon.gsm Changed  
Model Check Form (1 Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_OxIIIKds_xEpsilon.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective: Kd sensitivity case</b>						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	IDisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change was made.	NA			
Kd_Dist_OxIII	Materials\Concrete_Kds_Oxidizing\OxIII	Edited the distribution elements. Multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_OxIII SaltstoneKd_Dist_Ra_OxIII SaltstoneKd_Dist_Sr_OxIII	Materials\Concrete_Kds_Oxidizing\OxIII	Edited the distribution elements. Multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19				

SRS Saltstone v5.054-GS-ComplianceCase\_AssumeReIIIKds\_xEpsilon.gsm Changed  
Model Check Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename):		Source Model ID (or filename):				
SRS Saltstone v5.054-GS-ComplianceCase_ReIIIKds_xEpsilon.gsm		SRS Saltstone v5.054.gsm				
New Model File Date:		Source Model File Date:				
4/17/2019		4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDU s\\OuterLoop\\InnerLo op	Submodel shows as changed. No change was made.	NA			
Kd_Dist_ReIII	\\Materials\\Concrete_ Kds_Reducing\\old_c oncrete_kds_red	Edited the distribution elements. Multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_ReII   SaltstoneKd_Dist_I_ReII   SaltstoneKd_Dist_Ra_ReII   SaltstoneKd_Dist_Sr_ReII	\\Materials\\Concrete_ Kds_Reducing\\old_c oncrete_kds_red	Edited the distribution elements. Multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b>		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
Steve Hommel						
<b>Checker Name (print):</b>		<b>E-Signature (or sign/date/scan hardcopy):</b>				
David Watkins		 4/30/19				

SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_xEpsilon.gsm Changed Model Check  
Form (5 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_AllKds_xEpsilon.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No Change made.	NA			
SeepToWellRatio	\\User_Input	Set to 0 (seepage ratio is not appropriate to consider in soil Kd sensitivities)	Y			
Kd_Dist_Clay	\\Materials\\ClayeySoilKds	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_ClayL	\\Materials\\ClayeySoilKds_LeachateImpacted	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_xEpsilon\_Check

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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_AllKds_xEpsilon.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_OxII	\\Materials\\Concrete_Kds_Oxidizing\\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_OxII SaltstoneKd_Dist_Ra_OxII SaltstoneKd_Dist_Sr_OxII	\\Materials\\Concrete_Kds_Oxidizing\\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxIII	\\Materials\\Concrete_Kds_Oxidizing\\ld_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_OxIII SaltstoneKd_Dist_Ra_OxIII SaltstoneKd_Dist_Sr_OxIII	\\Materials\\Concrete_Kds_Oxidizing\\ld_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_xEpsilon\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_AllKds_xEpsilon.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_Oxl	\\Materials\Concrete_Kds_Oxidizing\young_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Oxl SaltstoneKd_Dist_Ra_Oxl SaltstoneKd_Dist_Sr_Oxl	\\Materials\Concrete_Kds_Oxidizing\young_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_Rell	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Rell SaltstoneKd_Dist_I_Rell SaltstoneKd_Dist_Ra_Rell SaltstoneKd_Dist_Sr_Rell	\\Materials\Concrete_Kds_Reducing\middle_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_xEpsilon\_Check

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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_AllKds_xEpsilon.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_RelII	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_RelII SaltstoneKd_Dist_I_RelII SaltstoneKd_Dist_Ra_RelII SaltstoneKd_Dist_Sr_RelII	\\Materials\Concrete_Kds_Reducing\old_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_Rel	\\Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Rel SaltstoneKd_Dist_I_Rel SaltstoneKd_Dist_Ra_Rel SaltstoneKd_Dist_Sr_Rel	\\Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			


SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_xEpsilon\_Check

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4/29/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_AllKds_xEpsilon.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_Sand	\\Materials\SandyS oilKds	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_SandL	\\Materials\SandyS oilKds_Leachatel impacted	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> comments				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19				

SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_xEpsilon\_Check

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SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_x0.01.gsm Changed Model Check  
Form (4 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_AllKds_x0.01.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm			
<b>New Model File Date:</b> 4/17/2019			<b>Source Model File Date:</b> 4/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No Change made.	NA			
SeepToWellRatio	\\User_Input	Set to 0 (seepage ratio is not appropriate to consider in soil Kd sensitivities)	Y			
Kd_Dist_Clay	\\Materials\\ClayeySoilKds	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_ClayL	\\Materials\\ClayeySoilKds_LeachateImpacted	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxII	\\Materials\\Concrete_Kds_Oxidizing\\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_AllKds_x0.01_gsm		Source Model ID (or filename): SRS Saltstone v5.054_gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_Ox II SaltstoneKd_Dist_Ra_Ox II SaltstoneKd_Dist_Sr_OxI I	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxIII	Materials\Concrete_Kds_Oxidizing\old_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Ox III SaltstoneKd_Dist_Ra_Ox III SaltstoneKd_Dist_Sr_OxI II	Materials\Concrete_Kds_Oxidizing\old_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxI	Materials\Concrete_Kds_Oxidizing\young_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Ox I SaltstoneKd_Dist_Ra_Ox I SaltstoneKd_Dist_Sr_OxI	Materials\Concrete_Kds_Oxidizing\young_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			

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SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_x0.01\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_AllKds_x0.01.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_ReII	Materials\Concret e_Kds_Reducing\ middle_concrete_ kds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Re II SaltstoneKd_Dist_I_ReII SaltstoneKd_Dist_Ra_Re II SaltstoneKd_Dist_Sr_Rel I	Materials\Concret e_Kds_Reducing\ middle_concrete_ kds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_ReIII	Materials\Concret e_Kds_Reducing\ old_concrete_kds _red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Re III SaltstoneKd_Dist_I_ReIII SaltstoneKd_Dist_Ra_Re III SaltstoneKd_Dist_Sr_Rel II	Materials\Concret e_Kds_Reducing\ old_concrete_kds _red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_Rel	Materials\Concret e_Kds_Reducing\ young_concrete_k ds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			


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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_AllKds_x0.01_gsm			Source Model ID (or filename): SRS Saltstone v5.054_gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_Re   SaltstoneKd_Dist_I_Rel SaltstoneKd_Dist_Ra_Re   SaltstoneKd_Dist_Sr_Rel	Materials\Concrete e_Kds_Reducing\ young_concrete_k ds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_Sand	Materials\SandyS oilKds	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
Kd_Dist_SandL	Materials\SandyS oilKds_Leachatel impacted	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 100. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)			
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy):  4/29/19			

SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_x0.01\_Check

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SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_x0.001.gsm Changed Model Check  
Form (4 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_AllKds_x0.001.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No Change made.	NA			
SeepToWellRatio	\\User_Input	Set to 0 (seepage ratio is not appropriate to consider in soil Kd sensitivities)	Y			
Kd_Dist_Clay	\\Materials\\ClayeySoilKds	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_ClayL	\\Materials\\ClayeySoilKds_LeachateImpacted	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxII	\\Materials\\Concrete_Kds_Oxidizing\\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_x0.001\_Check

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Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_AllKds_x0.001.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019		Source Model File Date: 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_Ox II SaltstoneKd_Dist_Ra_Ox II SaltstoneKd_Dist_Sr_OxI I	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxIII	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Ox III SaltstoneKd_Dist_Ra_Ox III SaltstoneKd_Dist_Sr_OxI II	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_OxI	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Ox I SaltstoneKd_Dist_Ra_Ox I SaltstoneKd_Dist_Sr_OxI	Materials\Concrete_Kds_Oxidizing\middle_concrete_kds_ox	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			

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SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_x0.001\_Check

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_AllKds_x0.001.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_ReII	Materials\Concret e_Kds_Reducing\ middle_concrete_ kds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Re II SaltstoneKd_Dist_I_ReII SaltstoneKd_Dist_Ra_Re II SaltstoneKd_Dist_Sr_Rel I	Materials\Concret e_Kds_Reducing\ middle_concrete_ kds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_ReIII	Materials\Concret e_Kds_Reducing\ old_concrete_kds _red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
SaltstoneKd_Dist_Ba_Re III SaltstoneKd_Dist_I_ReIII SaltstoneKd_Dist_Ra_Re III SaltstoneKd_Dist_Sr_Rel II	Materials\Concret e_Kds_Reducing\ old_concrete_kds _red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_Rel	Materials\Concret e_Kds_Reducing\ young_concrete_k ds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_x0.001\_Check


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Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase_AllKds_x0.001.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
SaltstoneKd_Dist_Ba_Rel SaltstoneKd_Dist_I_Rel SaltstoneKd_Dist_Ra_Rel SaltstoneKd_Dist_Sr_Rel	Materials\Concrete_Kds_Reducing\young_concrete_kds_red	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_Sand	Materials\Sandys_oilKds	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
Kd_Dist_SandL	Materials\Sandys_oilKds_LeachateImpacted	Edited the distribution elements. Under "Other Settings" I divided the Deterministic Value by 1000. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)			
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy):  4/29/19			

SRS Saltstone v5.054-GS-ComplianceCase\_AllKds\_x0.001\_Check

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SRS Saltstone v5.054-SA\_ParametricFlow\_F01.gsm Changed Model Check Form (1 Page)

New Model ID (or filename):		Source Model ID (or filename):				
SRS Saltstone v5.054-SA_ParametricFlow_F01.gsm		SRS Saltstone v5.054.gsm				
New Model File Date:		Source Model File Date:				
4/16/2019		4/16/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Create SA for Case F01 Flow Field.						
UseSpecifiedFlowField	User_Input	Set conditional switch to "True"	Y	none	N/A	Y
SpecifiedFlowField	User_Input	Set data element to 1 (See 2019 SDF PA Table 4.4-82)	Y	none	N/A	Y
Submodel						
			Y	Submodel shows as changed, but not changed.	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Barry Lester		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): Steven Hommel		E-Signature (or sign/date/scan hardcopy): 4/29/2019				

SRS Saltstone v5.054-SA\_ParametricFlow\_F28.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority				Changed Model Check Form			
New Model ID (or filename): SRS Saltstone v5.054_SA_ParametricFlow_F28.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/16/2019			Source Model File Date: 4/16/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N	
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.							
<b>Objective:</b> Create SA for Case F28 Flow Field.							
UseSpecifiedFlowField	User_Input	Set conditional switch to "True"	Y	none	N/A	Y	
SpecifiedFlowField	User_Input	Set data element to 28 (See 2019 SDF PA Table 4.4-82)	Y	none	N/A	Y	
Submodel							
			Y	Submodel shows as changed, but not changed	N/A	Y	
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.							
Analyst Name (print): Barry Lester							
E-Signature (or sign/date/scan hardcopy): E-Signature (or sign/date/scan hardcopy):							
Checker Name (print): Steven Hommel							
E-Signature (or sign/date/scan hardcopy): 4/29/2019							

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SRS Saltstone v5.054\_SA\_ParametricFlow\_F28\_Check

SRS Saltstone v5.054-SA\_ParametricFlow\_F35.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority							Changed Model Check Form		
New Model ID (or filename): SRS Saltstone v5.054_SA_ParametricFlow_F35.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm						
New Model File Date: 4/16/2019			Source Model File Date: 4/16/2019						
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N			
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.									
<b>Objective:</b> Create SA for Case F35 Flow Field.									
UseSpecifiedFlowField	User_Input	Set conditional switch to "True"	Y	none	N/A	Y			
SpecifiedFlowField	User_Input	Set data element to 35 (See 2019 SDF PA Table 4.4-82)	Y	none	N/A	Y			
Submodel									
If checker has no comments, check here. <input checked="" type="checkbox"/>									
Analyst Name (print): Barry Lester							E-Signature (or sign/date/scan hardcopy): Add additional rows above, as needed.		
Checker Name (print): Steven Hommel							E-Signature (or sign/date/scan hardcopy): SEP/LL 4/29/2019		

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SRS Saltstone v5.054\_SA\_ParametricFlow\_F35\_Check



SRS Saltstone v5.054-SA\_ParametricFlow\_F45.gsm Changed Model Check Form (1 Page)

New Model ID (or filename): SRS Saltstone v5.054_SA_ParametricFlow_F45.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/16/2019		Source Model File Date: 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Create SA for Case F45 Flow Field.						
UseSpecifiedFlowField	User_Input	Set conditional switch to "True"	Y	none	N/A	Y
SpecifiedFlowField	User_Input	Set data element to 45 (See 2019 SDF PA Table 4.4-82)	Y	none	N/A	Y
Submodel						
			Y	Submodel Structure 25 changed, but not changed	N/A	Y
If checker has no comments, check here. <input checked="" type="checkbox"/> Add additional rows above, as needed.						
Analyst Name (print): Barry Lester						
E-Signature (or sign/date/scan hardcopy): comments						
Checker Name (print): Steven Hammel						
E-Signature (or sign/date/scan hardcopy): S. Hammel 4/29/2019						

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SRS Saltstone v5.054\_SA\_ParametricFlow\_F45\_Check

SRS Saltstone v5.054-SA\_ParametricFlow\_F54.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename):		Source Model ID (or filename):				
SRS Saltstone v5.054_SA_ParametricFlow_F54.gsm		SRS Saltstone v5.054.gsm				
New Model File Date:		Source Model File Date:				
4/16/2019		4/16/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Create SA for Case F54 Flow Field.						
UseSpecifiedFlowField	User_Input	Set conditional switch to "True"	Y	none	N/A	Y
SpecifiedFlowField	User_Input	Set data element to 54 (See 2019 SDF PA Table 4.4-82)	Y	none	N/A	Y
Submodel						
Submodel shows as changed - not changed						
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Barry Lester						
E-Signature (or sign/date/scan hardcopy): Add additional rows above, as needed.						
Checker Name (print): Steven Hommel						
E-Signature (or sign/date/scan hardcopy): see P17C 4/29/2019						

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SRS Saltstone v5.054\_SA\_ParametricFlow\_F54\_Check

SRS Saltstone v5.054-GS-ComplianceCase\_SoilKds\_xEpsilon.gsm Changed Model Check  
Form (2 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_SoilKds_xEpsilon.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm			
<b>New Model File Date:</b> 4/17/2019			<b>Source Model File Date:</b> 4/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Shows as changed. No change was made.	NA			
SeeptoWellRatio	\\User_Input	Set to 0 (seepline ratio is not appropriate to consider in soil Kd sensitivities)	Y			
Kd_Dist_Clay	\\Materials\\ClayeySoilKds	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_ClayL	\\Materials\\ClayeySoilKds_LeachateImpacted	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			

SRS Saltstone v5.054-GS-ComplianceCase\_SoilKds\_xEpsilon\_Check


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Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-ComplianceCase_SoilKds_xEpsilon.gsm			<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm			
<b>New Model File Date:</b> 4/17/2019			<b>Source Model File Date:</b> 4/16/2019			
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Kd_Dist_Sand	Materials\SandyS oilKds	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
Kd_Dist_SandL	Materials\SandyS oilKds_LeachateI mpacted	Edited the distribution elements. Under "Other Settings" I multiplied the Deterministic Value by 'epsilon' = 1E-30. This modifies all the downstream Kd values.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel			<b>E-Signature (or sign/date/scan hardcopy):</b> comments)			
<b>Checker Name (print):</b> David Watkins			<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19			

SRS Saltstone v5.054-GS-ComplianceCase\_SoilKds\_xEpsilon\_Check

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SRS Saltstone v5.054-GS-ComplianceCase\_WetClimateUZSZ.gsm Changed Model Check  
Form (4 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054_SA_WetClimateUZSZ_Rev1.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm				
<b>New Model File Date:</b> 4/29/2019		<b>Source Model File Date:</b> 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Create SA for wetter climate analysis.						
UseSpecifiedFlowField	\User_Input	Set conditional switch to "True"	Y	None	N/A	Y
SpecifiedFlowField	\User_Input	Set data element to 54 (See 2019 SDF PA Table 4.4-82)	Y	None	N/A	Y
ClimateChangeScenario	\User_Input	Added a conditional switch to allow user to perform a Climate Change sensitivity analysis (for deterministic runs only).	Y	None	N/A	Y
SZFlowRateFactor_input	\User_Input	Added data element to be used as an SZ flow rate multiplication factor and set to 1.5 (for using Compliance Value SZ flow rates set to 1.0).	Y	None	N/A	Y
UZThicknessOption_input	\User_Input	Added data element switch to choose from the PA water table data, the wet climate (high) water table level data, or the dry climate (low) water table level data (see SRR-CWDA-2019-00027) and set to 2.	Y	None	N/A	Y

SRS Saltstone v5.054\_SA\_WetClimateUZSZ\_Check\_Rev1.docx

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4/30/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_SA_WetClimateUZSZ_Rev1.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/29/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UZThicknessAdjustment_wet	\User_Input	Added data element to adjust UZ thickness based on water table rise and set to -8 ft (see SRR-CWDA-2019-00027).	Y	None	N/A	Y
UZThicknessAdjustment_dry	\User_Input	Added data element to adjust UZ thickness based on water table fall and set to +7.6 ft (see SRR-CWDA-2019-00027).	Y	None	N/A	Y
SZFlowRateFactor	\User_Input	Added selector element to control use of SZFlowRateFactor_input and negate its influence where appropriate.	Y	None	N/A	Y
UZThicknessOption	\User_Input	Added selector element to control use of UZThicknessOption_input and negate its influence where appropriate.	Y	None	N/A	Y
SZThicknessAdjustment	\User_Input	Added selector element to control the influence of UZThicknessOption_input on the saturated thickness and negate its influence where appropriate.	Y	None	N/A	Y
SatThickness_determinant	\Transport\WaterTransport\FlowField_Picked	Adjusted selector element to utilize SZThicknessAdjustment to change the saturated thickness where appropriate.	Y	None	N/A	Y

SRS Saltstone v5.054\_SA\_WetClimateUZSZ\_Check\_Rev1.docx

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4/30/2019

Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_SA_WetClimateUZSZ_Rev1.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/29/2019		Source Model File Date: 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UZThickness_table_wet	\DisposalUnits\SD U_Data	Added expression element to control use of UZThicknessOption_input to adjust the UZ thickness for a wetter climate.	Y	None	N/A	Y
UZThickness_table_dry	\DisposalUnits\SD U_Data	Added expression element to control use of UZThicknessOption_input to adjust the UZ thickness for a drier climate.	Y	None	N/A	Y
UZThickness_table_PA	\DisposalUnits\SD U_Data	Renamed UZThickness_table	Y	None	N/A	Y
UZThickness_table	\DisposalUnits\SD U_Data	Added selector element to assign the correct UZ thickness to each SDU.	Y	None	N/A	Y
UZthicknessDist	\DisposalUnits\SD U_Data	Redefine Deterministic Value as UZThickness_Table	Y	None	N/A	Y
SatZoneDarcyVel	\DisposalUnits\SD U1	Value multiplied by the SZFlowRateFactor	Y	None	N/A	Y
SatZoneDarcyVel_vec	\DisposalUnits\SD U4	Value multiplied by the SZFlowRateFactor	Y	None	N/A	Y
SDU_TransportSubmodel	\DisposalUnits\SD Us\OuterLoop\InnerLoop	Added input from SZFlowRateFactor	Y	None	N/A	Y
Submodel						
SZFlowRateFactor	Within submodel: \InputData\UserInput	Added element to read input data from SZFlowRateFactor	Y	None	N/A	Y
SatZoneDarcyVel	Within submodel: \SDUs	Value multiplied by the SZFlowRateFactor	Y	None	N/A	Y

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4/30/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054_SA_WetClimateUZSZ_Rev1.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm	
<b>New Model File Date:</b> 4/29/2019		<b>Source Model File Date:</b> 4/16/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
If checker has no comments, check here. <input checked="" type="checkbox"/>		<b>Checker Comment</b>	<b>Analyst Response</b>
<b>Analyst Name (print):</b> Barry Lester		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)	
<b>Checker Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> SE PLLC 4/30/2019	

Add additional rows above, as needed.

SRS Saltstone v5.054\_SA\_WetClimateUZSZ\_Check\_Rev1.docx

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4/30/2019

SRS Saltstone v5.054-GS-ComplianceCase\_DryClimateUZSZ.gsm Changed Model Check  
Form (4 Pages)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054_SA_DryClimateUZSZ_Rev1.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm				
<b>New Model File Date:</b> 4/29/2019		<b>Source Model File Date:</b> 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Create SA for drier climate analysis.						
UseSpecifiedFlowField	\User_Input	Set conditional switch to "True"	Y	None	N/A	Y
SpecifiedFlowField	\User_Input	Set data element to 1 (See 2019 SDF PA Table 4.4-82)	Y	None	N/A	Y
ClimateChangeScenario	\User_Input	Added a conditional switch to allow user to perform a Climate Change sensitivity analysis (for deterministic runs only).	Y	None	N/A	Y
SZFlowRateFactor_input	\User_Input	Added data element to be used as an SZ flow rate multiplication factor and set to 0.62 (for using Compliance Value SZ flow rates set to 1.0).	Y	None	N/A	Y
UZThicknessOption_input	\User_Input	Added data element switch to choose from the PA water table data, the wet climate (high) water table level data, or the dry climate (low) water table level data (see SRR-CWDA-2019-00027) and set to 3.	Y	None	N/A	Y

SRS Saltstone v5.054\_SA\_DryClimateUZSZ\_Rev1\_Check.docx

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4/30/2019



Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_SA_DryClimateUZSZ_Rev1.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/29/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UZThicknessAdjustment_wet	\\User_Input	Added data element to adjust UZ thickness based on water table rise and set to -8 ft (see SRR-CWDA-2019-00027).	Y	None	N/A	Y
UZThicknessAdjustment_dry	\\User_Input	Added data element to adjust UZ thickness based on water table fall and set to +7.6 ft (see SRR-CWDA-2019-00027).	Y	None	N/A	Y
SZFlowRateFactor	\\User_Input	Added selector element to control use of SZFlowRateFactor_input and negate its influence where appropriate.	Y	None	N/A	Y
UZThicknessOption	\\User_Input	Added selector element to control use of UZThicknessOption_input and negate its influence where appropriate.	Y	None	N/A	Y
SZThicknessAdjustment_t	\\User_Input	Added selector element to control the influence of UZThicknessOption_input on the saturated thickness and negate its influence where appropriate.	Y	None	N/A	Y
SatThickness_determinant	\\Transport\\WaterTransportFlowField_Picked	Adjusted selector element to utilize SZThicknessAdjustment to change the saturated thickness where appropriate.	Y	None	N/A	Y

SRS Saltstone v5.054\_SA\_DryClimateUZSZ\_Rev1\_Check.docx

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4/30/2019



Waste Disposal Authority

Changed Model Check Form

New Model ID (or filename): SRS Saltstone v5.054_SA_DryClimateUZSZ_Rev1.gsm		Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/29/2019		Source Model File Date: 4/16/2019				
Parameter or Element	Location	Change Description	Correct Y,Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
UZThickness_table_wet	\DisposalUnits\SD U_Data	Added expression element to control use of UZThicknessOption_input to adjust the UZ thickness for a wetter climate.	Y	None	N/A	Y
UZThickness_table_dry	\DisposalUnits\SD U_Data	Added expression element to control use of UZThicknessOption_input to adjust the UZ thickness for a drier climate.	Y	None	N/A	Y
UZThickness_table_PA	\DisposalUnits\SD U_Data	Renamed UZThickness_table	Y	None	N/A	Y
UZThickness_table	\DisposalUnits\SD U_Data	Added selector element to assign the correct UZ thickness to each SDU.	Y	None	N/A	Y
UZThicknessDist	\DisposalUnits\SD U_Data	Redefine Deterministic Value as UZThickness_Table	Y	None	N/A	Y
SatZoneDarcyVel	\DisposalUnits\SD U1	Value multiplied by the SZFlowRateFactor	Y	None	N/A	Y
SatZoneDarcyVel_vec	\DisposalUnits\SD U4	Value multiplied by the SZFlowRateFactor	Y	None	N/A	Y
SDU_TransportSubmodel	\DisposalUnits\SD U1OuterLoop\InnerLoop	Added input from SZFlowRateFactor	Y	None	N/A	Y
Submodel						
SZFlowRateFactor	Within submodel: \InputData\UserInput	Added element to read input data from SZFlowRateFactor	Y	None	N/A	Y
SatZoneDarcyVel	Within submodel: \SDUs	Value multiplied by the SZFlowRateFactor	Y	None	N/A	Y

SRS Saltstone v5.054\_SA\_DryClimateUZSZ\_Rev1\_Check.docx

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4/30/2019

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054_SA_DryClimateUZSZ_Rev1.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm	
<b>New Model File Date:</b> 4/29/2019		<b>Source Model File Date:</b> 4/16/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
If checker has no comments, check here. <input checked="" type="checkbox"/>		<b>Checker Comment</b>	<b>Analyst Response</b>
<b>Analyst Name (print):</b> Barry Lester		<b>Checker Concur?</b> Y,N	
<b>Checker Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> 4/30/2019	

SRS Saltstone v5.054\_SA\_DryClimateUZSZ\_Rev1\_Check.docx

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4/30/2019

SRS Saltstone v5.054-GS- Defense-in-DepthCase.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.054-GS-Defense-in-DepthCase.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
Objective: GoldSim Version of the Defense-in-Depth Case (using v5.054)						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmod el	\\DisposalUnits\\SD Us\\OuterLoop\\Inn erLoop	Submodel shows as changed. No changes made.	NA			
Scenario_switch	\\User_Input	Set to 3 for conservative estimate inputs/settings	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)			
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy):			

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SRS Saltstone v5.054-GS-Defense-in-DepthCase\_Check

SRS Saltstone v5.054-GS- RealisticCase.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.054-GS-RealisticCase.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> GoldSim Version of the Realistic Case (using v5.054)						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No change made.	NA			
Scenario_switch	User_Input	Set to 1 for best estimate inputs/settings	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy): (Not required if no comments)			
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy):			

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SRS Saltstone v5.054-GS-RealisticCase\_Check

SRS Saltstone v5.054-GS-ComplianceCase.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority				Changed Model Check Form			
New Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm				
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019				
Parameter or Element	Location	Change Description	Correct ? Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N	
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.							
<b>Objective:</b> GoldSim Version of the Compliance Case (using v5.054)							
[not applicable]	[not applicable]	Model was renamed and ran for results.	Y				
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No changes made.	NA				
If checker has no comments, check here. <input checked="" type="checkbox"/>							
Add additional rows above, as needed.							
<b>Analyst Name (print):</b> Steve Hommel			<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b>			<b>E-Signature (or sign/date/scan hardcopy):</b>				

SRS Saltstone v5.054-GS-ComplianceCase\_Check  
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SRS Saltstone v5.054-GS-Compliance\_wD-in-D\_Inv.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority

Changed Model Check Form

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-Compliance_wD-in-D_Inv.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm				
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019				
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>	<b>Checker Comment</b>	<b>Analyst Response</b>	<b>Checker Concur? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No Change made.	NA			
Inventory_Compliance	\\Inventory	Copied values from Inventory_Defensible and pasted them into this element.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)				
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b> <i>David Watkins</i> 4/29/19				

SRS Saltstone v5.054-GS-Compliance\_wD-in-D\_Inv\_Check

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SRS Saltstone v5.054-GS-Compliance\_wMaxInv.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority

**Changed Model Check Form**

<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-Compliance_wMaxInv.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm	
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective:</b> Kd sensitivity case			
[not applicable]	[not applicable]	Model was renamed.	Y
SDU_TransportSubmodel	\\DisposalUnits\\SDUs\\OuterLoop\\InnerLoop	Submodel shows as changed. No Change made.	NA
Inventory_Compliance	\\Inventory	Changed the values to the Maximum Inventories from Inventory Multipliers.xlsx	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> Add additional rows above, as needed. (Not required if no comments)	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19	



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SRS Saltstone v5.054-GS-Compliance\_wMaxInv\_Check




SRS Saltstone v5.054-GS-Compliance\_wMinInv.gsm Changed Model Check Form (1 Page)

Waste Disposal Authority						
Changed Model Check Form						
New Model ID (or filename): SRS Saltstone v5.054-GS-Compliance_wMinInv.gsm			Source Model ID (or filename): SRS Saltstone v5.054.gsm			
New Model File Date: 4/17/2019			Source Model File Date: 4/16/2019			
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> Kd sensitivity case						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	\DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No Change made.	NA			
Inventory_Compliance	\Inventory	Changed the values to the Minimum Inventories from Inventory Multipliers.xlsx	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel			E-Signature (or sign/date/scan hardcopy):  4/29/19			
Checker Name (print): David Watkins			E-Signature (or sign/date/scan hardcopy):  4/29/19			

SRS Saltstone v5.054-GS-Compliance\_wReal\_Inv.gsm Changed Model Check Form (1  
Page)

Waste Disposal Authority

Changed Model Check Form


<b>New Model ID (or filename):</b> SRS Saltstone v5.054-GS-Compliance_wReal_Inv.gsm		<b>Source Model ID (or filename):</b> SRS Saltstone v5.054.gsm	
<b>New Model File Date:</b> 4/17/2019		<b>Source Model File Date:</b> 4/16/2019	
<b>Parameter or Element</b>	<b>Location</b>	<b>Change Description</b>	<b>Correct ? Y,N</b>
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4) for this model. - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.			
<b>Objective: Kd sensitivity case</b>			
[not applicable]	[not applicable]	Model was renamed.	Y
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No Change made.	NA
Inventory_Compliance	Inventory	Copied values from Inventory_Realistic and pasted them into this element.	Y
If checker has no comments, check here. <input checked="" type="checkbox"/>			
<b>Analyst Name (print):</b> Steve Hommel		<b>E-Signature (or sign/date/scan hardcopy):</b> (Not required if no comments)	
<b>Checker Name (print):</b> David Watkins		<b>E-Signature (or sign/date/scan hardcopy):</b>  4/29/19	

SRS Saltstone v5.054-GS-Compliance\_wReal\_Inv\_Check

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4/29/2019

SRS Saltstone v5.054-GS-Compliance\_AltI129.gsm Changed Model Check Form (1 Page)

New Model ID (or filename): SRS Saltstone v5.054-GS-Compliance_AltI129.gsm		Source Model ID (or filename): SRS Saltstone v5.054-GS-ComplianceCase.gsm				
New Model File Date: 4/18/2019		Source Model File Date: 4/17/2019				
Parameter or Element	Location	Change Description	Correct Y,N	Checker Comment	Analyst Response	Checker Concur? Y,N
Can this new model be traced (by following the Source Model IDs) back to a source model with a completed Initial Model Check Form (QA&DV Form 4)? - If so, proceed. If not, disregard this form and complete an Initial Model Check Form (QA&DV Form 4) for this model.						
<b>Objective:</b> GoldSim version of CaseCV8.8_AltI129: updated all inventories, not just I-129 (although note that Tc-99 still uses the PORFLOW fluxes, so Tc-99 did not change relative to the compliance case result).						
[not applicable]	[not applicable]	Model was renamed.	Y			
SDU_TransportSubmodel	DisposalUnits\SDUs\OuterLoop\InnerLoop	Submodel shows as changed. No changes made.	NA			
Inventory_Compliance	Inventory	Scaled the compliance case inventory values for SDUs 6 through 12. Scaling was based on the ratio of the compliance case I-129 inventory and the preliminary system planning inventory used in PORFLOW run: CaseCV.8_AltI129.	Y			
If checker has no comments, check here. <input checked="" type="checkbox"/>						
Analyst Name (print): Steve Hommel		E-Signature (or sign/date/scan hardcopy): (Not required if no comments)				
Checker Name (print): David Watkins		E-Signature (or sign/date/scan hardcopy):  4/29/19				

SRS Saltstone v5.054-GS-Compliance\_AltI129\_Check

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4/29/2019

## **Appendix A-4**

### **Emails Documenting QA Issues**

Email Documenting Correct Sheet Drain Placement for SDU 2 (2 Pages)

**Steven Hommel**

---

**From:** Barry Lester  
**Sent:** Tuesday, September 11, 2018 4:19 PM  
**To:** Thong Hang; Gregory Flach  
**Cc:** Jeremiah Mangold; Steven Hommel  
**Subject:** RE: Previous Email

Thong,

That looks much better. The sheet drain is now adjacent to the saltstone and can be assigned either saltstone properties or fast zone properties.

Thanks,

Barry

---

**From:** Thong Hang  
**Sent:** Tuesday, September 11, 2018 3:54 PM  
**To:** Barry Lester <Barry.Lester@srs.gov>; Gregory Flach <gregory.flach@srm.doe.gov>  
**Cc:** Jeremiah Mangold <Jeremiah.Mangold@srs.gov>  
**Subject:** RE: Previous Email

Barry,

I believe I have solved the problem. Please check the property zones in RUN.OUT files to make sure they are correct now.

Thanks,  
Thong

\*\*\*\*\*  
Thong Hang, PhD  
Environmental Modeling  
Savannah River National Laboratory  
Building 773-42A  
Aiken, SC 29808

Phone: (803) 725-8204  
Fax: (803) 725-7673  
E-mail: [thong.hang@srm.doe.gov](mailto:thong.hang@srm.doe.gov)  
\*\*\*\*\*

---

From: Barry Lester

Sent: Tuesday, September 11, 2018 11:50 AM

To: Gregory Flach <[gregory.flach@srnl.doe.gov](mailto:gregory.flach@srnl.doe.gov)>

Cc: Thong Hang <[thong.hang@srnl.doe.gov](mailto:thong.hang@srnl.doe.gov)>; Jeremiah Mangold <[Jeremiah.Mangold@srs.gov](mailto:Jeremiah.Mangold@srs.gov)>

Subject: Previous Email

Greg,

I rechecked the input/output files for the SDF PORFLOW flow runs (and discussed them with Thong) and I was mistaken with respect to the SDU 4 runs but I still think that the SDU 2 runs have a problem. The sheet drain elements appear to be located between the wall and the HDPE. Attached is a copy of the RUN.dat, TYPE.dat, and the material property data from RUN.OUT file with the data in question colored in yellow in the latter 2 files.

Barry

Email Documenting Irregularity #1 SDU 7 Design w/Margin BE Re-Run (1 Page)

**Steven Hommel**

---

**From:** Gregory Flach  
**Sent:** Wednesday, September 19, 2018 5:22 PM  
**To:** Steven Hommel; Barry Lester; Jeremiah Mangold  
**Cc:** Thong Hang; Thomas Danielson  
**Subject:** SDU7 Design w/Margin BE case re-run

Guys,

Tom Danielson has been design-checking the vadose zone flow simulations and discovered a glitch with the SDU7 Design w/Margin BE case (VadoseSDU7DM/Flow/CaseBE.3). For some of the cementitious materials, the initial conductivity was drawn from SRR-CWDA-2018-00004, Rev. 1, Table 1 instead of the overriding values in SRNL-STI-2018-00077, Rev. 1, Table 11-1. The overrides reflect unrepaired penetrations assumed in the DM case. This case has been re-run through PORFLOW.

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Email Documenting Acknowledgement of Closure Cap Impingement Rate Error (7 Pages)

From: [Benson, Craig H.\(chb4x\)](#)  
To: [Steven Hommel](#)  
Cc: [Kent Rosenberger](#); [William Dean](#)  
Subject: Re: Questions on SDF Closure Cap  
Date: Friday, November 9, 2018 6:23:34 AM  
Attachments: [Table 2 REVISED.docx](#)

---

Steve –

I got through this again yesterday, and have created a revised version of Table 2 that is attached that I would like to discuss.

I have been thru this countless times and finally realized that I had made the simplest error in one of my inputs. Your last email clued me in, where you indicated an impingement rate 650 mm/yr equates to 65 m/yr. This is not correct, as 650 mm/yr is 0.65 m/yr. I thought this was the source of an error in your analysis. However, this clued me in to an error in MY inputs. In particular, I had entered 650 cm/yr in the spreadsheet instead of 65 cm/yr (equals 650 mm/yr). I can't believe I missed this after having being thru many cycles of review.

Anyhow, I re-did the analysis with an impingement rate of 65 cm/yr. I also changed the barrier thickness from 10 mm to 8 mm, which was a point of discussion earlier. While this is splitting hairs in my opinion, using 8 mm makes this issue moot.

Please take a look at the attached version of Table 2. I would like to chat with you on the phone about it today or Monday if you are available. I could talk at NOON EST or 330 PM EST today. Monday has more flexibility.

Thanks, Craig

---

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[chbenson@virginia.edu](mailto:chbenson@virginia.edu)

---

Craig-

I'm hoping that you've had a chance to review the work you did on the report and will be able to bridge the gap between results in the report and the information in the leak rate calculator.

Thanks

**Steve Hommel**

Waste Disposal Authority  
Savannah River Remediation

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[Steven.Hommel@srs.gov](mailto:Steven.Hommel@srs.gov)

---

**From:** Benson, Craig H (chb4x) <chb4x@virginia.edu>  
**Sent:** Wednesday, October 31, 2018 12:32 AM  
**To:** Steven Hommel <Steven.Hommel@srs.gov>  
**Cc:** Kent Rosenberger <kent.rosenberger@srs.gov>; William Dean <William.Dean@srs.gov>  
**Subject:** Re: Questions on SDF Closure Cap

I will take a look at this and get back to you by Friday. Craig

---

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---

Craig-

Thanks for getting back to me.

Unfortunately, I think we still have an issue with the analytical solution.  
I used your Excel file and I applied our model inputs (attached).

Based on your report (GENV-18-05, for contract SRR107772-000009), Table 2, for first case in the table ("Most realistic long-term upper bound"):

Impingement Rate = 650 mm/yr (converts to 65 m/yr)  
Horizontal Flow Length = 825 ft (converts to 25146 cm)  
Drainage Slope = 4%  
Drainage Layer K = 5E-04 m/s (converts to 1.58E+06 cm/yr)

From this, your calculator gives a flow thickness (or head) of **2.59E-01 m**

Then, for the leakage rate, I again used our inputs:

Barrier thickness of composite barrier = 10 mm (converts to 0.01 m)  
Defect Diameter = 10 mm (converts to 0.01 m)  
Composite Barrier K = 1E-10 m/s  
Holes per Hectare = 5

With all of these inputs, I ended up with a leakage rate of 4.86E-02 mm/yr (or **0.05 mm/yr**).  
However Table 2 of the report shows that the "Most realistic long-term upper bound" case has a percolation rate of **0.4 mm/yr**.

Thanks

**Steve Hommel**

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[Steven.Hommel@srs.gov](mailto:Steven.Hommel@srs.gov)

---

**From:** Benson, Craig H (chb4x) <[chb4x@virginia.edu](mailto:chb4x@virginia.edu)>  
**Sent:** Tuesday, October 30, 2018 6:02 AM  
**To:** Steven Hommel <[Steven.Hommel@srs.gov](mailto:Steven.Hommel@srs.gov)>  
**Cc:** Kent Rosenberger <[kent.rosenberger@srs.gov](mailto:kent.rosenberger@srs.gov)>  
**Subject:** Re: Questions on SDF Closure Cap

Hi Steve –

Well, after a **VERY** long delay, I have been able to go thru this in detail. I have attached a WORD document with your queries and my answers. I have also attached my “leakage rate calculator” EXCEL sheet and a paper by Tian et al. (2018) that is cited in my response to your query regarding service life of the geomembrane around the exterior of the SDU vaults.

I am very sorry this took **SO LONG**. Things have been kind of crazy at UVA with our executive leadership changes, which had all of us running around doing extra things for the past few months. That has now settled down so we should be in better shape going forward.

I am glad to have a call if you want to discuss any of this. I will be out of pocket for the next couple of days, but am available on Friday.

Thanks, Craig

-----  
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-----

Dr. Benson-

Your assistance on clarifying the Analytical Solution Question (from my July email, see below) is still desired.

I am re-attaching my failed attempt to recreate your results. Again, I'm attaching my work for you in hopes that you will look at this and be able to understand where we went wrong. Alternatively, feel

free to share your version with me and I may be able to solve this without taking up any more of your time.

Thanks

**Steve Hommel**

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---

**From:** Benson, Craig H (chb4x) <[chb4x@virginia.edu](mailto:chb4x@virginia.edu)>  
**Sent:** Tuesday, September 25, 2018 10:59 AM  
**To:** Steven Hommel <[Steven.Hommel@srs.gov](mailto:Steven.Hommel@srs.gov)>  
**Cc:** Kent Rosenberger <[kent.rosenberger@srs.gov](mailto:kent.rosenberger@srs.gov)>  
**Subject:** Re: Questions on SDF Closure Cap

I will look into these. Thanks for your help. Craig

---

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---

In addition to the earlier concerns, I have found an inconsistency within the report that needs additional clarification. Specifically, the text indicates that the Year=2002 had 1030 mm of precipitation, but Figure 11 shows the precipitation value for 2002 is closer to 1160 mm. Looking at the SRS rainfall data, I believe that the 1030 mm value was correct. I believe this discrepancy also affects Figure 12 as none of those data points fall near 1030 mm.

In addition to your upcoming responses to my questions, I was wondering if it would be possible for you to double check these figures, and either provide an explanation for the difference, or provide updated figures.

Thanks

**Steve Hommel**

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[Steven.Hommel@srs.gov](mailto:Steven.Hommel@srs.gov)

---

From: Benson, Craig H (chb4x) <[chb4x@virginia.edu](mailto:chb4x@virginia.edu)>  
Sent: Tuesday, September 18, 2018 5:28 PM  
To: Steven Hommel <[Steven.Hommel@srs.gov](mailto:Steven.Hommel@srs.gov)>  
Subject: Re: Questions on SDF Closure Cap

Steve --

My apologies for the delay in responding. The last couple of weeks have been busy with the start of the new academic year.

I am back on this and expect to have material for you next week.

Thanks, Craig

---

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---

Dr. Benson-

It has been another few weeks so I'm reaching out again.  
We are reaching a point along our schedule wherein the answers to these questions would be very helpful for some of our decision-making.

Thanks

**Steve Hommel**

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[Steven.Hommel@srs.gov](mailto:Steven.Hommel@srs.gov)

---

From: Steven Hommel  
Sent: Tuesday, July 17, 2018 10:16 AM  
To: [chb4x@virginia.edu](mailto:chb4x@virginia.edu)  
Subject: Questions on SDF Closure Cap

Dr. Benson,

I know that Kent Rosenberger has relayed to you that I had some questions related to the closure cap for SDF.

I understand that you have a busy schedule so I wanted to outline my concerns for you. This way when we do talk we can be on the same page.

**Analytical Solution Question**

The first question is related to the Giroud analytical solution (Eq. 4 in your report, or Slide 16 in your presentation to the NRC).

SRS will likely be redesigning the closure cap. The new design should only impact slope length (all the layers and slope angle should remain the same).

In order to see how sensitive the percolation rates are to the slope length, I attempted to recreate your results with the analytical solution. My results were different from what you show in Table 3 of your report.

I thought maybe I set it up incorrectly, so I had a coworker go over what I did and he found it to be consistent with our interpretation of the equation and the inputs.

I'm attaching my work for you (see the Excel file), in hopes that you will look at and be able to understand where we went wrong. Alternatively, feel free to share your version with me and I may be able to solve this without taking up any more of your time.

**Erosion Question**

The NRC (Hans) has expressed concerns about surface erosion of the closure cap. Your report does not seem to mention or address erosion. Is there a rationale or justification for ignoring surface erosion, or can you make a recommendation for how we might need to modify percolation rates to address the potential for surface erosion?

**HDPE Service Life Question**

We intend to use some of your assumptions regarding HDPE for modeling other HDPE layers in our system, specifically an HDPE layer directly above the SDU roof. With only five holes per hectare, we are seeing the HDPE is nearly impermeable forever, even with a hole diameter of 10 mm.

So we are considering an alternative (more conservative) interpretation of the term "service life" as used for describing the evolution of HDPE. "Service life" is assumed to be reached once HDPE properties have to potential to be degraded by 50% (per my understanding). Therefore, the HDPE might begin to degrade as early as the end of the induction stage (~750 years to ~1000 years per Tian et al 2017), then could continue to degrade indefinitely until some end state is reached, as long as it reaches the 50% degradation at ~2000 years.

In your professional opinion, would it be reasonable/conservative to simulate HDPE degradation as starting at ~750 years, then linearly degrading it so it reaches 50% at ~2000 years and complete degradation at ~3250 years? In this approach we define "fully degraded" as an HDPE layer with properties that are hydraulically equivalent to the underlying GCL. Do you believe that this approach

is reasonable and/or conservative?

Thanks

**Steve Hommel**

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Email Documenting Technical Review of SRNL-STI-2018-00077, Rev. 1 (3 Pages)

**From:** [Thomas Danielson](#)  
**To:** [Gregory Flach](#)  
**Subject:** RE: SRNL-STI-2018-00077 Rev. 1 draft report and spreadsheet  
**Date:** Monday, August 6, 2018 12:10:00 PM

---

Greg,

I found no further issues.

Tom Danielson  
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**From:** Gregory Flach  
**Sent:** Thursday, August 02, 2018 5:31 PM  
**To:** Thomas Danielson <[Thomas.Danielson@srnl.doe.gov](mailto:Thomas.Danielson@srnl.doe.gov)>  
**Subject:** RE: SRNL-STI-2018-00077 Rev. 1 draft report and spreadsheet

Tom,

Re: "Perhaps you hadn't gotten around to that just yet and were intending to have the Excel file reviewed prior to updating." ... yes, that was the case and I should have called that to your attention at the outset. The attachments are draft final versions. Since your review the saltstone porosity and dry bulk density have changed, per SRR directive. I'll forward that information by separate e-mail. I do appreciate the careful checking, because you catch some changes that I overlooked.

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803-725-5195  
[gregory.flach@srnl.doe.gov](mailto:gregory.flach@srnl.doe.gov)

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**From:** Thomas Danielson  
**Sent:** Tuesday, July 31, 2018 10:08 AM  
**To:** Gregory Flach <[gregory.flach@srnl.doe.gov](mailto:gregory.flach@srnl.doe.gov)>  
**Subject:** RE: SRNL-STI-2018-00077 Rev. 1 draft report and spreadsheet

Greg,

Attached is the design check. I made a few comments throughout the report on updating tables and some small discrepancies. Perhaps you hadn't gotten around to that just yet and were intending to

have the Excel file reviewed prior to updating. No significant problems were found in the excel file, with the exception of one small necessary update that we noted yesterday.

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---

**From:** Gregory Flach  
**Sent:** Monday, July 30, 2018 9:05 AM  
**To:** Thomas Danielson <[Thomas.Danielson@srnl.doe.gov](mailto:Thomas.Danielson@srnl.doe.gov)>  
**Subject:** RE: SRNL-STI-2018-00077 Rev. 1 draft report and spreadsheet

Newly cited references are available in:

[\\godzilla-01\hpc\\_project\projwork66\srr18\CementitiousMaterialsDegradation\Vanderbilt](#)  
SRR107772-000009 (Benson and Benevides 2018)  
%28ASCE%29GT.1943-5606.0001643 (Tian et al. 2017)

[\\godzilla-01\hpc\\_project\projwork66\srr18\CementitiousMaterialsDegradation\SRR\\_inputs](#)  
SRR-CWDA-2018-00004\_Rev1b\_07252018 (draft, final to be issued concurrent with SRNL-STI-2018-00077 Rev. 1)

SRR-CWDA-2018-00012 Rev. 2 will be issued concurrent with SRNL-STI-2018-00077 Rev. 1 and under the heading "Additional Specifications and Instructions," contain the statement:  
"As part of normal construction activities, the roof and floor of SDU 7 shall be penetrated by nails and other fixtures. While current plans are to repair these penetrations prior to SDU 7 going into service, modeling for the SDU 7 Design Margin should also assume that these penetrations will not be repaired. The methodology for addressing this assumption should be consistent with the approach described in in SRNL-STI-2016-00511."

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**From:** Thomas Danielson  
**Sent:** Monday, July 30, 2018 8:19 AM  
**To:** Gregory Flach <[gregory.flach@srnl.doe.gov](mailto:gregory.flach@srnl.doe.gov)>  
**Subject:** RE: SRNL-STI-2018-00077 Rev. 1 draft report and spreadsheet

Greg – yes, I will gladly do the design check for rev. 1. I'm available to discuss further whenever you are ready.

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---

**From:** Gregory Flach  
**Sent:** Friday, July 27, 2018 2:54 PM  
**To:** Steven Hommel <[Steven.Hommel@srs.gov](mailto:Steven.Hommel@srs.gov)>; Thomas Danielson  
<[Thomas.Danielson@srnl.doe.gov](mailto:Thomas.Danielson@srnl.doe.gov)>  
**Subject:** SRNL-STI-2018-00077 Rev. 1 draft report and spreadsheet

Steve: The attached Word file contains edits to the narrative only. Updates to tables and figures will follow formal design checking. You are welcome to review these early edits in parallel with the latter. No changes to the spreadsheet since yesterday when you last reviewed it.

Tom: Because you reviewed Revision 0, I'm hoping you are available and interested in reviewing Revision 1. Edits to the report narrative provide some explanation. Rather than prepare detailed written instructions, I'd like to interactively discuss the changes made. Changes to inputs or formulas are generally marked using a red or purple font. The most significant logic change is to HDPE degradation. Attached are the two papers that form the basis of the new analysis.  
Speedchart 09Y8L4A376

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**Email Documenting Inconsistent Application of Assumptions #2: Checking of Application  
of Boundary Conditions for PORFLOW Vadose Zone Modeling (1 Page)**

**From:** [David Watkins](#)  
**To:** [Steven Hommel](#)  
**Subject:** RE: files to check  
**Date:** Thursday, January 17, 2019 10:17:20 AM

---

I have completed checking all the flux files and I have no comments. All inputs are correct.

---

**From:** Steven Hommel  
**Sent:** Monday, January 14, 2019 3:22 PM  
**To:** David Watkins <David.Watkins@srs.gov>  
**Subject:** files to check

David-

We had to rerun our central scenario transport runs.

I have updated flux figures. Can you verify/check the Excel files at:

Z:\C&WDA\Folks\SDF\z\_\_04\_Modeling\PORFLOW\PORFLOW\_Results\Vadose\_Zone\_Transport\_Results.7

**Steve Hommel**

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705-1C, PH: (702) 353-6624  
[Steven.Hommel@srs.gov](mailto:Steven.Hommel@srs.gov)

Email Documenting Incorrect Calculation of Drill Cutting Volume in Inventory Document  
(1 Page)

**David Watkins**

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**From:** Steven Hommel  
**Sent:** Thursday, January 24, 2019 7:27 AM  
**To:** David Watkins  
**Subject:** FW: PA inventory document error

David-

Something for the QA report

---

**From:** Steven Hommel  
**Sent:** Wednesday, January 23, 2019 5:18 PM  
**To:** Leslie Wooten <Leslie.Wooten@srs.gov>; Katie-Dara Dixon (katie-dara.dixon@srs.gov) <katie-dara.dixon@srs.gov>; William Dean <William.Dean@srs.gov>  
**Cc:** Kent Rosenberger (kent.rosenberger@srs.gov) <kent.rosenberger@srs.gov>  
**Subject:** PA inventory document error

All-

I found an error in the drill cutting inventories.  
Since Leslie is no longer with us, I'm not sure how to proceed.  
Kent, do we need to create a Rev 2? If so, who will take ownership?

Here is the error:  
[SRR-CWDA-2018-00041](#), Section 5 describes how the drill cutting inventories were estimated.  
These calculations are in the Excel file: 2019PA\_TotalEstimatedInventory\_Rev1.xlsx, Sheet: MPAD Drill Cuttings\_Rad

In the Excel file, the volume of the drill cuttings (in cubic feet) was calculated in Cell Z9.  
The formula used was:  
=PI()\*(Z8/2)\*Z7  
Where Z8 = the diameter of the drill cutting core (8 inches or 0.667 feet) and  
Z7 = was the height of the SDU (43 feet).

This is essentially:  $\pi \times radius \times height$  which would result in units of square feet (area) and not cubic feet (volume).

Since the formula for the area of a circle is  $\pi r^2$  I think the formula should have been:  
=PI()\*((Z8/2)^2)\*Z7

The volume would then change from  
45 ft<sup>3</sup> to 15 ft<sup>3</sup>  
Or from  
337 gal to 112 gal

The resulting drill cutting inventories would all then be reduced to 1/3.

**Steve Hommel**  
Waste Disposal Authority  
Savannah River Remediation

## Email Documenting Changes to Garden Size Error (1 Page)

From: [Steven Hammel](#)  
To: [Barry Lester](#)  
Cc: [David Watkins](#)  
Subject: Changes for GoldSim model rerun  
Date: Wednesday, February 20, 2019 2:21:37 PM

Barry-

The first two changes are needed to correct a minor error in the IHI doses.

The last seven changes are optional changes that will make my analysis go a little quicker when I re-do it after we re-run the model.

Element	Path	Change
GardenSoilMass	\\Dose_Parameter_Calculations\\IHI_DrillCutConc_Calc	Change: $TillDepth * GardenSize * SandySoil.Density$ To: $TillDepth * GardenSize * GardenSizeUncert * SandySoil.Density$
IHI_GardenConc	\\Dose_Parameter_Calculations\\IHI_DrillCutConc_Calc	Change: $Garden.Mass\_in\_Pathway * Species.Specific\_Activity / (GardenSize * TillDepth)$ To: $Garden.Mass\_in\_Pathway * Species.Specific\_Activity / (GardenSize * GardenSizeUncert * TillDepth)$
PeakDose_100m_SectB [new element]	\\SensitivityAnalysis_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to MOP_Doses[SectorB]
PeakDose_100m_SectD [new element]	\\SensitivityAnalysis_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to MOP_Doses[SectorD]
PeakDose_IHI_1m [new element]	\\SensitivityAnalysis_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to IHI_1mBoundary.Dose_IHI
PeakDose_100m_I129 [new element]	\\SensitivityAnalysis_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to Rad_from_MaxSector[I129]
PeakDose_100m_Tc99 [new element]	\\SensitivityAnalysis_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to Rad_from_MaxSector[Tc99]
PeakDose_100m_Watering [new element]	\\SensitivityAnalysis_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to Paths_from_MaxSector[Wateringestion]
PeakDose_100m_Planting [new element]	\\SensitivityAnalysis_New	Copy <b>PeakDose_100m</b> and rename the element. Change input from: MOP_Doses[Total] to Paths_from_MaxSector[Plantingestion]

## **APPDENDIX B – PORFLOW VADOSE ZONE FLOW FIELD CONFIGURATION FILE CHECKING**



**SRR-CWDA-2018-00068**  
**Revision 2**  
**January 2020**

[illegible]

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**Performance Assessment for the Saltstone  
Disposal Facility at the Savannah River Site:  
Quality Assurance Report**

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