REFERENCE DATA SOURCE DOCUMENTATION

FOR PERFORMANCE ASSESSMENT STUDIES

BASALT WASTE ISOLATION PROJECT

HANFORD SITE, WASHINGTON

Prepared for: Basalt Waste Isolation Project
Performance Assessment Group
Energy Systems Group
Rockwell Hanford Operations
Richland, Washington

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APPENDICES

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APPENDIX A

SITE SUBSYSTEM DATA TABLES

HYDRAULIC CONDUCTIVITY: SITE SUBSYSTEM
Abbreviations for Methods

CD-AL = Constant discharge air lift
CD-P = Constant discharge pumping
CDP = Constant drawdown pulse
CHI = Constant head injection
PI = Pulse injection
PT = Pulse test
SI = Slug injection
SW = Slug withdrawal
UPP = Under-pressure pulse

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
QA BY: L.H DATE: 10-29-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
--	--	MABTON INTERBED	DC-16A	N46-31-37 W119-39-34	425.2 - 477.9	--	--	--	--	3E-6 - 3E-5	--	--	--	SD-BWI-TI-135 P30
--	--	VANTAGE INTERBED	DC-16A	N43-31-37 W119-39-34	814.1 - 832.1	--	--	--	--	3E-6 - 3E-5	--	--	--	SD-BWI-TI-135 P30
--	--	MABTON INTERBED	DB-13	N46-29-15 W119-30-56	364-394	--	--	--	--	--	7.1E-5	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
--	--	MABTON INTERBED	DB-14	N46-30-35 W119-38-35	259-316	--	--	--	--	--	4.9E-6	--	SINGLE WELL PUMP TEST & INJECTION TESTING	RHO-BWI-ST-5
--	--	MABTON INTERBED	DH-8	N46-36-24 W119-32-43	18-76	--	--	--	--	--	4.4E-4	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
--	--	MABTON INTERBED	DC-16B	--	429.8 - 478.5	--	--	--	--	1.0E-2 - 1.0E-3	--	--	CD-AL, CD-P	RHO-BW-SR-83-1 1GP
--	--	MABTON INTERBED	DC16A	N46-31-37 W119-39-34	418.5 - 461.8	--	--	--	--	1.0E-6 - 1.0E-5	--	--	CD-P	RHO-BW-SR-82-2 1GP
--	--	MABTON INTERBED	DB-12	N46-36-51 W119-42-11	114-160	--	--	--	--	--	4.2E-5	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
--	--	VANTAGE INTERBED	RRL-2	N46-32-55 W119-39-38	812.3 - 826.9	--	--	--	--	1.0E-8 - 1.0E-6	--	--	CD-AL,CHI,UP P,SI,SW	RHO-BW-SR-82-2 2GP
--	--	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	801.6 - 814.1	--	--	--	--	1.0E-5 - 1.0E-4	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 3GP
--	--	VANTAGE INTERBED	RTLSNK HLS NO 1 EXP	--	--	--	--	--	--	1.0E-5 - 1.0E-9	--	--	--	RHO-SA-25-A

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SD DATE: 10-18-91
QA BY: EH DATE: 10-21-91

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
--	--	--	--	--	1043-1055	--	1.03E-7	--	--	--	--	--	--	RHO-BWI-SA-92A
--	--	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	814.1 - 832.1	--	1.41E-6	--	--	--	--	--	RECOVERY, HARRIL	SD-BWI-TI-100 P.17
--	--	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	814.1 - 832.1	--	6.14E-5	--	--	--	--	--	RECOVERY, EARLOUGHER	SD-BWI-TI-100 P.17
--	--	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	814.1 - 832.1	--	1.31E-5	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-100 P.17
--	--	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	814.1 - 832.1	--	1.79E-4	--	--	--	--	--	SLUG TEST	SD-BWI-TI-100 P.17
--	--	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	814.1 - 832.1	--	3.86E-4	--	--	--	--	--	SLUG TEST	SD-BWI-TI-100 P.17
--	--	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	814.1 - 832.1	--	4.31E-4	--	--	--	--	--	SLUG TEST	SD-BWI-TI-100 P.17
--	--	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	814.1 - 832.1	--	4.43E-4	--	--	--	--	--	SLUG TEST	SD-BWI-TI-100 P.17
--	--	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	814.1 - 832.1	--	3.18E-5	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-100 P.17
--	--	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	814.1 - 832.1	--	--	--	--	--	2.16E-4	2.00E-4	--	--
--	--	MABTON INTERBED	RRL-2	N46-32-55 W119-39-38	397.5 - 470.6	--	--	--	--	3E-10-3E-9	--	--	--	SD-BWI-TI-113 P.57
--	--	VANTAGE INTERBED	RRL-2	N46-32-55 W119-39-38	812.3 - 826.9	--	--	--	--	3E-8-3E-7	--	--	--	SD-BWI-TI-113 P.57

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
QA BY: [illegible] DATE: 10-22-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
--	--	MABTON INTERBED	DC-1	--	217-363	--	--	--	--	--	1.0E-5	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1200.6TO12 31.4	--	2.29E-10	--	--	--	--	--	RECOVERY	SD-BWI-TI-134 P29
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1200.6TO12 31.4	--	2.68E-9	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-134 P29
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1200.6TO12 31.4	--	1.76E-9	--	--	--	--	--	UNDER-PRESSURE PULSE	SD-BWI-TI-134 P29
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1200.6TO12 31.4	--	1.34E-9	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-134 P29
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1200.6TO12 31.4	--	1.20E-9	--	--	--	--	--	SLUG WITHDRAWAL	SD-BWI-TI-134 P29
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1200.6TO12 31.4	--	3.88E-9	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-134 P29
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1200.6TO12 31.4	--	2.05E-9	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-134 P29
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1200.6TO12 31.4	--	2.08E-9	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-134 P29
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1200.6TO12 31.4	--	--	--	--	--	1.88E-9	1.17E-9	--	--
GRANDE RONDE	SENTINEL BLUFFS	--	DC-16A	N46-31-37 W119-39-34	813.8 TO 860.1	--	--	--	--	3E-6 TO 3E-5	--	--	--	SD-BWI-TI-135 P30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-16A	N46-31-37 W119-39-34	905.3 TO 940.6	--	--	--	--	3E-8 TO 3E-7	--	--	--	SD-BWI-TI-135 P30

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
QA BY: TH DATE: 10-27-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF CM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COLONNADE ENTABLA-TURE	DC-16A	N46-31-37 W119-39-34	961.3 TO 991.8	--	--	--	--	3E-14 TO 3E-13	--	--	--	GD-BWI-TI-135 P30
GRANDE RONDE	SENTINEL BLUFFS	COLONNADE ENTABLA-TURE	DC-16A	N46-31-37 W119-39-34	991.8 TO 1024.1	--	--	--	--	3E-11 TO 3E-10	--	--	--	GD-BWI-TI-135 P30
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE /ENTABLA-TURE	RRL-6	N46-31-59 W119-40-47	1166.8-1200.6	--	5.29E-13	--	--	--	--	--	CONSTANT HEAD INJECTION	THORNE & SPANE, 1983
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE /ENTABLA-TURE	RRL-6	N46-31-59 W119-40-47	1166.8-1200.6	--	5.29E-13	--	--	--	--	--	CONSTANT HEAD INJECTION	THORNE & SPANE, 1983
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE /ENTABLA-TURE	RRL-6	N46-31-59 W119-40-47	1166.8-1200.6	--	6.35E-13	--	--	--	--	--	CONSTANT HEAD INJECTION	THORNE & SPANE, 1983
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE /ENTABLA-TURE	RRL-6	N46-31-59 W-119-40-47	1166.8-1200.6	--	6.47E-13	--	--	--	--	--	CONSTANT HEAD INJECTION	THORNE & SPANE, 1983
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE /ENTABLA-TURE	RRL-6	N46-31-59 W119-40-47	1166.8-1200.6	--	2.19E-15	--	--	--	--	--	SLUG TEST	THORNE & SPANE, 1983
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE /ENTABLA-TURE	RRL-6	N46-31-59 W119-40-47	1166.8-1200.6	--	6.00E-16	--	--	--	--	--	SLUG TEST	THORNE & SPANE, 1983
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE /ENTABLA-TURE	RRL-6	N46-31-59 W119-40-47	1166.8-1200.6	--	--	--	--	--	4.24E-13	3.37E-13	SLUG TEST	THORNE & SPANE, 1983

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF CM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE /ENTABLA-TURE	RRL-6	N46-31-59 W119-40-47	1166.8-1200.6	--	3.18E-13	--	--	--	--	--	BEST ESTIMATE	THORNE & SPANE, 1983
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	RRL-2	N46-32-55 W119-39-38	1056.4-1072.3	--	1.14E-10	--	--	--	--	--	CONSTANT DISCHARGE	SD-BWI-TI-146 P.28
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	RRL-2	N46-32-55 W119-39-38	1056.4-1072.3	--	7.27E-11	--	--	--	--	--	CONSTANT DISCHARGE	SD-BWI-TI-146 P.28
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	RRL-2	N46-32-55 W119-39-38	1056.4-1072.3	--	6.42E-11	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-146 P.28
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	RRL-2	N46-32-55 W119-39-38	1056.4-1072.3	--	3.88E-10	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-146 P.28
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	RRL-2	N46-32-55 W119-39-38	1056.4-1072.3	--	7.73E-11	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-146 P.28
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	RRL-2	N46-32-55 W119-39-38	1056.4-1072.3	--	8.11E-11	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-146 P.28
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	RRL-2	N46-32-55 W119-39-38	1056.4-1072.3	--	--	--	--	--	1.43E-10	1.38E-10	--	SD-BWI-TI-146 P.28
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE /ENTABLA-TURE	DC-16A	N46-31-37 W119-39-34	961.3 - 991.8	--	1.23E-13	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-149 P.27

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIENTATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE /ENTABLATURE	DC-16A	N46-31-37 W119-39-34	961.3 - 991.8	--	3.88E-14	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-149 P.27
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE /ENTABLATURE	DC-16A	N46-31-37 W119-39-34	961.3 - 991.8	--	3.88E-13	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-149 P.27
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE /ENTABLATURE	DC-16A	N46-31-37 W119-39-34	961.3 - 991.8	--	1.23E-13	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-149 P.27
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE /ENTABLATURE	DC-16A	N46-31-37 W119-39-34	961.3 - 991.8	--	--	--	--	--	1.83E-13	1.82E-13	--	--
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW INTR.	DC-4	N46-34-35 W119-39-53	882-897	--	--	--	--	--	1.0E-13	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW TOP	DC-12	N46-28-4 W119-32-28	734-746	--	--	--	--	--	1.0E-5	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW TOP	DC-15	N46-23-45 W119-16-13	679-714	--	--	--	--	--	1.0E-5	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW TOP	DC-16A	N46-31-37 W119-39-34	864-898	--	--	--	--	--	1.0E-6	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW TOP	RRL-2	N46-32-55 W119-39-38	829-889	--	--	--	--	--	1.0E-7	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	DC-6	N46-35-14 W119-23-46	730-822	--	--	--	--	--	1.0E-7	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF CM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	DC-12	N46-28-4 W119-32-28	782-811	--	--	--	--	--	1.0E-7	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	DC-15	N46-23-45 W119-16-13	760-777	--	--	--	--	--	1.0E-5	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	DC-16A	N46-31-37 W119-39-34	905-941	--	--	--	--	--	1.0E-8	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	RRL-2	N46-32-55 W119-39-38	909-921	--	--	--	--	--	1.0E-8	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSET FLOW TOP	RRL-6	N46-31-59 W119-40-47	939-951	--	--	--	--	--	1.0E-11	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	RRL-14	N46-33-18 W119-41-20	920-959	--	--	--	--	--	1.0E-6	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW INTERIOR	DC-16A	N46-31-37 W119-39-34	961-992	--	--	--	--	--	1.0E-14	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW INTERIOR	RRL-2	N46-32-55 W119-39-38	968-989	--	--	--	--	--	1.0E-13	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW INTERIOR	RRL-6	N46-31-59 W119-40-47	954-1016	--	--	--	--	--	1.0E-13	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW INTERIOR	RRL-14	N46-33-18 W119-41-20	957-1010	--	--	--	--	--	1.0E-14	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	990-1019	--	--	--	--	--	1.0E-5	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1106-1041	--	--	--	--	--	1.0E-10	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF VALUE	GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	RRL-14	N46-33-18 W119-41-20	1004-1037	--	--	--	--	--		1.0E-8	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOW TOP	DC-7/8	N46-28-46 W119-23-12	1039-1060	--	--	--	--	--		1.0E-8	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOW TOP	DC-12	N46-28-4 W119-32-28	908-961	--	--	--	--	--		1.0E-9	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOW TOP	DC-14	N46-40-16 W119-27-31	878-907	--	--	--	--	--		1.0E-8	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	DC-6	N46-35-14 W119-23-46	912-938	--	--	--	--	--		1.0E-7	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	DC-14	N46-40-16 W119-27-31	933-958	--	--	--	--	--		1.0E-6	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	DC-15	N46-23-45 W119-16-13	902-949	--	--	--	--	--		1.0E-5	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-2	N46-32-55 W119-39-38	1088-1152	--	--	--	--	--		1.0E-5	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-6	N46-31-59 W119-40-47	1130-1167	--	--	--	--	--		1.0E-8	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-14	N46-33-18 W119-41-20	1132-1162	--	--	--	--	--		1.0E-7	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW INTERIOR	DC-3	N46-33-39 W119-36-18	1092-1108	--	--	--	--	--		1.0E-13	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW INTERIOR	DC-6	N46-35-14 W119-23-46	938-989	--	--	--	--	--		1.0E-13	--	STRADDLE PACKER INJECTON	RHO-BW-ST-28P

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM FLOW INTERIOR	RRL-6	N46-31-59 W119-40-47	1166-1200	--	--	--	--	--	<= 1.0E-13	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW INTERIOR	RRL-14	N46-33-18 W119-41-20	1164-1190	--	--	--	--	--	<= 1.0E-14	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	1170-1185	--	--	--	--	--	1.0E-5	--	STRADDLE PACKER INJECTION	RHO-BW-ST-28P
GRANDE RONDE	--	--	DC-1	--	792-847	--	--	--	--	--	4.9E-7	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	832-887	--	--	--	--	--	6.4E-9	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	959-986	--	--	--	--	--	3.0E-6	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	965-974	--	--	--	--	--	8.5E-8	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	1012-1052	--	--	--	--	--	1.8E-8	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	1150-1199	--	--	--	--	--	1.2E-8	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	1192-1240	--	--	--	--	--	1.7E-6	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	712-724	--	--	--	--	5.3E-8 - 1.1E-9	--	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	724-734	--	--	--	--	2.0E-8 - 4.6E-10	--	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	900-917	--	--	--	--	6.4E-9 - 1.4E-9	--	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	920-936	--	--	--	--	2.6E-12 - 5.3E-14	--	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	935-952	--	--	--	--	6.0E-12 - 1.5E-13	--	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	965-966	--	--	--	--	2.9E-12 - 1.4E-13	--	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	757-774	--	--	--	--	--	1.3E-7	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	774-1018	--	--	--	--	--	1.1E-9	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	1018-1019	--	--	--	--	--	7.1E-7	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	1019-1058	--	--	--	--	--	3.5E-8	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	1058-1098	--	--	--	--	--	4.2E-8	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	1098-1103	--	--	--	--	--	5.6E-7	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	1103-1112	--	--	--	--	--	3.9E-8	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	1112-1123	--	--	--	--	--	1.5E-6	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	1123-1125	--	--	--	--	--	2.1E-6	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	1125-1149	--	--	--	--	--	3.9E-6	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	1149-1159	--	--	--	--	--	7.1E-7	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	1159-1322	--	--	--	--	--	2.7E-9	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	689-700	--	--	--	--	--	3.0E-15	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	743-757	--	--	--	--	--	1.0E-3	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	775-785	--	--	--	--	--	1.0E-10	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	786-798	--	--	--	--	--	1.0E-10	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	814-826	--	--	--	--	--	2.0E-9	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	RSH-1	N46-26-30 W119-46-23	588-611	--	--	--	--	--	7.1E-8	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	RSH-1	N46-26-30 W119-46-23	797-820	--	--	--	--	--	5.7E-10	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	RSH-1	N46-26-30 W119-46-23	799-816	--	--	--	--	5.7E-11 - 3.9E-11	--	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	--	--	RSH-1	N46-26-30 W119-46-23	823-844	--	--	--	--	6.0E-11 - 4.6E-11	--	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	RSH-1	N46-26-30 W119-46-23	828-835	--	--	--	--	--	1.5E-10	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	RSH-1	N46-26-30 W119-46-23	835-844	--	--	--	--	1.4E-10 - 1.1E-10	--	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	RSH-1	N46-26-30 W119-46-23	847-860	--	--	--	--	--	1.7E-9	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	RSH-1	N46-26-30 W119-46-23	847-860	--	--	--	--	8.8E-11 - 7.7E-11	--	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	--	--	RSH-1	N46-26-30 W119-46-23	861-872	--	--	--	--	3.5E-10 - 3.0E-10	--	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-5
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOW INT.	RRL-2	N46-32-55 W119-39-38	1087.5-1095.1	--	--	--	--	1.0E-10 - 1.0E-11	--	--	--	RHO-BW-SR-83-1 1QP
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1202.7-1231.4	--	--	--	--	1.0E-10- 1.0E-11	--	--	PI.CHI	RHO-BW-SR-83-1 1QP
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	DC-16A	N46-31-37 W119-39-34	991.8 - 1024.1	--	--	--	--	1.0E-10- 1.0E-12	--	--	CD-AL.SI.SW. CHI	RHO-BW-SR-83-1 1QP
GRANDE RONDE	--	--	DC-16A	N46-31-37 W119-39-34	1031.1-1065.3	--	--	--	--	1.0E-10 - 1.0E-12	--	--	CD-AL.SI.SW. CHI	RHO-BW-SR-83-1 1QP

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR, VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF VALUE	GM MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOW BOTTOM	DC-16A	N46-31-37 W119-39-34	1070.5-1081.7	--	--	--	--	1.0E-7 - 1.0E-9	--	--	CD-AL,SI,SW. CHI	RHO-BW-SR-83-1 1QP
GRANDE RONDE	COMPOSITE	COMPOSITE	DC-7	N46-28-46 W119-23-12	847.3 - 1203.0	--	1.0E-8	--	--	--	--	--	CD-P	RHO-BW-SR-82-2 1QP
GRANDE RONDE	SENTINEL BLUFFS	--	RRL-2	N46-32-55 W119-39-38	931.8 - 967.7	--	--	--	--	1.0E-13 - 1.0E-12	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 3QP
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-2	N46-32-55 W119-39-38	1135.4-1152.4	--	--	--	--	1.0E-8 - 1.0E-7	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 3QP
GRANDE RONDE	SCHWANA	UMTANUM FLOW INTERIOR	RRL-2	N46-32-55 W119-39-38	1146.7-1159.8	--	--	--	--	1.0E-13 - 1.0E-12	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 3QP
GRANDE RONDE	SCHWANA	UMTANUM FLOW INTERIOR	RRL-2	N46-32-55 W119-39-38	1152.4-1166.5	--	--	--	--	1.0E-5 - 1.0E-4	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 3QP
GRANDE RONDE	SENTINEL BLUFFS	--	RRL-14	N46-33-18 W119-41-20	937.9 - 959.2	--	--	--	--	1.0E-8 - 1.0E-7	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 3QP
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	RRL-14	N46-33-18 W119-41-20	1004.0-1037.2	--	--	--	--	1.0E-9 - 1.0E-8	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 4QP
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	DC-4/5	N46-34-35 W119-39-53	897.6 - 918.1	--	--	--	--	1.0E-8 - 1.0E-6	--	--	CD-P,PT,CHI	RHO-BW-SR-82-2 4QP
GRANDE RONDE	SENTINEL BLUFFS	--	DC-16A	N46-31-37 W119-39-34	813.8 - 860.1	--	--	--	--	1.0E-7 - 1.0E-6	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 4QP

SITE SUBSYSTEM
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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF CM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	RRL-6	N46-31-59 W119-40-47	939.1 - 951.3	--	--	--	--	3.5E-12 - 3.5E-11	--	--	--	SD-BWI-TI-167 P.28
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE /ENTABLA-TURE	RRL-6	N46-31-59 W119-40-47	953.7 - 1015.6	--	--	--	--	3.5E-16 - 3.5E-13	--	--	--	SD-BWI-TI-167 P.28
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1015.0- 1041.2	--	--	--	--	3.5E-10 - 3.5E-10	--	--	--	SD-BWI-TI-167 P.28
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-6	N46-31-59 W119-40-47	1129.9- 1166.8	--	--	--	--	3.5E-9 - 3.5E-8	--	--	--	SD-BWI-TI-167 P.28
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE /ENTABLA-TURE	RRL-6	N46-31-59 W119-40-47	1166.5- 1200.3	--	--	--	--	3.5E-16 - 3.5E-13	--	--	--	SD-BWI-TI-167 P.28
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-6	N46-31-59 W119-40-47	1200.6- 1231.4	--	--	--	--	3.5E-11 - 3.5E-10	--	--	--	SD-BWI-TI-167 P.28
GRANDE RONDE	SCHWANA	VERY HIGH MG FLOW BOTTOM	DC-16A	N46-31-37 W119-39-34	1193.0- 1231.1	--	3.28E-9	--	--	--	--	--	CONSTANT DISCHARGE	SD-BWI-TI-171 P.20
GRANDE RONDE	SCHWANA	VERY HIGH MG FLOW BOTTOM	DC-16A	N46-31-37 W119-39-34	1193.0- 1231.1	--	1.16E-7	--	--	--	--	--	SLUG WITHDRAWL	SD-BWI-TI-171 P.20
GRANDE RONDE	SCHWANA	VERY HIGH MG FLOW BOTTOM	DC-16A	N46-31-37 W119-39-34	1193.0- 1231.1	--	7.41E-9	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-171 P.20

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

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GRANDE RONDE	SCHWANA	VERY HIGH MG FLOW BOTTOM	DC-16A	N46-31-37 W119-39-34	1193.0-1231.1	--	4.23E-8	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-171 P.20
GRANDE RONDE	SCHWANA	VERY HIGH MG FLOW BOTTOM	DC-16A	N46-31-37 W119-39-34	1193.0-1231.1	--	4.23E-8	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-171 P.20
GRANDE RONDE	SCHWANA	VERY HIGH MG FLOW BOTTOM	DC-16A	N46-31-37 W119-39-34	1193.0-1231.1	--	--	--	--	--	4.24E-8	5.24E-8	--	--
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-4	N46-34-35 W119-39-53	882.1-896.7	--	8.82E-14	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-175
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-4	N46-34-35 W119-39-53	882.1-896.7	--	1.23E-13	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-175
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-4	N46-34-35 W119-39-53	882.1-896.7	--	5.64E-14	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-175
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-4	N46-34-35 W119-39-53	882.1-896.7	--	1.41E-14	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-175
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-4	N46-34-35 W119-39-53	882.1-896.7	--	1.41E-13	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-175
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-4	N46-34-35 W119-39-53	882.1-896.7	--	8.82E-14	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-175
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-4	N46-34-35 W119-39-53	882.1-896.7	--	--	--	--	--	8.47E-14	5.12E-14	--	--
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	RRL-14	N46-33-18 W119-41-20	916.5-959.2	--	--	--	--	1.0E-7 - 1.0E-6	--	--	--	SD-BWI-TI-186 P.27

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

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QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIENTATION	RANGE OF VALUE	GM MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE /ENTABLATURE	RRL-14	N46-33-18 W119-41-20	957.1 - 1009.8	--	--	--	--	1.0E-16 - 1.0E-14	--	-	--	SD-BWI-TI-186 P.27
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	RRL-14	N46-33-18 W119-41-20	1004.0- 1037.2	--	--	--	--	1.0E-4 - 1.0E-8	--	--	--	SD-BWI-TI-186 P.27
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-14	N46-33-18 W119-41-20	1132.3- 1162.5	--	--	--	--	1.0E-8 - 1.0E-7	--	--	--	SD-BWI-TI-186 P.27
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE /ENTABLATURE	RRL-14	N46-33-18 W119-41-20	1164.0- 1190.9	--	--	--	--	1.0E-16 - 1.0E-14	--	--	--	SD-BWI-TI-186 P.27
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-14	N46-33-18 W119-41-20	1180.8- 1204.6	--	--	--	--	1.0E-10 - 1.0E-9	--	--	--	SD-BWI-TI-186 P.27
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON INTERFLOW	--	--	--	--	0.84	--	--	--	--	--	--	RHO-BW-SA-220P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON INTERFLOW	--	--	--	--	0.60	--	--	--	--	--	--	RHO-BW-SA-220P
GRANDE RONDE	SCHWANA	220 FT. ABOVE UMTANUM	DC-8	N46-28-47 W119-23-13	--	--	7.35E-8	--	--	--	--	--	PRESSURE RECOVERY DATA	RHO-BW-CR-131P P.E-32
GRANDE RONDE	SCHWANA	220 FT. ABOVE UMTANUM	DC-8	N46-28-47 W119-23-13	--	--	7.96E-7	--	--	--	--	--	PUMP TEST	RHO-BW-CR-131P P.E-32
GRANDE RONDE	--	INTER-FLOWS	--	--	--	--	--	--	--	1.0E-4 - 1.0E-10	--	--	--	RHO-BWI-LD-44 P.26
GRANDE RONDE	--	ALL FLOWS	RATTLESNAKE HILLS	--	--	--	--	--	--	1.0E-9 - 1.0E-11	--	--	--	RHO-SA-25-A

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
QA BY: [illegible] DATE: 10-29-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF VALUE	GM MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	220 FT. ABOVE UMTANUM	DC7/8	N46-28-46 W119-23-12	--	--	3.87E-7	--	--	--	--	--	DST	RHO-BW-CR-131P P.E-32
GRANDE RONDE	SCHWANA	220 FT. ABOVE UMTANUM	DC7	N46-28-46 W119-23-12	--	--	4.05E-7	--	--	--	--	--	SLUG INJECTION TEST	RHO-BW-CR-131P P.E-32
GRANDE RONDE	SCHWANA	220 FT. ABOVE UMTANUM	DC7	N46-28-46 W119-23-12	--	--	7.96E-8	--	--	--	--	--	PRESS. RECOVERY DATA	RHO-BW-CR-131P P.E-32
GRANDE RONDE	SCHWANA	220 FT. ABOVE UMTANUM	DC7	N46-28-46 W119-23-12	--	--	4.79E-7	--	--	--	--	--	PUMP TEST	RHO-BW-CR-131P P.E-32
GRANDE RONDE	--	TEST INTERVAL NO. 8	DC14	N46-40-16 W119-27-31	999-1015	--	4.45E-6	--	--	--	--	--	--	SD-BWI-TC-011 P.5
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1152-1166	--	1.24E-4	--	--	--	--	-	CONSTANT DISCHARGE	SD-BWI-TI-089 P.24
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1152-1166	--	5.19E-4	--	--	--	--	--	RECOVERY	SD-BWI-TI-089 P.24
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1152-1166	--	5.19E-4	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-089 P.24
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1152-1166	--	1.21E-4	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-089 P.24
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1152-1166	--	1.21E-4	--	--	--	--	--	SLUG WITHDRAWAL	SD-BWI-TI-089 P.24
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1152-1166	--	--	--	--	--	2.22E-4	1.98E-4	--	--
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS VESICULAR	RRL-2	N46-32-55 W119-39-38	931.8 - 966.8	--	1.91E-12	--	--	--	--	--	OVER-PRESS. PULSE	SD-BWI-TI-090 P.16
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS VESICULAR	RRL-2	N46-32-55 W119-39-38	931.8 - 966.8	--	5.64E-11	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-090 P.16

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS VESICULAR	RRL-2	N46-32-55 W119-39-38	931.8 - 966.8	--	5.64E-11	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-090 P.16
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS VESICULAR	RRL-2	N46-32-55 W119-39-38	931.8 - 966.8	--	--	--	--	--	2.92E-11	3.85E-11	--	--
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1135.4-1152.5	--	1.62E-6	--	--	--	--	--	RECOVERY	SD-BWI-TI-091 P.20
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1135.4-1152.5	--	1.62E-6	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-091 P.20
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1135.4-1152.5	--	7.76E-7	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-091 P.20
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1135.4-1152.5	--	1.13E-6	--	--	--	--	--	SLUG WITHDRAWL	SD-BWI-TI-091 P.20
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1135.4-1152.5	--	--	--	--	--	1.18E-6	4.24E-7	--	--
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	989.7 - 1019.3	--	3.85E-5	--	--	--	--	--	RECOVERY	SD-BWI-TI-095 P.28
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	989.7 - 1019.3	--	3.53E-5	--	--	--	--	--	RECOVERY VARIABLE DISCHARGE RATE	SD-BWI-TI-095 P.28

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	989.7 - 1019.3	--	1.27E-5	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-095 P.28
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	989.7 - 1019.3	--	9.17E-6	--	--	--	--	--	SLUG WITHDRAWL	SD-BWI-TI-095 P.28
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	989.7 - 1019.3	--	3.49E-5	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-095 P.28
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	989.7 - 1019.3	--	--	--	--	--	2.39E-5	1.51E-5	--	--
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS FLOWTOP	RRL-2	N46-32-55 W119-39-38	912.3 - 918.1	--	3.53E-9	--	--	--	--	--	OVER-PRESSURE TEST	SD-BWI-TI-102 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS FLOWTOP	RRL-2	N46-32-55 W119-39-38	912.3 - 918.1	--	1.06E-8	--	--	--	--	--	OVER-PRESSURE TEST	SD-BWI-TI-102 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS FLOWTOP	RRL-2	N46-32-55 W119-39-38	912.3 - 918.1	--	9.88E-9	--	--	--	--	--	OVER-PRESSURE TEST	SD-BWI-TI-102 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS FLOWTOP	RRL-2	N46-32-55 W119-39-38	912.3 - 918.1	--	8.82E-9	--	--	--	--	--	OVER-PRESSURE TEST	SD-BWI-TI-102 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS FLOWTOP	RRL-2	N46-32-55 W119-39-38	912.3 - 918.1	--	9.17E-9	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-102 P.26

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS FLOWTOP	RRL-2	N46-32-55 W119-39-38	912.3 - 918.1	--	1.73E-9	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-102 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS FLOWTOP	RRL-2	N46-32-55 W119-39-38	912.3 - 918.1	--	1.16E-8	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-102 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFSS FLOWTOP	RRL-2	N46-32-55 W119-39-38	912.3 - 918.1	--	7.76E-9	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-102 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS FLOWTOP	RRL-2	N46-32-55 W119-39-38	912.3 - 918.1	--	--	--	--	--	7.9E-9	3.75E-9	--	SD-BWI-TI-102 P.26
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RRL-2	N46-32-55 W119-39-38	1087.5-1152.5	--	1.09E-5	--	--	--	--	--	RECOVERY	SD-BWI-TI-105 P.30
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RRL-2	N46-32-55 W119-39-38	1087.5-1152.5	--	5.64E-6	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-105 P.30
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RRL-2	N46-32-55 W119-39-38	1087.5-1152.5	--	5.64E-6	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-105 P.30
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	FFL-2	N46-32-55 W119-39-38	1087.5-1152.5	--	5.64E-6	--	--	--	--	--	SLUG WITHDRAWL	SD-BWI-TI-105 P.30
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RRL-2	N46-32-55 W119-39-38	1087.5-1152.5	--	5.64E-6	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-105 P.30

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: JP DATE: 10-18-84
QA BY: LH DATE: 10-29-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RRL-2	N46-32-55 W119-39-38	1087.5-1152.5	--	5.64E-6	--	--	--	--	--	SLUG WITHDRAWL	SD-BWI-TI-105 P.30
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RRL-2	N46-32-55 W119-39-38	1087.5-1152.5	--	1.09E-5	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-105 P.30
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RRL-2	N46-32-55 W119-39-38	1087.5-1152.5	--	--	--	--	--	6.7E-6	2.37E-6	--	--
GRANDE RONDE	SCHWANA	UMTANUM ENTABLA-TURE	RRL-2	N46-32-55 W119-39-38	1146.7-1159.8	--	7.41E-13	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-107 P.25
GRANDE RONDE	SCHWANA	UMTANUM ENTABLA-TURE	RRL-2	N46-32-55 W119-39-38	1146.7-1159.8	--	1.23E-12	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-107 P.25
GRANDE RONDE	SCHWANA	UMTANUM ENTABLA-TURE	RRL-2	N46-32-55 W119-39-38	1146.7-1159.8	--	2.22E-12	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-107 P.25
GRANDE RONDE	SCHWANA	UMTANUM ENTABLA-TURE	RRL-2	N46-32-55 W119-39-38	1146.7-1159.8	--	2.47E-12	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-107 P.25
GRANDE RONDE	SCHWANA	UMTANUM ENTABLA-TURE	RRL-2	N46-32-55 W119-39-38	1146.7-1159.8	--	9.88E-13	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-107 P.25
GRANDE RONDE	SCHWANA	UMTANUM ENTABLA-TURE	RRL-2	N46-32-55 W119-39-38	1146.7-1159.8	--	1.73E-11	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-107 P.25

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
QA BY: ZH DATE: 10-22-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GN VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM ENTABLA-TURE	RRL-2	N46-32-55 W119-39-38	1146.7-1159.8	--	1.31E-12	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-107 P.25
GRANDE RONDE	SCHWANA	UMTANUM ENTABLA-TURE	RRL-2	N46-32-55 W119-39-38	1146.7-1159.8	--	--	--	--	--	4.16E-12	6.47E-12	--	--
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	967.7 - 988.8	--	5.64E-13	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-109 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	967.7 - 988.8	--	1.73E-13	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-109 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	967.7 - 988.8	--	2.26E-13	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-109 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	967.7 - 988.8	--	1.62E-13	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-109 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	967.7 - 988.8	--	1.62E-13	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-109 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	967.7 - 988.8	--	2.82E-12	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-109 P.26
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	967.7 - 988.8	--	2.26E-13	--	--	--	--	--	BEST ESTIMATE	GRANDE RONDE
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	RRL-2	N46-32-55 W119-39-38	967.7 - 988.8	--	--	--	--	--	6.85E-13	1.06E-12	--	--
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	1169.5-1185.4	--	1.38E-5	--	--	--	--	--	CONSTANT DISCHARGE	SD-BWI-TI-112 P.24

SITE SUBSYSTEM
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GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	1169.5-1185.4	--	1.75E-5	--	--	--	--	--	CONSTANT DISCHARGE	SD-BWI-TI-112 P.24
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	1169.5-1185.4	--	1.41E-7	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-112 P.24
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	1169.5-1185.4	--	1.56E-5	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-112 P.24
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-2	N46-32-55 W19-39-38	1169.5-1185.4	--	--	--	--	--	1.05E-5	9.13E-6	--	--
GRANDE RONDE	SENTINEL BLUFFS	UPPER FLOWTOPS	RRL-2	N46-32-55 W119-39-38	828.8-887.9	--	--	--	--	3E-6 - 3E-5	--	--	--	SD-BWI-TI-113 P.57
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	RRL-2	N46-32-55 W119-39-38	908.6-920.5	--	--	--	--	3E-9 - 3E-8	--	--	--	SD-BWI-TI-113 P.57
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT VESICULAR	RRL-2	N46-32-55 W119-39-38	931.8-966.8	--	--	--	--	3E-12 - 3E-11	--	--	--	SD-BWI-TI-113 P.57
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE /ENTABLA-TURE	RRL-2	N46-32-55 W119-39-38	967.7-988.8	--	--	--	--	3E-14 - 3E-13	--	--	--	SD-BWI-TI-113 P.57
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	989.7-1019.3	--	--	--	--	3E-6 - 3E-5	--	--	--	SD-BWI-TI-113 P.57
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RRL-2	N46-32-55 W119-39-38	1087.5-1152.4	--	--	--	--	3E-6 - 3E-5	--	--	--	SD-BWI-TI-113 P.57

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CHECKED BY: SP DATE: 10-18-84
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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP LOWER PORTION	RRL-2	N46-32-55 W119-39-38	1135.4-1152.4	--	--	--	--	3E-8 - 3E-7	--	--	--	SD-BWI-TI-113 P. 57
GRANDE RONDE	SCHWANA	UMTANUM ENTABLA-TURE	RRL-2	N46-32-55 W119-39-38	1146.7-1159.8	--	--	--	--	3E-13 - 3E-12	--	--	--	SD-BWI-TI-113 P. 58
GRANDE RONDE	SCHWANA	UMTANUM FRACTURE ZONE	RRL-2	N46-32-55 W119-39-38	1152.4-1166.5	--	--	--	--	3E-5 - 3E-4	--	--	--	SD-BWI-TI-113 P. 58
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	1169.5-1185.4	--	-	--	--	3E-6-3E-4	--	--	--	SD-BWI-TI-113 P. 58
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-16A	N46-31-37 W119-39-34	905.3 - 940.6	--	4.59E-7	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-121
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-16A	N46-31-37 W119-39-34	905.3 - 940.6	--	2.68E-7	--	--	-	--	--	SLUG INJECTION	SD-BWI-TI-121
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-16A	N46-31-37 W119-39-34	905.3 - 940.6	--	1.06E-7	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-121
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-16A	N46-31-37 W119-39-34	905.3 - 940.6	--	1.45E-7	--	--	--	--	--	SLUG INJECTION	SD-BWI-TI-121
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-16A	N46-31-37 W119-39-34	905.3 - 940.6	--	3.88E-9	--	--	--	--	--	SLUG WITHDRAWL	SD-BWI-TI-121
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-16A	N46-31-37 W119-39-34	905.3 - 940.6	--	8.29E-8	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-121
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-16A	N46-31-37 W119-39-34	905.3 - 940.6	--	2.29E-7	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-121

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
QA BY: LH DATE: 10-29-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF CM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-1A6	N46-31-37 W119-39-34	905.3 - 940.6	--	--	--	--	--	1.32E-7	1.68E-7	--	--
GRONDE RONDE	SENTINEL BLUFFS	COLONNADE ENTABLA-TURE	DC-16A	N46-31-37 W119-39-34	941.2 TO 992.4	--	--	--	--	3E-10 TO 3E-9	--	--	--	GD-BWI-TI-135 P30
HANFORD	--	UPPER	--	--	--	--	--	--	--	1.0E-4 - 1.0E-2	--	--	--	RHO-BWI-LD-44 P.11
HANFORD	--	MIDDLE	--	--	--	--	--	--	--	1.0E-5 - 1.0E-3	--	--	--	RHO-BWI-LD-44 P.11
HANFORD	--	LOWER	--	--	--	--	--	--	--	1.0E-7 - 1.0E-5	--	--	--	RHO-BWI-LD-44 P.11
HANFORD	--	SEDIMENTARY INTERBEDS	--	--	--	--	--	--	--	1.0E-3 - 1.0E-8	---	--	--	RHO-BWI-LD-44 P.12
HANFORD	--	BASALT INTER-FLOWS	--	--	--	--	--	--	--	1.0E-1 - 1.0E-8	--	--	--	RHO-BWI-LD-44 P.12
HANFORD	--	COLUMNAR BASALTS	--	--	--	--	--	--	--	<1.0E-10	--	--	--	RHO-BWI-LD-44 P.12
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	DB-15	N46-34-10 W119-29-31	45.7 TO 67.7	--	2.96E-5	--	--	--	--	--	CONSTANT DISCHARGE	GD-BWI-TI-130 P.18
SADDLE MOUNTAIN	POMONA	POMONA FLOW TOP	DB-15	N46-34-10 W119-29-31	45.7 TO 67.7	--	3.10E-5	--	--	--	--	--	CONSTANT DISCHARGE	GD-BWI-TI-130 P18
SADDLE MOUNTAIN	POMONA	POMONA FLOW TOP	DB-15	N46-34-10 W119-29-31	45.7 TO 67.7	--	3.03E-5	--	--	--	--	--	BEST ESTIMATE	GD-BWI-TI-130 P18
SADDLE MOUNTAIN	POMONA	POMONA FLOW TOP	DB-15	N46-34-10 W119-29-31	45.7 TO 67.7	--	--	--	--	--	3.03E-5	9.98E-7	--	--
SADDLE MOUNTAIN	--	SELAH INTERBED	DB-15	N46-34-10 W119-29-31	112.8 TO 128.6	--	1.20E-6	--	--	--	--	--	CONSTANT DISCHARGE	GD-BWI-TI-131 P

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF VALUE	GM MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	DC-16A	N46-31-37 W119-39-34	203.6 TO 254.5	--	--	--	--	3E-5 TO 3E-1	--	--	--	SD-BWI-TI-135 P30
SADDLE MOUNTAIN	--	SELAH INERBED	DC-16A	N46-31-37 W119-39-34	282.9 TO 311.2	--	--	--	--	3E-7 TO 3E-6	--	--	--	SD-BWI-TI-135 P30
SADDLE MOUNTAIN	--	COLD CREEK INTERBED	DC-16A	N46-31-37 W119-39-34	329.2 TO 369.4	--	--	--	--	3E-8 TO 3E-7	--	--	--	SD-BWI-TI-135 P30
SADDLE MOUNTAIN	--	COLD CREEK INTERBED & FLOWTOP	DB-15	N46-34-10 W119-29-31	155.4 - 187.8	--	5.8E-5	--	--	--	--	--	CONSTANT DISCHARGE	SD-BWI-TI-142 P.19
SADDLE MOUNTAIN	ASOTIN	COLD CREEK INTERBED & FLOWTOP	DB-15	N46-34-10 W119-29-31	155.4 - 187.8	--	6.7E-5	--	--	--	--	--	CONSTANT DISCHARGE	SD-BWI-TI-142 P.19
SADDLE MOUNTAIN	ASOTIN	COLD CREEK INTERBED & FLOWTOP	DB-15	N46-34-10 W119-29-31	155.4 - 187.8	--	6.4E-5	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-142 P.19
SADDLE MOUNTAIN	ASOTIN	COLD CREEK INTERBED & FLOWTOP	DB-15	N46-34-10 W119-29-31	155.4 - 187.8	--	--	--	--	--	6.2E-5	6.2E-6	--	SD-BWI-TI-142 P.19
SADDLE MOUNTAIN	--	COLD CREEK INTERBED & FLOWTOP	DC-15	N46-23-45 W119-16-13	217.3 - 239.9	--	1.41E-6	--	--	--	--	--	CONSTANT DISCHARGE	SD-BWI-TI-150 P.22
SADDLE MOUNTAIN	UMITILLA	COLD CREEK INTERBED & FLOWTOP	DC-15	N46-23-45 W119-16-13	217.3 - 239.9	--	1.41E-6	--	--	--	--	--	CONSTANT DISCHARGE	SD-BWI-TI-150 P.22
SADDLE MOUNTAIN	UMITILLA	COLD CREEK INTERBED & FLOWTOP	DC-15	N46-23-45 W119-16-13	217.3 - 239.9	--	1.41E-6	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-150 P.22

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-15-84
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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
SADDLE MOUNTAIN	UMITILLA	COLD CREEK INTERBED & FLOWTOP	DC-15	N46-23-45 W119-16-13	217.3 - 239.9	--	--	--	--	--	1.41E-6	0	--	SD-BWI-TI-150 P. 22
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-52-48	--	51.8	16.8	--	--	--	--	2.6E-6	--	SINGLE WELL PUMP TEST	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-53-50	--	51.8	16.8	--	--	--	--	44E-6	--	AV. OF DRAWDOWN AND RECOVERY	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-51-46	--	43.6	16.5	--	--	--	--	5.6E-6	--	AV. OF DRAWDOWN AND RECOVERY	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-51-46	--	59.4	17.8	--	--	--	--	9.5E-6	--	AV. OF DRAWDOWN AND RECOVERY	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-50-45	--	47.5	16.8	--	--	--	--	1.2E-6	--	AV. OF DRAWDOWN AND RECOVERY	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-50-48	--	70.4	18.2	--	--	--	--	30E-6	--	AV. OF DRAWDOWN AND RECOVERY	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-47-50	--	84.7	18.3	--	--	--	--	100E-6	--	AV. OF DRAWDOWN AND RECOVERY	RHO-ST-38
SADDLE MOUNTAIN	ELEPHANT MOUNTAIN	ELEPHANT MOUNTAIN	DB-13	N46-29-15 W119-30-56	113-125	--	--	--	--	--	7.2E-3	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	DB-13	N46-29-15 W119-30-56	141-166	--	--	--	--	--	1.5E-5	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-15-84
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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	DB-14	N46-30-35 W119-38-35	63-88	--	--	--	--	--	4E-7	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	WPPSS-3	--	194-206	--	--	--	--	--	4E-4	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-14-E6Q	--	133-137	--	--	--	--	--	1.0E-4	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	199-H4-2	--	110-118	--	--	--	--	--	8.5E-6	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	SELAH	DB-13	N46-29-15 W119-30-56	219-229	--	--	--	--	--	1.0E-4	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	SELAH	DB-14	N46-30-35 W119-38-35	137-149	--	--	--	--	--	7.8E-6	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	SELAH	DC-1	--	110-217	--	--	--	--	--	1.0E-5	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	COLD CREEK	DB-13	N46-29-15 W119-30-56	260-292	--	--	--	--	--	4.1E-5	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	COLD CREEK	DB-14	N46-30-35 W119-38-35	183-205	--	--	--	--	--	6.4E-4	--	SINGLE WELL PUMP TEST & INJECTION TESTING	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	COLD CREEK	DC-1	--	110-217	--	--	--	--	--	5.0E-6	--	SINGLE WELL PUMP TEST	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	INTERBEDS	--	--	--	--	--	--	--	1.0E-4 - 1.0E-7	--	--	--	RHO-BWI-LD-44 P.26

SITE SUBSYSTEM
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FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF VALUE	CM	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
SADDLE MOUNTAIN	--	INTER-FLOWS	--	--	--	--	--	--	--	1.0E-3 1.0E-8	--	--	--	--	RHO-BWI-LD-44 P.26
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	699-25-80 (DB-14)	N46-30-35 W119-38-35	63.4-88.4	19-19.2	3.9E-7	--	--	--	--	--	--	CONSTANT DISCHARGE (DRAWDOWN)	RHO-LD-67 P.14
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	699-25-80 (DB-14)	N46-30-35 W119-38-35	63.4-88.4	19-19.2	5.3E-7	--	--	--	--	--	--	CONSTANT DISCHARGE (RECOVERY)	RHO-LD-67 P.14
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	--	--	--	--	8.8E-7	--	--	--	--	--	--	--	LEDGERWOOD & DEJU (1976)
SADDLE MOUNTAIN	--	LEVEY INTERBED	699-S11-E12A	--	72.6-80.8	18-	2.0E-6	--	--	--	--	--	--	CONSTANT DRAWDOWN	RHO-BWI-LD-27 P.22
SADDLE MOUNTAIN	--	LEVEY INTERBED	699-S11-E12A	--	72.6-80.8	18-	2.4E-6	--	-	--	--	--	--	CONSTANT DRAWDOWN (RECOVERY)	RHO-BWI-LD-27 P.22
SADDLE MOUNTAIN	--	LEVEY INTERBED	699-S11-E12A	--	72.6-80.8	18-	1.7E-6	--	--	--	--	--	--	SLUG WITHDRAWL	RHO-BWI-LD-27 P.22
SADDLE MOUNTAIN	--	LEVEY INTERBED	699-S11-E12A	--	72.6-80.8	18-	1.5E-6	--	--	--	--	--	--	SLUG WITHDRAWL	RHO-BWI-LD-27 P.22
SADDLE MOUNTAIN	--	LEVEY INTERBED	699-S11-E12A	--	72.6-80.8	18-	1.6E-6	--	--	--	--	--	--	SLUG WITHDRAWL	RHO-BWI-LD-27 P.22
SADDLE MOUNTAIN	--	LEVEY INTERBED	699-S11-E12A	--	72.6-80.8	18-	2.6E-6	--	--	--	--	--	--	CONSTANT DISCHARGE	RHO-BWI-LD-27 P.22
SADDLE MOUNTAIN	--	LEVEY INTERBED	699-S11-E12A	--	72.6-80.8	18-	2.6E-6	--	--	--	--	--	--	PULSE	RHO-BWI-LD-27 P.22

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIENTATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
SADDLE MOUNTAIN	--	LEVEY INTERBED	699-S11-E12A	--	--	--	2.6E-6	--	--	--	--	--	BEST ESTIMATE	RHO-BWI-LD-27 P.22
SADDLE MOUNTAIN	--	LEVEY INTERBED	699-S11-E12A	--	--	--	5.2E-6	--	--	--	--	--	BEST ESTIMATE	RHO-BWI-LD-27 P.21
SADDLE MOUNTAIN	--	LEVEY INTERBED	DC-15	N46-23-45 W119-16-13	--	--	1.6E-5	--	--	--	--	--	BEST ESTIMATE	RHO-BWI-LD-27 P.21
WANAPUM	PRIEST RAPIDS	--	DC-16A	N46-31-37 W119-39-34	515.1 TO 526.7	--	--	--	-	3E-6 TO 3E-5	--	--	--	SD-BWI-TI-135 P30
WANAPUM	ROZA	--	DC-16A	N46-31-37 W119-39-34	536.5 TO557.2	--	--	--	--	3E-3 TO 3E-2	--	--	--	SD-BWI-TI-135 P30
WANAPUM	FRENCH SPRINGS	--	DC-16A	N46-31-37 W119-39-34	576.9 TO 609.6	--	--	--	--	3E-4 TO 3E-3	--	--	--	SD-BWI-TI-135 P30
WANAPUM	FRENCH SPRINGS	--	DC-16A	N46-31-37 W119-39-34	641.6 TO 657.1	--	--	--	--	3E-6 TO 3E-5	--	--	--	SD-BWI-TI-135 P30
WANAPUM	FRENCH SPRINGS	--	DC-16A	N46-31-37 W119-39-34	670.9 TO 689.2	--	--	--	--	3E-4 TO 3E-3	--	--	--	SD-BWI-TI-135 P30
WANAPUM	FRENCH SPRINGS	--	DC-16A	N46-31-37 W119-39-24	690.7 TO 722.7	--	--	--	--	3E-8 TO 3E-7	--	--	--	SD-BWI-TI-135 P30
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	754.7 TO 780	--	--	--	--	3E-5 TO 3E-4	--	--	--	SD-BWI-TI-135 P30
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	787.9 TO 802.2	--	--	--	--	3E-5 TO 3E-4	--	--	--	SD-BWI-TI-135 P30
WANAPUM	PRIEST RAPIDS	--	699-52-111	--	190-237	--	--	--	--	--	4.0E-2	--	FLOWING ARTESIAN, MULTIPLE WELL	RHO-BWI-ST-5

SITE SUBSYSTEM
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WANAPUM	PRIEST RAPIDS	--	699-50-112	--	285-335	--	--	--	--	--	3.9E-2	--	FLOWING ARTESIAN, MULTIPLE WELL	RHO-BWI-ST-5
WANAPUM	PRIEST RAPIDS	--	699-52-115	--	183-212	--	--	--	--	--	4.6E-2	--	FLOWING ARTESIAN, MULTIPLE WELL	RHO-BWI-ST-5
WANAPUM	PRIEST RAPIDS	--	DB-12	N46-36-51 W119-42-11	156-199	--	--	--	--	--	1.0E-2	--	STRADDLE PACKER INJECTION TEST	RHO-BWI-ST-5
WANAPUM	.9FRENCH SFR..1ROZ A	--	DC-1	--	405-463	--	--	--	--	--	1.5E-7	--	STRADDLE PACKER INJECTION TEST	RHO-BWI-ST-5
WANAPUM	FRENCHMAN SPRINGS	--	MCGEE WELL	N46-35-10 W119-44-13	538.0 - 562.1	--	--	--	--	1.0E-7 - 1.0E-8	--	--	CD-AL,UPP,CDP	RHO-BW-SR-83-1 1GP
WANAPUM	PRIEST RAPIDS INT.	--	RRL-2	N46-32-55 W119-39-38	479.8 - 522.4	--	--	--	--	1.0E-6 - 1.0E-7	--	--	CD-AL,CHI,SI,SW	RHO-BW-SR-82-2 1GP
WANAPUM	ROZA INTERBED	--	RRL-2	N46-32-55 W119-39-38	528.8 - 540.4	--	--	--	--	1.0E-3 - 1.0E-4	--	--	SC-AL,CHI,SI,SW	RHO-BW-SR-82-2 1GP
WANAPUM	UPPER FR. SPR.	--	RRL-2	N46-32-55 W119-39-38	581.2 - 677.2	--	--	--	--	1.0E-6 - 1.0E-5	--	--	CD-AL,CHI,SI,SW	RHO-BW-SR-82-2 1GP
WANAPUM	PRIEST RAPIDS INT.	--	DC-16A	N46-31-37 W119-39-34	512.1 - 526.7	--	--	--	--	1.0E-7 - 1.0E-5	--	--	CD-P	RHO-BW-SR-82-2 1GP
WANAPUM	ROZA INTERFLOW	--	DC-16A	N46-31-37 W119-39-34	536.6 - 557.3	--	--	--	--	1.0E-4 - 1.0E-3	--	--	CD-P	RHO-BW-SR-82-2 1GP
WANAPUM	LOWER FRENCH. SPR.	--	RRL-2	N46-32-55 W119-39-38	684.0 - 805.9	--	--	--	--	1.0E-6 - 1.0E-5	--	--	CD-AL,CHI,UP P,SI,SW	RHO-BW-SR-82-2 2GP

SITE SUBSYSTEM
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QA BY: LH DATE: 10-29-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF CM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
WANAPUM	FRENCHMAN SPRINGS #1		DC-16A	N46-31-37 W119-39-34	576.7 - 609.6	--	--	--	--	1.0E-5 - 1.0E-4	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 2QP
WANAPUM	FRENCHMAN SPRINGS #2		DC-16A	N46-31-37 W119-39-34	641.6 - 657.1	--	--	--	--	1.0E-6 - 1.0E-5	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 2QP
WANAPUM	FRENCHMAN SPRINGS #3		DC-16A	N46-31-37 W119-39-34	670.9 - 689.2	--	--	--	--	1.0E-5 - 1.0E-4	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 2QP
WANAPUM	FRENCHMAN SPRINGS #4		DC-16A	N46-31-37 W119-39-34	690.7 - 722.7	--	--	--	--	1.0E-7 - 1.0E-6	-	--	CD-AL,SI,SW	RHO-BW-SR-82-2 2QP
WANAPUM	FRENCHMAN SPRINGS #1		RRL-6	N46-31-59 W119-40-47	640.7 - 652.6	--	--	--	--	1.0E-12 - 1.0E-11	--	--	PT	RHO-BW-SR-82-2 3QP
WANAPUM	FRENCHMAN SPRINGS #5		DC-16A	N46-31-37 W119-39-34	754.7 - 780.0	--	--	--	--	1.0E-5 - 1.0E-4	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 3QP
WANAPUM	FRENCHMAN SPRINGS #6		DC-16A	N46-31-37 W119-39-34	787.9 - 802.2	--	--	--	--	1.0E-5 - 1.0E-4	--	--	CD-AL,SI,SW	RHO-BW-SR-82-2 3QP
WANAPUM	ROZA	--	MCGEE WELL	N46-35-10 W119-44-13	313.5 - 334.1	--	1.0E-6	--	--	--	--	--	FLOWING WELL TEST	RHO-BW-SR-82-2 3QP
WANAPUM	ROZA/FRENCH SPRINGS	--	MCGEE WELL	N46-35-10 W119-44-13	335.0 - 355.7	--	1.0E-7	--	--	--	--	--	FLOWING WELL TEST	RHO-BW-SI-82-2 3QP
WANAPUM	FRENCHMAN SPRINGS #1		MCGEE WELL	N46-35-10 W119-44-13	402.5 - 420.0	--	1.0E-6	--	--	--	--	--	FLOWING WELL TEST	RHO-BW-SR-82-2 3QP
WANAPUM	FRENCHMAN SPRINGS #3		MCGEE WELL	N46-35-10 W119-44-13	439.8 - 452.0	--	>1.0E-4	--	--	--	--	--	FLOWING WELL TEST	RHO-BW-SR-82-2 4QP
WANAPUM	FRENCHMAN SPRINGS #5		MCGEE WELL	N46-35-10 W119-44-13	481.7 - 512.1	--	>1.0E-5	--	--	--	--	--	FLOWING WELL TEST	RHO-BW-SR-82-2 4QP

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
QA BY: LH DATE: 10-29-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF OM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
WANAPUM	FRENCHMAN SPRINGS	#6	MCGEE WELL	N46-35-10 W119-44-13	510.2 - 533.4	--	>1.0E-4	--	--	--	--	--	FLOWING WELL TEST	RHO-BW-SR-82-2 4QP
WANAPUM	FRENCHMAN SPRINGS	1	RRL-6	N46-31-59 W119-40-47	640.7 - 652.6	--	--	--	--	3.5E-12 - 3.5E-11	--	--	--	SD-BWI-TI-167 P.28
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	4.94E-12	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-176 P.34
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	7.06E-12	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-176P.34
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	2.36E-11	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-176 P.34
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	3.53E-12	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-176 P.34
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	1.13E-11	--	--	--	--	-	CONSTANT HEAD INJECTION	SD-BWI-TI-176 P.34
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	1.41E-11	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-176 P.34
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	1.41E-11	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-176 P.34

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
QA BY: LH DATE: 10-29-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	1.45E-11	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-176 P.34
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	1.34E-11	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-176 P.34
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	1.41E-11	--	--	--	--	--	BEST ESTIMATE	SD-BWI-TI-176 P.34
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	1.06E-11	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-176 P.45
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	7.06E-12	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-176 P.45
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	1.34E-11	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-176 P.45
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	1.45E-11	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-176 P.45
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	1.55E-11	--	--	--	--	--	CONSTANT HEAD INJECTION	SD-BWI-TI-176 P.45
WANAPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	1.48E-11	--	--	--	--	--	CONSTANT HEAD INJECTION	WANAPUM

SITE SUBSYSTEM
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-18-84
QA BY: LH DATE: 10-29-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF OM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
WANAPUM	--	INTERBEDS	--	--	--	--	--	--	--	1.0E-8 - 1.0E-10	--	--	--	RHO-BWI-LD-44 P.26
WANAPUM	--	INTER-FLOWS	--	--	--	--	--	--	--	1.0E-4 - 1.0E-9	--	--	--	RHO-BWI-LD-44 P.26
WANAPUM	PRIEST RAPIDS	FLOWTOP	RRL-2	N46-32-55 W119-39-38	479.8 - 522.4	--	--	--	--	3E-6-3E-5	--	--	--	SD-BWI-TI-113 P.57
WANAPUM	ROZA	FLOWTOP	RRL-2	N46-32-55 W119-39-38	528.8 - 540.4	--	--	--	--	3E-5-3E-4	--	--	--	SD-BWI-TI-113 P.57
WANAPUM	FRENCHMAN SPRINGS	UPPER FLOWTOPS	RRL-2	N46-32-55 W119-39-38	581.3 - 677.3	--	--	--	--	3E-6-3E-5	--	--	--	SD-BWI-TI-113 P.57
WANAPUM	FRENCHMAN SPRINGS	LOWER FLOWTOPS	RRL-2	N46-32-55 W119-39-38	684.0 - 805.9	--	--	--	--	3E-5-3E-4	--	--	--	SD-BWI-TI-113 P.57
WANAPUM /GRANDE RONDE	40%FR. SP. 60%G. R.	--	DC-1	--	600-658	--	--	--	--	--	8.1E-7	--	STRADDLE PACKER INJECTION	RHO-BWI-ST-9
WANPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	--	--	--	--	1.18E-11	6.11E-12	--	--
WANPUM	ROZA	ROZA COLONNADE /ENTABLA-TURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	6E-12	--	--	--	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-176 P.45

SITE SUBSYSTEM
PARAMETER: APPARENT POROSITY (%)

CHECKED BY: SP DATE: 10-18-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	—	—	—	—	—	—	7.0-34.6	18.55	6.42	—	SD-BWI-DP-041, P. 33
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	—	—	—	—	—	—	0.4-3.4	1.06	0.506	—	SD-BWI-DP-041, P. 33
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	—	—	—	—	—	—	0.9-4.2	1.80	0.871	—	SD-BWI-DP-041, P. 33
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	—	—	—	—	—	0.2-3.0	1.1	0.4	—	SD-BWI-DP-041, P. 47
GRANDE RONDE	—	EXCLUDING UMTANUM	EXCLUSIVE OF RRL	—	—	—	—	—	2.0-5.3	3.4	1.3	—	SD-BWI-DP-041, P. 47
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	—	—	—	—	—	—	0.2-1.9	1.2	0.7	—	SD-BWI-DP-041, P. 29
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE COLONNADE	—	—	—	—	—	—	0.3-2.5	1.1	0.6	—	SD-BWI-DP-041, P. 29
GRANDE RONDE	SENTINEL BLUFFS	COHASSET FLOWTOP	—	—	—	—	—	—	9.3-25.0	13.93	3.5	—	SD-BWI-DP-041, P. 31
GRANDE RONDE	SENTINEL BLUFFS	COHASSET VESICULAR	—	—	—	—	—	—	1.6-10.1	5.07	1.92	—	SD-BWI-DP-041, P. 31
GRANDE RONDE	SENTINEL BLUFFS	COHASSET ENTABLATURE	—	—	—	—	—	—	0.1-5.2	1.60	0.76	—	SD-BWI-DP-041, P. 31
GRANDE RONDE	SENTINEL BLUFFS	COHASSET COLONNADE	—	—	—	—	—	—	0.1-8.9	2.74	1.45	—	SD-BWI-DP-041, P. 31
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	—	—	—	—	—	—	13.5-26.9	21.60	3.80	—	SD-BWI-DP-041, P. 33
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON VESICULAR	—	—	—	—	—	—	3.6-17.0	8.50	3.90	—	SD-BWI-DP-041, P. 33
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	—	—	—	—	—	—	0.9-7.4	2.39	1.43	—	SD-BWI-DP-041, P. 33

SITE SUBSYSTEM
PARAMETER: APPARENT POROSITY (%)

CHECKED BY: SP DATE: 10-18-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON COLONNADE	--	--	--	--	--	--	4.3-12.4	8.20	3.00	--	SD-BWI-DP-041, P. 33

SITE SUBSYSTEM
PARAMETER: BULK DENSITY (g/cc)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
—	—	COLONADE	—	—	—	—	—	—	2.52-3.06	2.77	0.07	CSM 1978	SD-BWI-TI-080 P.10
—	—	ENTABLATURE	—	—	—	—	—	—	2.59-2.85	2.78	0.05	CSM 1978	SD-BWI-TI-080 P.10
—	—	FLOWTOP	—	—	—	—	—	—	1.79-3.04	2.44	0.28	CSM 1978	SD-BWI-TI-080 P.10
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	—	—	—	—	—	—	2.80-2.85	2.83	0.02	—	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE COLONNADE	—	—	—	—	—	—	2.71-2.87	2.81	0.06	—	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	COHASSET FLOWTOP	—	—	—	—	—	—	1.92-2.47	2.28	0.115	—	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSET VESICULAR	—	—	—	—	—	—	2.45-2.77	2.62	0.09	—	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSET ENTABLATURE	—	—	—	—	—	—	2.72-2.89	2.84	0.214	—	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSET COLONNADE	—	—	—	—	—	—	2.64-2.88	2.81	0.05	—	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	—	—	—	—	—	—	1.88-2.42	2.14	0.16	—	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON VESICULAR	—	—	—	—	—	—	2.27-2.74	2.50	0.15	—	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	—	—	—	—	—	—	2.59-2.88	2.82	0.062	—	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON COLONNADE	—	—	—	—	—	—	2.55-2.72	2.62	0.06	—	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	—	—	—	—	—	—	—	2.83	0.06	—	RHO-BW-SA-252P

SITE SUBSYSTEM
PARAMETER: BULK DENSITY (g/cc)

CHECKED BY: SP DATE: 10-09-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-2	N46-34-17 W119-31-04	—	—	—	—	—	2.79	0.02	FSI 1981a	SD-BWI-TI-080 P.11
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-2	N46-34-17 W119-31-04	—	—	—	—	—	2.79	0.02	FSI 1981a	SD-BWI-TI-080 P.11
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-2	N46-34-17 W119-31-04	—	—	—	—	—	2.79	0.02	CSM 1978	SD-BWI-TI-080 P.11
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-4	N46-34-35 W119-39-53	—	—	—	—	—	2.77	0.03	MILLER 1979b	SD-BWI-TI-080 P.11
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-6	N46-35-14 W119-23-46	—	—	—	—	—	2.78	0.02	MILLER & BISHOP 1979	SD-BWI-TI-080 P.11
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DH-5	N46-45-17 W119-49-43	—	—	—	—	—	2.77	0.07	CSM 1978	SD-BWI-TI-080 P.11
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	—	—	—	—	—	—	1.79-2.64	2.24	0.173	—	SD-BWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM VESICULAR	—	—	—	—	—	—	—	—	—	—	SD-BWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	—	—	—	—	—	—	2.74-2.86	2.82	0.017	—	SD-BWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	—	—	—	—	—	—	2.73-2.86	2.82	0.07	—	SD-BWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	—	—	—	—	—	—	2.40-2.83	2.73	0.08	CSM 1978; MILLER 1979a,b	SD-BWI-TI-080 P.10
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	—	—	—	—	—	—	2.41-3.01	2.78	0.05	CSM 1978; MILLER 1979a,b	SD-BWI-TI-080 P.10
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	—	—	—	—	—	—	1.91-2.84	2.38	0.20	CSM 1978; MILLER 1979a,b	SD-BWI-TI-080 P.10
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	—	—	—	—	—	—	2.49-2.84	2.73	0.11	MILLER & BISHOP 1979	SD-BWI-TI-080 P.10

SITE SUBSYSTEM
PARAMETER: BULK DENSITY (g/cc)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM	—	—	—	—	—	—	—	2.78	0.05	—	RHO-BW-SA-252P
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	—	—	—	—	—	2.41-3.01	2.78	0.05	—	SD-BWI-DP-041 P.47
GRANDE RONDE	—	EXCLUDING UMTANUM	EXCLUSIVE OF RRL	—	—	—	—	—	2.59-2.85	2.78	0.05	—	SD-BWI-DP-041 P.47
SADDLE MOUNTAIN	UMATILLA	UMATILLA COLONNADE	—	—	—	—	—	—	2.75-2.77	2.76	0.01	ASTM	SD-BWI-TI-106 P.17
SADDLE MOUNTAIN	UMATILLA	UMATILLA COLONNADE	—	—	—	—	—	—	2.76-2.77	2.77	0.01	ASTM	SD-BWI-TI-106 P.18
SADDLE MOUNTAIN	UMATILLA	UMATILLA COLONNADE	—	—	—	—	—	—	2.75-2.78	2.76	0.01	ASTM	SD-BWI-TI-106 P.19
SADDLE MOUNTAIN	UMATILLA	UMATILLA COLONNADE	—	—	—	—	—	—	2.75-2.77	2.76	0.01	ASTM	SD-BWI-TI-106 P.20
SADDLE MOUNTAIN	POMONA	—	EXCLUSIVE OF RRL	—	—	—	—	—	2.69-2.89	2.85	0.03	—	SD-BWI-DP-041 P.47
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-1	—	—	—	—	—	2.75-2.85	2.82	0.028	—	SD-BWI-TD-008 P.8
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-2	—	—	—	—	—	2.76-2.86	2.82	0.029	—	SD-BWI-TD-008 P.9
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-3	—	—	—	—	—	2.79-2.86	2.83	0.019	—	SD-BWI-TD-008 P.10
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-4	—	—	—	—	—	2.74-2.86	2.83	0.033	—	SD-BWI-TD-008 P.12

SITE SUBSYSTEM
PARAMETER: BULK DENSITY (g/cc)

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QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD. DEV.	METHOD OR REFERENCE	SOURCE
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-5	--	--	--	--	--	2.82-2.86	2.83	0.012	--	SD-BWI-TD-008 P.14
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-6	--	--	--	--	--	2.73-2.86	2.83	0.032	--	SD-BWI-TD-008 P.15
SADDLE MOUNTAIN	POMONA	POMONA COLONNADE	--	--	--	--	--	--	2.72-2.88	2.84	0.04	CSM, 1978; DUVALL ET AL., 1978	SD-BWI-TI-080 P.10
SADDLE MOUNTAIN	POMONA	POMONA ENTABLATURE	--	--	--	--	--	--	2.69-2.89	2.85	0.03	MILLER & BISHOP, 1979; FSI 1980, 1981	SD-BWI-TI-080 P.10
SADDLE MOUNTAIN	POMONA	--	--	--	--	--	--	--	2.78-2.87	2.84	--	--	RHO-BWI-LD-11 P.23

SITE SUBSYSTEM
PARAMETER: STORAGE COEFFICIENT

CHECKED BY: SP DATE: 11-07-84
QA BY: LH DATE: 12-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD. DEV.	METHOD OR REFERENCE	SOURCE
--	--	BSLT. INTERFLOWS & COLUMNAR BSLTS.	--	--	--	--	--	--	1.0E-3 - 1.0E-6	--	--	--	RHO-BWI-LD-44 P.12
GRANDE RONDE	SCHWANA	220 FT. ABOVE UMTANUM FLOW	DC-7/8	N46-28-46 W119-23-12	--	--	--	1.1E-5	--	--	--	PUMP TEST RECOVERY DATA	RHO-BW-CR-131P P.E-32
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-4/5	N46-34-35 W119-39-53	--	--	--	2.6E-3	--	--	--	--	SD-BWI-TI-136 P.54
GRANDE RONDE	SENT. BLUFFS-SCHWANA	COMPOSITE	DC-7/8	N46-28-46 W119-23-12	833-1250	--	--	1.0E-5	--	--	--	TWO BOREHOLE TEST	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOW TOP	DC-7/8	N46-28-46 W119-23-12	1038-1061	--	--	1.0E-5	--	--	--	TWO BOREHOLE TEST	RHO-BW-ST-28P
GRANDE RONDE	--	--	DC-1	--	959-986	--	--	1.4E-6	--	--	--	STRADDLE PACKER SINGLE WELL	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	714-724	--	--	3.0E-3	--	--	--	STRADDLE PACKER SINGLE WELL	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	724-734	--	--	1.0E-6	--	--	--	STRADDLE PACKER SINGLE WELL	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	900-917	--	--	3.0E-3	--	--	--	STRADDLE PACKER SINGLE WELL	RHO-BWI-ST-5
GRANDE RONDE	--	--	--	--	--	--	--	--	E-3 - E-6	--	--	RHO-BW-SA-189P	RHO-BW-SA-231P
RONDE GRANDE	SCHWANA	220 FT. ABOVE UMTANUM FLOW	DC-7/8	N46-28-46 W119-23-12	--	--	--	6.0E-6	--	--	--	PUMP TEST	RHO-BW-CR-131P P.E-32

SITE SUBSYSTEM
PARAMETER: STORAGE COEFFICIENT

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-31-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
SADDLE MTN.	--	--	--	--	--	--	--	--	E-3 - E-4	--	--	RHO-BW-SA-189P	RHO-BW-SA-251P
SADDLE MTN.	--	LEVEY INTERBED	S11-E12A	N46-24-30 W119-16-51	72.5-80.8	--	18	4.5E-3	--	--	--	CONSTANT DRAWDOWN	RHO-BWI-LD-27 P.22
SADDLE MTN.	--	LEVEY INTERBED	S11-E12A	N46-24-30 W119-16-51	72.5-80.8	--	18	7.2E-3	--	--	--	SLUG WITHDRAWL	RHO-BWI-LD-27 P.22
SADDLE MTN.	--	LEVEY INTERBED	S11-E12A	N46-24-30 W119-16-51	72.5-80.8	--	18	--	4.5E-3 - 7.2E-3	5.9E-3	--	--	RHO-BWI-LD-27 P.22
SADDLE MTN.	--	LEVEY INTERBED	S11-E12A	N46-24-30 W119-16-51	72.5-80.8	--	18	4.5E-3	--	--	--	BEST ESTIMATE	RHO-BWI-LD-27 P.22
WANAPUM	ROZA	ROZA COLONNAIDE/ENTABLATURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	--	--	1.7E-6 - 1.6E-4	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-176 P.46
WANAPUM	ROZA	ROZA COLONNAIDE/ENTABLATURE	DB-2	N46-28-46 W119-16-39	363.3 - 388.0	--	--	--	2.7E-5 - 6.1E-5	--	--	OVER-PRESSURE PULSE	SD-BWI-TI-176 P.46
WANAPUM	--	--	DC-1	--	405-463	--	--	6.3E-4	--	--	--	STRADDLE PACKER SINGLE WELL	RHO-BWI-ST-5
WANAPUM	--	--	DC-1	--	536-594	--	--	6.3E-4	--	--	--	STRADDLE PACKER SINGLE WELL	RHO-BWI-ST-5
WANAPUM	--	--	--	--	--	--	--	--	E-4 TO E-5	--	--	RHO-BW-SA-189P	RHO-BW-SA-251P

SITE SUBSYSTEM
PARAMETER: VERTICAL HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	--	--	--	--	--	--	--	1E-12	--	--	--	USED IN SIMULATION	RHO-BWI-LD-44 P.27
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-4/5	N46-34-35 W119-39-53	882.1 - 897.6	--	--	< 3.5E-11	--	--	--	RATIO	SD-BWI-TI-136 P.54
SADDLE MTN.	--	--	--	--	--	--	--	1E-11	--	--	--	USED IN SIMULATION	RHO-BWI-LD-44 P.27
WANAPUM	--	--	--	--	--	--	--	1E-12	--	--	--	USED IN SIMULATION	RHO-BWI-LD-44 P.27

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: L.H DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
—	—	MABTON INTERBED	RRL-2	N46-32-55 W119-39-38	—	37.8	SD-BWI-TI-113 P.11
—	—	VANTAGE INTERBED	RRL-2	N46-32-55 W119-39-38	—	1.2	SD-BWI-TI-113 P.13
—	—	SURFACE SECTION TOTAL FLOW	SENTINEL GAP	—	—	79.9	SD-BWI-DP-011 P.7
—	—	SURFACE SECTION FLOWTOP	SENTINEL GAP	—	—	4.9	SD-BWI-DP-011 P.7
—	—	SURFACE SECTION ENTABLATURE	SENTINEL GAP	—	—	41.8	SD-BWI-DP-011 P.7
—	—	SURFACE SECTION BASAL COLONNADE	SENTINEL GAP	—	—	33.2	SD-BWI-DP-011 P.7
—	—	SURFACE SECTION FLOWBOTTOM	SENTINEL GAP	—	—	0	SD-BWI-DP-011 P.7
—	—	SURFACE SECTION TOTAL FLOW	EMERSON NIPPLE	—	—	79.9	SD-BWI-DP-011 P.7
—	—	SURFACE SECTION FLOWTOP	EMERSON NIPPLE	—	—	42.1	SD-BWI-DP-011 P.7
—	—	SURFACE SECTION ENTABLATURE	EMERSON NIPPLE	—	—	30.8	SD-BWI-DP-011 P.7
—	—	SURFACE SECTION BASAL COLONNADE	EMERSON NIPPLE	—	—	7.0	SD-BWI-DP-011 P.7

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
--	--	SURFACE SECTION FLOWBOTTOM	EMERSON NIPPLE	--	--	0	SD-BWI-DP-011 P.7
--	--	MABTON INTERBED	DC-12	N46-28-04 W119-32-28	--	39.0	RHO-BWI-LD-45 P.8
--	--	VANTAGE INTERBED	DC-12	N46-28-04 W119-32-38	--	4.7	RHO-BWI-LD-45 P.8
GRANDE RONDE	--	1	RRL-2	N46-32-55 W119-39-38	--	10.4	SD-BWI-TI-113 P.13
GRANDE RONDE	--	2	RRL-2	N46-32-55 W119-39-38	--	31.1	SD-BWI-TI-113 P.13
GRANDE RONDE	--	3	RRL-2	N46-32-55 W119-39-38	--	51.8	SD-BWI-TI-113 P.13
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	--	79.9	SD-BWI-TI-113 P.13
GRANDE RONDE	SENTINEL BLUFFS	5	RRL-2	N46-32-55 W119-39-38	--	40.5	SD-BWI-TI-113 P.14
GRANDE RONDE	SENTINEL BLUFFS	6	RRL-2	N46-32-55 W119-39-38	--	9.1	SD-BWI-TI-113 P.14
GRANDE RONDE	SENTINEL BLUFFS	7	RRL-2	N46-32-55 W119-39-38	--	17.4	SD-BWI-TI-113 P.14
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON	RRL-2	N46-32-55 W119-39-38	--	40.2	SD-BWI-TI-113 P.14
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	--	70.7	SD-BWI-TI-113 P.14
GRANDE RONDE	SCHWANA	10	RRL-2	N46-32-55 W119-39-38	--	19.5	SD-BWI-TI-113 P.14
GRANDE RONDE	SCHWANA	11	RRL-2	N46-32-55 W119-39-38	--	21.3+	SD-BWI-TI-113 P.14
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	DC-2	N46-34-17 W119-31-04	--	67.1	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	DC-2	N46-34-17 W119-31-04	--	14.9	SD-BWI-DP-011 P.6

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-2	N46-34-17 W119-31-04	--	38.3	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	DC-2	N46-34-17 W119-31-04	--	12.6	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	DC-2	N46-34-17 W119-31-04	--	1.2	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	DC-4	N46-34-35 W119-39-53	--	62.5	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	DC-4	N46-34-35 W119-39-53	--	17.1	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-4	N46-34-35 W119-39-53	--	40.8	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	DC-4	N46-34-35 W119-39-53	--	4.6	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	DC-4	N46-34-35 W119-39-53	--	0	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	DC-6	N46-35-14 W119-23-46	--	67.7	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	DC-6	N46-35-14 W119-23-46	--	8.2	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-6	N46-35-14 W119-23-46	--	54.3	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	DC-6	N46-35-14 W119-23-46	--	5.2	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	DC-6	N46-35-14 W119-23-46	--	0	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM TOTALFLOW	DC-8	N46-28-47 W119-23-13	--	73.6	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	DC-8	N46-28-47 W119-23-13	--	26.7	SD-BWI-DP-011 P.6

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: JH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-8	N46-28-47 W119-23-13	--	42.1	SD-BWI-DP-011 P.6
GRANDE-RONDE	SCHWANA	UMTANUM BASAL COLONNADE	DC-8	N46-28-47 W119-23-13	--	4.9	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	DC-8	N46-28-47 W119-23-13	--	0	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	DC-12	N46-28-04 W119-32-28	--	71.9	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	DC-12	N46-28-04 W119-32-28	--	16.2	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-12	N46-28-04 W119-32-28	--	51.7	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	DC-12	N46-28-04 W119-32-28	--	3.7	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	DC-12	N46-28-04 W119-32-28	--	0.4	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	DC-14	N46-40-16 W119-27-31	--	39.4	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	DC-14	N46-40-16 W119-27-31	--	19.5	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-14	N46-40-16 W119-27-31	--	16.6	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	DC-14	N46-40-16 W119-27-31	--	2.9	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	DC-14	N46-40-16 W119-27-31	--	0.4	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	DC-15	N46-23-45 W119-16-13	--	78.3	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	DC-15	N46-23-45 W119-16-13	--	32.9	SD-BWI-DP-011 P.6

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-15	N46-23-45 W119-16-13	--	42.4	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	DC-15	N46-23-45 W119-16-13	--	2.9	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	DC-15	N46-23-45 W119-16-13	--	0.2	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	DDH-3	N46-21-19 W119-23-27	--	86.9	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	DDH-3	N46-21-19 W119-23-27	--	28.7	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DDH-3	N46-21-19 W119-23-27	--	36.9	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	DDH-3	N46-21-19 W119-23-27	--	21.3	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	DDH-3	N46-21-19 W119-23-27	--	0	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	DH-4	N46-45-33 W119-21-42	--	40.5	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	DH-4	N46-45-33 W119-21-42	--	13.1	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DH-4	N46-45-33 W119-21-42	--	24.6	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	DH-4	N46-45-33 W119-21-42	--	2.2	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	DH-4	N46-45-33 W119-21-42	--	0.6	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	DH-5	N46-45-17 W119-49-43	--	64.0	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	DH-5	N46-45-17 W119-49-43	--	9.1	SD-BWI-DP-011 P.6

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DH-5	N46-45-17 W119-49-43	--	49.1	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	DH-5	N46-45-17 W119-49-43	--	5.5	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	DH-5	N46-45-17 W119-49-43	--	0.3	SD-BWI-DP-011 P.6
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	RRL-2	N46-32-55 W119-39-38	--	70.7	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RRL-2	N46-32-55 W119-39-38	--	45.1	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	RRL-2	N46-32-55 W119-39-38	--	21.9	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	RRL-2	N46-32-55 W119-39-38	--	3.4	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	RRL-2	N46-32-55 W119-39-38	--	0.3	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	RRL-6	N46-31-59 W119-40-47	--	70.3	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RRL-6	N46-31-59 W119-40-47	--	28.5	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	RRL-6	N46-31-59- W119-40-47	--	35.4	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	RRL-6	N46-31-59 W119-40-47	--	6.4	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	RRL-6	N46-31-59 W119-40-47	--	0	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	RRL-14	N46-33-18 W119-41-20	--	60.5	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RRL-14	N46-33-18 W119-41-20	--	20.9	SD-BWI-DP-011 P.7

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-27-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	RRL-14	N46-33-18 W119-41-20	--	34.4	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM BASAL COLONNADE	RRL-14	N46-33-18 W119-41-20	--	4.6	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM FLOWBOTTOM	RRL-14	N46-33-18 W119-41-20	--	0.6	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	DC-3	N46-33-39 W119-36-18	--	67.1	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	DC-3	N46-33-39 W119-36-18	--	19.9	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM TOTAL DENSE INTERIOR	DC-3	N46-33-39 W119-36-18	--	47.2	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM TOTAL FLOW	RSH-1	N46-26-30 W119-46-23	--	64.6	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	RSH-1	N46-26-30 W119-46-23	--	13.4	SD-BWI-DP-011 P.7
GRANDE RONDE	SCHWANA	UMTANUM TOTAL DENSE INTERIOR	RSH-1	N46-26-30 W119-46-23	--	51.2	SD-BWI-DP-011 P.7
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON TOTAL FLOW	DC-4	N46-34-35 W119-39-53	--	43.6	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON TOTAL FLOW	RRL-2	N46-32-55 W119-39-38	--	40.2	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON TOTAL FLOW	RRL-6	N46-31-59 W119-40-47	--	42.5	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON TOTAL FLOW	RRL-14	N46-33-18 W119-41-20	--	45.0	SD-BWI-DP-011 P.24

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON TOTAL FLOW	SENTINEL GAP	--	--	73.2	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON TOTAL FLOW	EMERSON NIPPLE	--	--	61.0	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	DC-4	N46-34-35 W119-39-53	--	10.1	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	RRL-2	N46-32-55 W119-39-38	--	6.4	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	RRL-6	N46-31-59 W119-40-47	--	12.0	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON	RRL-14	N46-33-18 W119-41-20	--	11.7	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	SENTINEL GAP	--	--	10.1	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	EMERSON NIPPLE	--	--	20.1	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	DC-4	N46-34-35 W119-39-53	--	24.1	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	RRL-2	N46-32-55 W119-39-38	--	25.3	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	RRL-6	N46-31-59 W119-40-47	--	24.2	SD-BWI-DP-011 P.24

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: LA DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	RRL-14	N46-33-18 W119-41-20	--	25.0	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	SENTINEL GAP	--	--	36.6	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	EMERSON NIPPLE	--	--	33.4	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON BASAL COLONNADE	DC-4	N46-34-35 W119-39-53	--	9.4	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON BASAL COLONNADE	RRL-2	N46-32-55 W119-39-38	--	6.1	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON BASAL COLONNADE	RRL-6	N46-31-59 W119-40-47	--	6.3	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON BASAL COLONNADE	RRL-14	N46-33-18 W119-41-20	--	8.2	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON BASAL COLONNADE	SENTINEL GAP	--	--	18.9	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON BASAL COLONNADE	EMERSON NIPPLE	--	--	5.5	SD-BWI-DP-011 P.24

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWBOTTOM	DC-4	N46-34-35 W119-39-53	--	0	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWBOTTOM	RRL-2	N46-32-55 W119-39-38	--	2.4	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWBOTTOM	RRL-6	N46-31-59 W119-40-47	--	0	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWBOTTOM	RRL-14	N46-33-18 W119-41-20	--	0	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWBOTTOM	SENTINEL GAP	--	--	7.6	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWBOTTOM	EMERSON NIPPLE	--	--	0	SD-BWI-DP-011 P.24
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	DC-2	N46-34-17 W119-31-04	--	84.4	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	DC-4	N46-34-35 W119-39-53	--	81.1	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	DC-6	N46-35-14 W119-23-46	--	72.2	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	DC-8	N46-28-47 W119-23-13	--	58.2	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	DC-12	N46-28-04 W119-32-28	--	67.8	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	DC-14	N46-40-16 W119-27-31	--	78.9	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	DC-15	N46-23-45 W119-16-13	--	46.9	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	DDH-3	N46-21-19 W119-23-27	--	50.0	SD-BWI-DP-011 P.32

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: TH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	DH-4	N46-45-33 W119-21-42	--	78.3	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	DH-5	N46-45-17 W119-49-43	--	71.3	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	RRL-2	N46-32-55 W119-39-38	--	79.9	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	RRL-6	N46-31-59 W119-40-47	--	76.7	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	RRL-14	N46-33-18 W119-41-20	--	72.8	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	DC-3	N46-33-39 W119-36-18	--	80.8	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	RSH-1	N46-26-30 W119-46-23	--	67.7	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	SENTINEL GAP	--	--	74.4	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT TOTAL FLOW	EMERSON NIPPLE	--	--	76.5	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-2	N46-34-17 W119-31-04	--	6.1	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-4	N46-34-35 W119-39-53	--	6.1	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-6	N46-35-14 W19-23-46	--	6.7	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-8	N46-28-47 W119-23-13	--	12.2	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-12	N46-28-04 W118-32-28	--	10.8	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-14	N46-40-16 W119-27-31	--	16.2	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-15	N46-23-45 W119-16-13	--	5.5	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DDH-3	N46-21-19 W119-23-27	--	10.4	SD-BWI-DP-011 P.32

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DH-4	N46-45-33 W119-21-42	--	25.6	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DH-5	N46-45-17 W119-49-43	-	10.4	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	RRL-2	N46-32-55 W119-39-38	--	5.2	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	RRL-6	N46-31-59 W119-40-47	--	9.0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	RRL-14	N46-33-18 W119-41-20	--	10.4	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	DC-3	N46-33-39 W119-36-18	--	8.2	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	RSH-1	N46-26-30 W119-46-23	--	8.8	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	SENTINEL GAP	--	--	10.1	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	EMERSON NIPPLE	--	--	10.1	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	DC-2	N46-34-17 W119-31-04	--	70.7	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	DC-4	N46-34-35 W119-39-53	--	64.6	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	DC-6	N46-35-14 W119-23-46	--	37.2	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	DC-8	N46-28-47 W119-23-13	--	38.7	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	DC-12	N46-28-04 W119-32-28	--	36.0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	DC-14	N46-40-16 W119-27-31	--	49.1	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	DC-15	N46-23-45 W119-16-13	--	37.2	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	DDH-3	N46-21-19 W119-23-27	--	28.4	SD-BWI-DP-011 P.32

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	DH-4	N46-45-33 W119-21-42	--	39.6	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	DH-5	N46-45-17 W119-49-43	--	48.8	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	RRL-2	N46-32-55 W119-39-38	--	57.9	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	RRL-6	N46-31-59 W119-40-47	--	54.3	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	RRL-14	N46-33-18 W119-41-20	--	53.3	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT DENSE INTERIOR	DC-3	N46-33-39 W119-36-18	--	72.5	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT DENSE INTERIOR	RSH-1	N46-26-30 W119-46-23	--	58.8	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	SENTINEL GAP	--	--	57.6	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	EMERSON NIPPLE	--	--	60.4	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	DC-2	N46-34-17 W119-31-04	--	7.6	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	DC-4	N46-34-35 W119-39-53	--	10.4	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	DC-6	N46-35-14 W119-23-46	--	27.9	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	DC-8	N46-28-47 W119-23-13	--	7.3	SD-BWI-DP-011 P.32

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-07-84
QA BY: LA DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	DC-12	N46-28-04 W119-32-28	--	21.0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	DC-14	N46-40-16 W119-27-31	--	13.4	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	DC-15	N46-23-45 W119-16-13	--	4.0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	DDH-3	N46-21-19 W119-23-27	--	11.3	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	DH-4	N46-45-33 W119-21-42	--	12.5	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	DH-5	N46-45-17 W119-49-43	--	12.2	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	RRL-2	N46-32-55 W119-39-38	--	16.6	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	RRL-6	N46-31-59 W119-40-47	--	13.1	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	RRL-14	N46-33-18 W119-41-20	--	6.8	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	SENTINEL GAP	--	--	6.7	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT BASAL COLONNADE	EMERSON NIPPLE	--	--	6.1	SD-BWI-DP-011 P.32

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-09-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	DC-2	N46-34-17 W119-31-04	--	0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	DC-4	N46-34-35 W119-39-53	--	0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	DC-6	N46-35-14 W119-23-46	--	0.5	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	DC-8	N46-28-47 W119-23-13	--	0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	DC-12	N46-28-04 W119-32-28	--	0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	DC-14	N46-40-16 W119-27-31	--	0.3	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	DC-15	N46-23-45 W119-16-13	--	0.3	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	DDH-3	N46-21-19 W119-23-27	--	0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	DH-4	N46-45-33 W119-21-42	--	0.6	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	DH-5	N46-45-17 W119-49-43	--	0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	RRL-2	N46-32-55 W119-39-38	--	0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	RRL-6	N46-31-59 W119-40-47	--	0.3	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	RRL-14	N46-33-18 W119-41-20	--	0.3	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	SENTINEL GAP	--	--	0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWBOTTOM	EMERSON NIPPLE	--	--	0	SD-BWI-DP-011 P.32
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE TOTAL FLOW	DC-4	N46-34-35 W119-39-53	--	52.4	SD-BWI-DP-011 P.49

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-06-84
QA BY: TH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE TOTAL FLOW	RRL-2	N46-32-55 W119-39-38	--	51.8	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE TOTAL FLOW	RRL-6	N46-31-39 W119-40-47	--	51.4	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE TOTAL FLOW	RRL-14	N46-33-18 W119-41-20	--	54.9	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE TOTAL FLOW	SENTINEL GAP	--	--	51.6	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE TOTAL FLOW	EMERSON NIPPLE	--	--	47.9	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWTOP	DC-4	N46-34-35 W119-39-53	--	24.7	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWTOP	RRL-2	N46-32-55 W119-39-38	--	5.2	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWTOP	RRL-14	N46-33-18 W119-41-20	--	24.4	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWTOP	SENTINEL GAP	--	--	14.0	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWTOP	EMERSON NIPPLE	--	--	10.1	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	DC-4	N46-34-35 W119-39-53	--	20.1	SD-BWI-DP-011 P.49

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-04-84
QA BY: JH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	RRL-2	N46-32-55 W119-39-38	--	41.9	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	RRL-6	N46-31-59 W119-40-47	--	39.6	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	RRL-14	N46-33-18 W119-41-20	--	24.1	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	SENTINEL GAP	--	--	25.9	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	EMERSON NIPPLE	--	--	29.9	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE BASAL COLONNADE	DC-4	N46-34-35 W119-39-53	--	7.0	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE BASAL COLONNADE	RRL-2	N46-32-55 W119-39-38	--	4.7	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE BASAL COLONNADE	RRL-6	N46-31-59 W119-40-47	--	6.6	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE BASAL COLONNADE	RRL-14	N46-33-18 W119-41-20	--	6.4	SD-BWI-DP-011 P.49

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-06-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE BASAL COLONNADE	SENTINEL GAP	--	--	11.9	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE BASAL COLONNADE	EMERSON NIPPLE	--	--	7.9	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWBOTTOM	DC-4	N46-34-35 W119-39-53	--	0.0	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWBOTTOM	RRL-2	N46-32-55 W119-39-38	--	0	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWBOTTOM	RRL-6	N46-31-59 W119-40-47	--	0	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWBOTTOM	RRL-14	N46-33-18 W119-41-20	--	0	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWBOTTOM	SENTINEL GAP	--	--	0	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWBOTTOM	EMERSON NIPPLE	--	--	0	SD-BWI-DP-011 P.49
GRANDE RONDE	SENTINEL BLUFFS	--	DC-12	N46-28-04 W119-32-38	--	10.8	RHO-BWI-LD-45 P.8
GRANDE RONDE	SENTINEL BLUFFS	--	DC-12	N46-28-04 W119-32-38	--	25.4	RHO-BWI-LD-45 P.8
GRANDE RONDE	SENTINEL BLUFFS	--	DC-12	N46-28-04 W119-32-38	--	15.9	RHO-BWI-LD-45 P.8
GRANDE RONDE	SENTINEL BLUFFS	--	DC-12	N46-28-04 W119-32-38	--	48.2	RHO-BWI-LD-45 P.8

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-26-84
QA BY: LH DATE: 10-24-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	--	DC-12	N46-28-04 W119-32-38	--	9.9	RHO-BWI-LD-45 P.8
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	DC-12	N46-28-04 W119-32-38	--	67.8	RHO-BWI-LD-45 P.8
GRANDE RONDE	SENTINEL BLUFFS	--	DC-12	N46-28-04 W119-32-38	--	5.2	RHO-BWI-LD-45 P.8
GRANDE RONDE	SENTINEL BLUFFS	--	DC-12	N46-28-04 W119-32-28	--	27.0	RHO-BWI-LD-45 P.8
GRANDE RONDE	SENTINEL BLUFFS	--	DC-12	N46-28-04 W119-32-28	--	18.1	RHO-BWI-LD-45 P.8
GRANDE RONDE	SENTINEL BLUFFS	--	DC-12	N46-28-04 W119-32-28	--	29.6	RHO-BWI-LD-45 P.
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON	DC-12	N46-28-04 W119-32-28	--	36.7	RHO-BWI-LD-45 P.8
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-04 W119-32-28	--	71.8	RHO-BWI-LD-45 P.8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	8.5	RHO-BWI-LD-45 P.8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	47.4	RHO-BWI-LD-45 P.8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	28.2	RHO-BWI-LD-45 P.8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	7.0	RHO-BWI-LD-45 P.8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	27.7	RHO-BWI-LD-45 P.8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	31.4	RHO-BWI-LD-45 P.8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	3.7	RHO-BWI-LD-45 P.8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	12.8	RHO-BWI-LD-45 P.8

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-04-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	10.2	RHO-BWI-LD-45 P. 8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	2.6	RHO-BWI-LD-45 P. 8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	2.4	RHO-BWI-LD-45 P. 8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	14.0	RHO-BWI-LD-45 P. 8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	6.2	RHO-BWI-LD-45 P. 8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	68.6	RHO-BWI-LD-45 P. 8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	29.1	RHO-BWI-LD-45 P. 8
GRANDE RONDE	--	NO. 2	DC-12	N46-28-04 W119-32-28	--	7.3	RHO-BWI-LD-45 P. 8
HANFORD	--	GLACIO-FLUVIAL DEPOSITS	699-25-60	--	--	10.1	RHO-BWI-LD-67 P. 6
RINGOLD	--	GLACIO-FLUVIAL	699-611-E12A	N46-24-30 W119-16-51	--	70.4	RHO-BWI-LD-27 P. 6
RINGOLD	--	--	699-25-60	--	--	23.2	RHO-BWI-LD-67 P. 6
SADDLE MOUNTAIN	ELEPHANT MOUNTAIN	ELEPHANT MOUNTAIN	RRL-2	N46-32-55 W119-39-38	--	24.7	SD-BWI-TI-113 P. 11
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	RRL-2	N46-32-55 W119-39-38	--	29.3	SD-BWI-TI-113 P. 11
SADDLE MOUNTAIN	POMONA	POMONA	RRL-2	N46-32-55 W119-39-38	--	48.6	SD-BWI-TI-113 P. 11
SADDLE MOUNTAIN	--	SELAH INTERBED	RRL-2	N46-32-55 W119-39-38	--	13.6	SD-BWI-TI-113 P. 11
SADDLE MOUNTAIN	ESQUATZEL	GABLE MOUNTAIN	RRL-2	N46-32-55 W119-39-38	--	36.0	SD-BWI-TI-113 P. 11

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-06-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
SADDLE MOUNTAIN	--	COLD CREEK INTERBED	RRL-2	N46-32-55 W119-39-38	--	19.5	SD-BWI-TI-113 P.11
SADDLE MOUNTAIN	UMATILLA	--	RRL-2	N46-32-55 W119-39-38	--	70.4	SD-BWI-TI-113 P.11
SADDLE MOUNTAIN	ICE HARBOR	--	699-S11-E12A	N46-24-30 W119-16-51	--	2.1	RHO-BWI-LD-27 P.6
SADDLE MOUNTAIN	ICE HARBOR	LEVEY INTERBED	699-S11-E12A	N46-24-30 W119-16-51	--	8.2	RHO-BWI-LD-27 P.6
SADDLE MOUNTAIN	ELEPHANT MOUNTAIN	--	699-S11-E12A	N46-24-30 W119-16-51	--	5.2+	RHO-BWI-LD-27 P.6
SADDLE MOUNTAIN	ELEPHANT MOUNTAIN	LEVEY UPPER	DC-12	N46-28-04 W119-32-28	--	19.8	RHO-BWI-LD-45 P.8
SADDLE MOUNTAIN	ELEPHANT MOUNTAIN	LEVEY LOWER	DC-12	N46-28-04 W119-32-28	--	16.8	RHO-BWI-LD-45 P.8
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTREBED	DC-12	N46-28-04 W119-32-28	--	24.4	RHO-BWI-LD-45 P.8
SADDLE MOUNTAIN	POMONA	--	DC-12	N46-28-04 W119-32-28	--	52.7	RHO-BWI-LD-45 P.8
SADDLE MOUNTAIN	--	SELAH INTERBED	DC-12	N46-28-04 W119-32-28	--	9.8	RHO-BWI-LD-45 P.8
SADDLE MOUNTAIN	ESQUATZEL	--	DC-12	N46-28-04 W119-32-28	--	27.4	RHO-BWI-LD-45 P.8
SADDLE MOUNTAIN	--	COLD CREEK INTERBED	DC-12	N46-28-04 W119-32-28	--	19.8	RHO-BWI-LD-45 P.8
SADDLE MOUNTAIN	UMATILLA	--	DC-12	N46-28-04 W119-32-28	--	63.3	RHO-BWI-LD-45 P.8
SADDLE MOUNTAIN	ELEPHANT MOUNTAIN	--	699-25-80	--	--	30.2	RHO-BWI-LD-67 P.6
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	699-25-80	--	--	23.0	RHO-BWI-LD-67 P.6
SADDLE MOUNTAIN	POMONA	--	699-25-80	--	--	14.0	RHO-BWI-LD-67 P.6

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-06-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
SADDLE MOUNTAIN	—	RATTLESNAKE RIDGE	699-52-48	—	—	15.2	RHO-ST-38
SADDLE MOUNTAIN	—	RATTLESNAKE RIDGE	699-51-46	—	—	13.7	RHO-ST-38
SADDLE MOUNTAIN	—	RATTLESNAKE RIDGE	699-52-46	—	—	18.3	RHO-ST-38
SADDLE MOUNTAIN	—	RATTLESNAKE RIDGE	699-50-45	—	—	13.7	RHO-ST-38
SADDLE MOUNTAIN	—	RATTLESNAKE RIDGE	699-50-48	—	—	11.6	RHO-ST-38
SADDLE MOUNTAIN	—	RATTLESNAKE RIDGE	699-47-50	—	—	10.7	RHO-ST-38
WANAPUM	PRIEST RAPIDS	LOLO	RRL-2	N46-32-55 W119-39-38	—	50.6	SD-BWI-TI-113 P.12
WANAPUM	PRIEST RAPIDS	ROSALIA	RRL-2	N46-32-55 W119-39-38	—	18.3	SD-BWI-TI-113 P.12
WANAPUM	—	QUINCY INTERBED	RRL-2	N46-32-55 W119-39-38	—	0.2	SD-BWI-TI-113 P.12
WANAPUM	ROZA	UPPER	RRL-2	N46-32-55 W119-39-38	—	8.5	SD-BWI-TI-113 P.12
WANAPUM	ROZA	LOWER	RRL-2	N46-32-55 W119-39-38	—	43.9	SD-BWI-TI-113 P.12
WANAPUM	FRENCHMAN SPRINGS	1	RRL-2	N46-32-55 W119-39-38	—	55.5	SD-BWI-TI-113 P.12
WANAPUM	FRENCHMAN SPRINGS	2	RRL-2	N46-32-55 W119-39-38	—	34.4	SD-BWI-TI-113 P.12
WANAPUM	FRENCHMAN SPRINGS	3	RRL-2	N46-32-55 W119-39-38	—	17.1	SD-BWI-TI-113 P.12
WANAPUM	FRENCHMAN SPRINGS	4	RRL-2	N46-32-55 W119-39-38	—	32.9	SD-BWI-TI-113 P.12
WANAPUM	FRENCHMAN SPRINGS	5	RRL-2	N46-32-55 W119-39-38	—	32.9	SD-BWI-TI-113 P.13
WANAPUM	FRENCHMAN SPRINGS	6	RRL-2	N46-32-55 W119-39-38	—	39.0	SD-BWI-TI-113 P.13

SITE SUBSYSTEM
PARAMETER: THICKNESS (m)

CHECKED BY: SP DATE: 10-04-84
QA BY: LH DATE: 10-24-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH	THICKNESS	SOURCE
WANAPUM	FRENCHMAN SPRINGS	7	RRL-2	N46-32-55 W119-39-38	—	20.1	SD-BWI-TI-113 P.13
WANAPUM	PRIEST RAPIDS	LOLO	DC-12	N46-28-04 W119-32-28	—	33.5	RHO-BWI-LD-45 P.8
WANAPUM	PRIEST RAPIDS	ROSALIA	DC-12	N46-28-04 W119-32-28	—	32.6	RHO-BWI-LD-45 P.8
WANAPUM	—	QUINCY INTERBED	DC-12	N46-28-04 W119-32-28	—	0.6	RHO-BWI-LD-45 P.8
WANAPUM	ROZA	—	DC-12	N46-28-04 W119-32-28	—	54.3	RHO-BWI-LD-45 P.8
WANAPUM	FRENCHMAN SPRINGS	—	DC-12	N46-28-04 W119-32-28	—	35.7	RHO-BWI-LD-45 P.8
WANAPUM	FRENCHMAN SPRINGS	—	DC-12	N46-28-04 W119-32-28	—	16.6	RHO-BWI-LD-45 P.8
WANAPUM	FRENCHMAN SPRINGS	—	DC-12	N46-28-04 W119-32-28	—	27.6	RHO-BWI-LD-45 P.8
WANAPUM	FRENCHMAN SPRINGS	—	DC-12	N46-28-04 W119-32-28	—	11.0	RHO-BWI-LD-45 P.8
WANAPUM	FRENCHMAN SPRINGS	—	DC-12	N46-28-04 W119-32-38	—	14.6	RHO-BWI-LD-45 P.8
WANAPUM	FRENCHMAN SPRINGS	—	DC-12	N46-28-04 W119-32-38	—	17.4	RHO-BWI-LD-45 P.8
WANAPUM	FRENCHMAN SPRINGS	—	DC-12	N46-28-04 W119-32-38	—	41.5	RHO-BWI-LD-45 P.8
WANAPUM	FRENCHMAN SPRINGS	—	DC-12	N46-28-04 W119-32-38	—	50.0	RHO-BWI-LD-45 P.8
WANAPUM	—	UNNAMED INTERBED	DC-12	N46-28-04 W119-32-38	—	1.8	RHO-BWI-LD-45 P.8

SITE SUBSYSTEM
PARAMETER: DISPERSIVITY (m)

CHECKED BY: SP DATE: 10-26-84
QA BY: LH DATE: 10-29-84

FORM-ATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TEMP (C)	PARAMETER: MAJOR VALUE	MINOR VALUE	ORIEN-TATION	RANGE OF GM VALUE	MEAN	STD. DEV.	METHOD REFERENCE	SOURCE
—	—	—	—	—	1043-1055	—	0.73	—	—	—	—	—	TWO-WELL TRACER TEST	RHO-BWI-SA-92A
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	DC-7/8	N46-28-46 W119-23-12	—	—	—	—	—	—	0.8	—	TRACER TEST	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	220 FT. ABOVE UMTANUM FLOW	DC-7/8	N46-28-46 W119-23-12	—	—	0.24	—	—	—	—	—	TWO-WELL TRACER TEST	RHO-BW-CR-131P P.E-31
GRANDE RONDE	SCHWANA	220 FT. ABOVE UMTANUM FLOW	DC-7/8	N46-28-46 W119-23-12	—	—	0.46	—	—	—	—	—	TWO-WELL TRACER TEST	RHO-BW-CR-131P P.14

SITE SUBSYSTEM
PARAMETER: THERMAL DIFFUSIVITY (m squared/s)

CHECKED BY: SP DATE: 10-16-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
COLUMBIA RIVER	—	—	—	—	38-316	—	0.441-0.532 E-6	—	—	LAB. MEASUREMENT	NUREG/CR-2352
COLUMBIA RIVER	—	—	—	—	211-1164	—	0.408-0.616 E-6	—	—	LAB. MEASUREMENT	NUREG/CR-2352
GRANDE RONDE	SCHWANA	UMTANUM	—	—	24-303	—	0.329-0.796 E-6	—	—	LAB. MEASUREMENT	NUREG/CR-2352
HANFORD	—	—	—	—	—	—	0.412 E-6	—	—	LAB. MEASUREMENT	NUREG/CR-2352
SADDLE MTN.	POMONA	POMONA	—	—	20-320	—	0.525-0.761 E-6	—	—	LAB. MEASUREMENT	NUREG/CR-2352
SADDLE MTN.	POMONA	POMONA	—	—	20-320	—	0.385-0.788 E-6	—	—	LAB. MEASUREMENT	NUREG/CR-2352

SITE SUBSYSTEM
PARAMETER: THERMAL CONDUCTIVITY (W/m deg. K)

CHECKED BY: SP DATE: 10-26-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
—	—	NEAR-SURFACE TEST FACILITY	—	—	—	—	—	2.09	0.19	—	SD-BWI-TI-080, P. 59
—	—	POMONA & UMTANUM	—	—	54-125	—	1.4-1.7	—	—	LAB. MEASUREMENT	NUREG/CR-2352
COLUMBIA RIVER	—	—	—	—	13-985	—	1.1-2.3	—	—	LAB. MEASUREMENT	NUREG/CR-2352
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	RRL-2	N46-32-55 W119-39-39	191	1.269	—	—	—	LAB TESTS, CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	—	—	20	0.84	—	—	—	—	RHO-BWI-ST-18
GRANDE RONDE	SCHWANA	UMTANUM	—	—	100	1.15	—	—	—	—	RHO-BWI-ST-18
GRANDE RONDE	SCHWANA	UMTANUM	—	—	300	1.93	—	—	—	—	RHO-BWI-ST-18
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	—	—	20-200	—	1.32-1.74	1.51	0.152	—	SD-BWI-DP-041 P. 54
GRANDE RONDE	SCHWANA	UMTANUM	—	—	20-200	—	1.27-2.46	1.71	0.478	—	SD-BWI-DP-041 P. 54
GRANDE RONDE	SCHWANA	UMTANUM	DC-2	N46-34-17 W119-31-04	—	—	—	1.55	0.29	—	SD-BWI-TI-080 P. 59
GRANDE RONDE	SCHWANA	UMTANUM	DDH-2	—	—	—	—	1.68	0.46	—	SD-BWI-TI-080 P. 59
GRANDE RONDE	SCHWANA	UMTANUM	DH-4	N46-45-33 W119-21-42	—	—	—	1.18	0.34	—	SD-BWI-TI-080 P. 59
GRANDE RONDE	SCHWANA	UMTANUM	DH-5	N46-45-17 W119-49-43	—	—	—	1.60	0.28	—	SD-BWI-TI-080 P. 59
GRANDE RONDE	SCHWANA	UMTANUM	—	—	56-305	—	1.8-2.5	—	—	LAB MEASUREMENT	NUREG/CR-2352
GRANDE RONDE	—	—	DC-2	N46-34-17 W119-31-04	—	—	—	1.74	0.61	—	SD-BWI-TI-080 P. 59\
GRANDE RONDE	—	—	DDH-3	N46-21-19 W119-23-27	—	—	—	2.18	0.51	—	SD-BWI-TI-080 P. 59
GRANDE RONDE	—	—	DH-4	N46-45-33 W119-21-42	—	—	—	1.41	0.35	—	SD-BWI-TI-080 P. 59

SITE SUBSYSTEM
PARAMETER: THERMAL CONDUCTIVITY (W/m deg. K)

CHECKED BY: SD DATE: 10-26-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	—	—	DH-5	N46-45-17 W119-49-43	—	—	—	1.44	0.41	—	SD-BWI-TI-080 P. 59
GRANDE RONDE	SCHWANA	UMTANUM	—	—	50	—	—	2.17	0.26	—	RHO-BW-SA-252P
GRANDE RONDE	SCHWANA	UMTANUM	—	—	150	—	—	2.30	0.17	—	RHO-BW-SA-252P
GRANDE RONDE	SCHWANA	UMTANUM	—	—	275	—	—	2.39	0.13	—	RHO-BW-SA-252P
GRANDE RONDE	SENTINEL BLUFFS	COHASSSSETT ENTABLATURE	RRL-2	N46-32-55 W119-39-38	60	1.601	—	—	—	LAB TESTS CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	RRL-2	N46-32-55 W119-39-38	128	1.564	—	—	—	LAB TESTS CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	RRL-2	N46-32-55 W119-39-38	196	1.418	—	—	—	LAB TESTS CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	RRL-2	N46-32-55 W119-39-38	55	1.366	—	—	—	LAB TESTS CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	RRL-2	N46-32-55 W119-39-38	122	1.307	—	—	—	LAB TESTS CORE SAMPLES	RHO-BW-ST-28P
HANFORD	—	—	—	—	—	—	1.4-4.2	—	—	LAB. MEASUREMENT	NUREG/CR-2352
HANFORD	—	—	—	—	0-212	—	1.0-1.1	—	—	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MOUNTAIN	POMONA	—	—	—	—	—	1.3-1.6	1.5	—	CORE ANAL.	RHO-BWI-LD-11 P. 23
SADDLE MOUNTAIN	POMONA	POMONA	—	—	20-200	—	1.16-2.65	1.85	0.38	—	SD-BWI-DP-041 P. 54
SADDLE MTN	POMONA	POMONA	—	—	94-303	—	0.65-3.0	—	—	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MTN	POMONA	POMONA	—	—	150-250	—	1.3-1.6	—	—	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MTN	POMONA	POMONA	—	—	100-300	—	1.5-1.9	—	—	LAB MEASUREMENT	NUREG/CR-2352

SITE SUBSYSTEM
PARAMETER: THERMAL CONDUCTIVITY (W/m deg. K)

CHECKED BY: SP DATE: 10-26-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
SADDLE MTN	POMONA	POMONA	—	—	31-300	—	1.8-2.5	—	—	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MTN	POMONA	POMONA	—	—	41-299	—	1.0-2.5	—	—	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MTN	POMONA	POMONA	DB-5	N46-34-56 W119-32-02	—	—	—	1.63	0.10	—	SD-BWI-TI-080 P.59
SADDLE MTN	POMONA	POMONA	DB-15	N46-34-10 W119-29-31	—	—	—	1.79	0.09	—	SD-BWI-TI-080 P.59
SADDLE MTN	POMONA	POMONA	DC-10	N46-36-41 W119-32-13	—	—	—	1.46	0.35	—	SD-BWI-TI-080 P.59
SADDLE MTN	POMONA	POMONA	DC-11	N46-36-23 W119-32-10	—	—	—	1.54	0.41	—	SD-BWI-TI-080 P.59
SADDLE MTN	POMONA	—	—	SURFACE OUTCROP	—	1.57E-3	—	—	—	—	RHO-BWI-SA-181

SITE SUBSYSTEM
PARAMETER: SPECIFIC HEAT (kJ/kg deg. K)

CHECKED BY: SP DATE: 10-06-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
—	—	POMONA & UMTANUM	—	—	50-300	—	0.908-1.24	—	—	LAB. MEASUREMENT	NUREG/CR-2352
COLUMBIA RIVER	—	—	—	—	38-316	—	0.728-0.979	—	—	LAB MEASUREMENT	NUREG/CR-2352
GRANDE RONDE	SCHWANA	UMTANUM	—	—	74-347	—	0.916-1.02	—	—	LAB MEASUREMENT	NUREG/CR-2352
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	—	—	75	—	—	0.941	0.021	FSI, 1980A	SD-BWI-TI-080 P. 67
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	—	—	190	—	—	0.987	0.033	FSI, 1980A	SD-BWI-TI-080 P. 67
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	—	—	350	—	—	1.01	0.013	FSI, 1980A	SD-BWI-TI-080 P. 67
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	RRL-2	N46-32-55 W119-39-38	50	0.795	—	—	—	LAB TESTS CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	RRL-2	N46-32-55 W119-39-38	100	0.849	—	—	—	LAB TESTS CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	RRL-2	N46-32-55 W119-39-38	200	0.937	—	—	—	LAB TESTS CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	RRL-2	N46-32-55 W119-39-38	50	0.803	—	—	—	LAB TESTS CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	RRL-2	N46-32-55 W119-39-38	100	0.858	—	—	—	LAB TESTS CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	RRL-2	N46-32-55 W119-39-38	200	0.941	—	—	—	LAB TESTS CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	—	—	—	0.094	—	—	—	LAB TESTS CORE SAMPLES	RHO-BWI-ST-18
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	—	—	50	0.795	0.025	—	—	—	RHO-BW-SA-252P

SITE SUBSYSTEM
PARAMETER: SPECIFIC HEAT (kJ/kg deg. K)

CHECKED BY: SP DATE: 10-04-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	--	--	150	--	--	0.895	0.00	--	RHO-BW-SA-252P
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	--	--	300	--	--	1.00	0.00	--	RHO-BW-SA-252P
GRANDE RONDE	SCHWANA	UMTANUM	--	--	75	--	--	0.941	0.021	--	RHO-BW-SA-252P
GRANDE RONDE	SCHWANA	UMTANUM	--	--	190	--	--	0.987	0.033	--	RHO-BW-SA-252P
HANFORD	--	--	--	--	--	--	0.711-1.71	--	--	LAB. MEASUREMENT	NUREG/CR-2352
SADDLE MOUNTAIN	POMONA	POMONA	--	--	100-300	--	1.20-2.45	--	--	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MOUNTAIN	POMONA	POMONA	--	--	73-356	--	0.820-1.05	--	--	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MOUNTAIN	POMONA	POMONA	--	--	74-358	--	0.837-1.02	--	--	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MOUNTAIN	POMONA	POMONA ENTABLATURE	AREA 1	--	350	--	--	1.02	0.19	FSI, 1980A	SD-BWI-TI-080 P. 67
SADDLE MOUNTAIN	POMONA	POMONA ENTABLATURE	AREA 2	--	75	--	--	0.908	0.042	FSI, 1980B	SD-BWI-TI-080 P. 67
SADDLE MOUNTAIN	POMONA	POMONA ENTABLATURE	AREA 2	--	190	--	--	0.962	0.013	FSI, 1980B	SD-BWI-TI-080 P. 67
SADDLE MOUNTAIN	POMONA	POMONA ENTABLATURE	AREA 2	--	350	--	--	1.00	0.054	FSI, 1980B	SD-BWI-TI-080 P. 67
SADDLE MOUNTAIN	POMONA	--	--	--	100	--	1.21-1.49	1.34	--	CORE ANAL.	RHO-BWI-LD-11 P. 23
SADDLE MOUNTAIN	POMONA	--	--	--	200	--	1.65-1.93	1.78	--	CORE ANAL.	RHO-BWI-LD-11 P. 23
SADDLE MOUNTAIN	POMONA	--	--	--	300	--	1.98-2.45	2.25	--	CORE ANAL.	RHO-BWI-LD-11 P. 23
SADDLE MTN	POMONA	POMONA ENTABLATURE	AREA 1	--	75	--	--	0.837	0.046	FSI, 1980A	SD-BWI-TI-080, P. 67

SITE SUBSYSTEM
PARAMETER: SPECIFIC HEAT (kJ/kg deg. K)

CHECKED BY: SP DATE: 10-06-84
QA BY: ZH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
SADDLE MTN	POMONA	POMONA ENTABLATURE	AREA 1	—	190	—	—	0.941	0.029	FSI, 1980A	SD-BWI-TI-080, P. 67

SITE SUBSYSTEM

PARAMETER: SPECIFIC HEAT (kJ/kg·°K)

Prepared by RK Date 6/25/84
Checked by SP Date 09-03-84
QA by LH Date 10-29-84

Formation	Member or Sequence	Flow or Sediment	Well ID	Location	Temp (°C)	Specific Heat (kJ/kg·°K) Linear regression	Source
Grande Ronde	Schwana	Umtanum	--	--	20-200	Cp = 0.702 + 5.86E-4 K	SD-BWI-DP-041, p. 54
Grande Ronde	Sentinel Bluffs	Cohassett	--	--	20-200	Cp = 0.543 + 8.16E-4 K	SD-BWI-DP-041, p. 54
Saddle Mountains	Pomona	Pomona	--	--	20-200	Cp = 0.703 + 5.19E-4 K	SD-BWI-DP-041, p. 54

SITE SUBSYSTEM
PARAMETER: THERMAL EXPANSION COEFFICIENT (per deg. K)

CHECKED BY: SP DATE: 10-04-84
QA BY: JH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
COLUMBIA RIVER	--	--	--	--	--	--	--	5.3E-6	1.3E-6	LAB MEASUREMENT	NUREG/CR-2352
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	RRL-2	N46-32-55 W119-39-38	--	6.17 E-6	--	--	--	LAB TESTS. CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	RR;-2	N46-32-55 W119-39-38	--	6.02 E-6	--	--	--	LAB TESTS. CORE SAMPLES	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	--	--	73-242	--	6.0-7.2E-6	--	--	LAB MEASUREMENT	NUREG/CR-2352
GRANDE RONDE	SCHWANA	UMTANUM	--	--	90-550	--	6.77-10.83E-6	--	--	LAB MEASUREMENT	NUREG/CR-2352
GRANDE RONDE	SCHWANA	UMTANUM	--	--	98-497	--	7.34-11.96E-6	--	--	LAB MEASUREMENT	NUREG/CR-2352
GRANDE RONDE	SCHWANA	UMTANUM	--	--	18-640	--	7.37-11.16E-6	--	--	LAB MEASUREMENT	NUREG/CR-2352
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	--	--	--	--	5.72-6.31E-6	6.02E-6	0.42E-6	--	SD-BWI-DP-041 P. 54
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	--	5.93-7.00E-6	6.51E-6	0.33E-6	--	SD-BWI-DP-041 P. 54
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	--	--	--	--	--	6.15E-6	0.64E-6	--	RHO-BW-SA-252P
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	--	--	8.81E-6	1.78E-6	--	RHO-BW-SA-252P
HANFORD	--	--	--	--	--	--	6.5E-6	--	--	LAB MEASUREMENT	NUREG/CR-2352
HANFORD	--	--	--	--	--	--	2.9-12.0E-6	--	--	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MOUNTAIN	POMONA	POMONA	--	--	--	--	5.23-10.65E-6	--	--	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MOUNTAIN	POMONA	POMONA	--	--	20.300	--	6.5-6.7E-6	--	--	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MOUNTAIN	POMONA	POMONA	--	--	20-250	--	2.1-2.9E-6	--	--	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MOUNTAIN	POMONA	POMONA	--	--	70-300	--	4.0-6.7E-6	--	--	LAB MEASUREMENT	NUREG/CR-2352

SITE SUBSYSTEM
PARAMETER: THERMAL EXPANSION COEFFICIENT (per deg. K)

CHECKED BY: SP DATE: 10-26-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
SADDLE MOUNTAIN	POMONA	POMONA	--	--	70-300	--	6.5-8.4E-6	--	--	LAB MEASUREMENT	NUREG/CR-2352
SADDLE MTN	POMONA	POMONA	--	--	--	--	4.80-8.73 E-6	6.40 E-6	1.16 E-6	--	SD-BWI-DP-041, P. 54
SADDLE MTN	POMONA	--	--	--	--	--	6.5E-6 - 6.7E-6	6.6 E-6	--	CORE ANAL.	RHO-BWI-LD-11, P. 23

SITE SUBSYSTEM
PARAMETER: YOUNG'S MODULUS (MPa)

CHECKED BY: SP DATE: 10-06-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFF	MIDDLE SENTINEL BLUFFS	—	—	—	—	—	—	—	76900	5000	—	RHO-BW-SA-232P
GRANDE RONDE	SCHWANA	UMTANUM	—	—	—	—	—	—	—	71000	20000	—	RHO-BW-SA-232P
GRANDE RONDE	OVER/UNDERLYING	FLOWTOP	—	—	—	—	—	—	—	39300	20700	UNIAXIAL	SD-BWI-TI-080 P.41
GRANDE RONDE	OVER/UNDERLYING	ENTABLATURE	—	—	—	—	—	—	—	64800	15900	UNIAXIAL	SD-BWI-TI-080 P.41
GRANDE RONDE	OVER/UNDERLYING	COLONNADE	—	—	—	—	—	—	—	62700	13100	UNIAXIAL	SD-BWI-TI-080 P.41
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	—	—	—	—	—	—	—	15200	7600	UNIAXIAL	SD-BWI-TI-080 P.41
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	—	—	—	—	—	—	—	71000	20000	UNIAXIAL	SD-BWI-TI-080 P.41
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	—	—	—	—	—	—	—	51000	16500	UNIAXIAL	SD-BWI-TI-080 P.41
GRANDE RONDE	OVER/UNDERLYING	FLOWTOP	—	—	—	—	—	—	—	37200	16500	TRIAXIAL	SD-BWI-TI-080 P.42
GRANDE RONDE	OVER/UNDERLYING	ENTABLATURE	—	—	—	—	—	—	—	74500	9000	TRIAXIAL	SD-BWI-TI-080 P.42
GRANDE RONDE	OVER/UNDERLYING	COLONNADE	—	—	—	—	—	—	—	67600	17900	TRIAXIAL	SD-BWI-TI-080 P.42
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE COLONNADE	—	—	—	—	—	—	78470-94880	86680	11600	STATIC	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	—	—	—	—	—	—	28430-35230	31790	4870	STATIC	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	—	—	—	—	—	—	45020-56130	51440	6390	STATIC	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	—	—	—	—	—	—	62800-85740	75600	5830	STATIC	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE	—	—	—	—	—	—	51780-86670	72760	7230	STATIC	SD-BWI-DP-041 P.30

SITE SUBSYSTEM
PARAMETER: YOUNG'S MODULUS (MPa)

CHECKED BY: SP DATE: 10-016-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	—	—	—	—	—	—	—	14000	—	STATIC	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	—	—	—	—	—	—	41370-84260	75040	9400	STATIC	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON COLONNADE	—	—	—	—	—	—	32890-43990	36890	6170	STATIC	SD-BWI-DP-041 P.32
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	—	—	-	—	—	—	69500-85400	77130	4310	DYNAMIC	SD-BWI-DP-041 P.35
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	—	—	—	—	—	—	60600-81000	72730	5490	DYNAMIC	SD-BWI-DP-041 P.35
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	—	—	—	—	—	—	14620-44000	31190	10810	STATIC	SD-BWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	—	—	—	—	—	—	69850-84410	80630	3940	STATIC	SD-BWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	—	—	—	—	—	—	63570-81840	74240	4600	STATIC	SD-BWI-DP-041 P.34
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	—	—	—	—	—	—	82400-84800	83600	17000	STATIC	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	—	—	—	—	—	—	31200-57000	43550	3750	DYNAMIC	SD-BWI-DP-041 P.31
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	—	—	—	—	—	—	39800-64000	54680	8190	DYNAMIC	SD-BWI-DP-041 P.31
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	—	—	—	—	—	—	62600-86000	76090	5670	DYNAMIC	SD-BWI-DP-041 P.31
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE	—	—	—	—	—	—	55100-83300	74010	6920	DYNAMIC	SD-BWI-DP-041 P.31
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	—	—	—	—	—	—	20700-33800	25200	6000	DYNAMIC	SD-BWI-DP-041 P.33
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	—	—	—	—	—	—	39800-75700	55000	12700	DYNAMIC	SD-BWI-DP-041 P.33

SITE SUBSYSTEM
PARAMETER: YOUNG'S MODULUS (MPa)

CHECKED BY: SP DATE: 10-26-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	—	—	—	—	—	—	49000-83700	71140	9100	DYNAMIC	SD-BWI-DP-041 P.33
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON COLONNADE	—	—	—	—	—	—	45700-64800	53200	8300	DYNAMIC	SD-BWI-DP-041 P.33
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	—	—	—	—	—	—	11500-50000	35380	9570	DYNAMIC	SD-BWI-DP-041 P.35
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	—	—	—	—	—	—	—	33800	31000	TRIAXIAL	SD-BWI-TI-080 P.41
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	—	—	—	—	—	—	—	63400	29000	TRIAXIAL	SD-BWI-TI-080 P.41
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	—	—	—	—	—	—	—	44800	24800	TRIAXIAL	SD-BWI-TI-080 P.41
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	—	—	—	—	—	66900-102000	80000	7700	DYNAMIC	SD-BWI-DP-041 P.47
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	—	—	—	—	—	54000-94500	71000	20000	STATIC	SD-BWI-DP-041 P.47
GRANDE RONDE	SCHWANA	EXCLUDING UMTANUM	EXCLUSIVE OF RRL	—	—	—	—	—	48900-86100	64800	16000	STATIC	SD-BWI-DP-041 P.47
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	—	—	—	—	—	—	79800-86800	84100	3700	DYNAMIC	SD-BWI-DP-041 P.29
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE COLONNADE	—	—	—	—	—	—	75800-89000	80200	5100	DYNAMIC	SD-BWI-DP-041 P.29
SADDLE MOUNTAIN	POMONA	POMONA ENTABLATURE	—	—	—	—	—	—	—	83400	8300	UNIAXIAL TESTS	SD-BWI-TI-080 P.41
SADDLE MOUNTAIN	POMONA	POMONA COLONNADE	—	—	—	—	—	—	—	72400	7600	—	SD-BWI-TI-080 P.41

SITE SUBSYSTEM
PARAMETER: YOUNG'S MODULUS (MPa)

CHECKED BY: SA DATE: 10-26-84
QA BY: LA DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
SADDLE MOUNTAIN	POMONA	POMONA ENTABLATURE	--	--	--	--	--	--	--	86200	9700	TRIAXIAL	SD-BWI-TI-080 P.41
SADDLE MOUNTAIN	POMONA	POMONA COLONNADE	--	--	--	--	--	--	--	72400	6900	TRIAXIAL	SD-BWI-TI-080 P.41
SADDLE MOUNTAIN	POMONA	--	EXCLUSIVE OF RRL	--	--	--	--	--	70900-91800	82500	4200	DYNAMIC	SD-BWI-DP-041 P.47
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-1	--	--	--	--	--	75100-90100	81400	4700	DYNAMIC	SD-BWI-TD-008 P.8
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-2	--	--	--	--	--	70100-92100	81900	7100	DYNAMIC	SD-BWI-TD-008 P.9
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-3	--	--	--	--	--	74000-90400	83400	4400	DYNAMIC	SD-BWI-TD-008 P.10
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-4	--	--	--	--	--	68100-87900	82700	5600	DYNAMIC	SD-BWI-TD-008 P.12
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-5	--	--	--	--	--	67200-89400	81800	5800	DYNAMIC	SD-BWI-TD-008 P.14
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-6	--	--	--	--	--	78000-88200	83100	3400	DYNAMIC	SD-BWI-TD-008 P.15
SADDLE MOUNTAIN	POMONA	--	EXCLUSIVE OF RRL	--	--	--	--	--	74500-112400	83400	8300	STATIC	SD-BWI-DP-041 P.47
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-1	--	--	--	--	--	72100-87500	80900	4800	STATIC	SD-BWI-TD-008 P.8
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-2	--	--	--	--	--	76300-87500	84400	5400	STATIC	SD-BWI-TD-008 P.9

SITE SUBSYSTEM
PARAMETER: YOUNG'S MODULUS (MPa)

CHECKED BY: SP DATE: 10-24-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD. DEV.	METHOD OR REFERENCE	SOURCE
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-3	--	--	--	--	--	70700-67900	80000	6200	STATIC	SD-BWI-TD-008 P.10
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-4	--	--	--	--	--	75450-111200	87950	12400	STATIC	SD-BWI-TD-008 P.12
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-5	--	--	--	--	--	71900-101000	83300	8500	STATIC	SD-BWI-TD-008 P.14
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-6	--	--	--	--	--	75000-92400	81200	5500	STATIC	SD-BWI-TD-008 P.15
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	52540-60810	57180	4230	STATIC	SD-BWI-TI-106 P.17
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	--	56950	--	STATIC	SD-BWI-TI-106 P.17
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	--	56160	--	STATIC	SD-BWI-TI-106 P.17
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	--	57200	--	STATIC	SD-BWI-TI-106 P.17
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	58700-66300	62400	2600	DYNAMIC	SD-BWI-TI-106 P.17
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	60600-66400	63200	2300	DYNAMIC	SD-BWI-TI-106 P.17
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	59900-65900	62600	2000	DYNAMIC	SD-BWI-TI-106 P.19
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	60300-66300	63500	2300	DYNAMIC	SD-BWI-TI-106 P.20

SITE SUBSYSTEM
PARAMETER: YOUNG'S MODULUS (MPa)

CHECKED BY: SP DATE: 10-04-84
QA BY: [illegible] DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
SADDLE MOUNTAIN	POMONA	—	—	—	—	—	—	—	63100-87000	76500	—	CORE ANAL	RHO-BWI-LD-11 P.23

SITE SUBSYSTEM
PARAMETER: POISSON'S RATIO

CHECKED BY: SP DATE: 10-26-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	--	--	--	--	--	--	0.25-0.29	0.27	0.02	DYNAMIC	SD-BWI-DP-041 P.24
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE COLONNADE	--	--	--	--	--	--	0.21-0.26	0.23	0.02	DYNAMIC	SD-BWI-DP-041 P.24
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	--	--	--	--	--	--	0.13-0.24	0.22	0.06	DYNAMIC	SD-BWI-DP-041 P.31
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT VESICULAR	--	--	--	--	--	--	0.16-0.31	0.24	0.02	DYNAMIC	SD-BWI-DP-041 P.31
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	--	--	--	--	--	--	0.17-0.31	0.24	0.02	DYNAMIC	SD-BWI-DP-041 P.31
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE	--	--	--	--	--	--	0.15-0.30	0.24	0.03	DYNAMIC	SD-BWI-DP-041 P.31
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	--	--	--	--	--	--	0.18-0.27	0.22	0.04	DYNAMIC	SD-BWI-DP-041 P.33
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON VESICULAR	--	--	--	--	--	--	0.22-0.38	0.28	0.05	DYNAMIC	SD-BWI-DP-041 P.33
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	--	--	--	--	--	--	0.13-0.31	0.23	0.04	DYNAMIC	SD-BWI-DP-041 P.33
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON COLONNADE	--	--	--	--	--	--	0.22-0.24	0.23	0.01	DYNAMIC	SD-BWI-DP-041 P.33
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	--	--	--	--	--	--	0.13-0.32	0.21	0.04	DYNAMIC	SD-BWI-DP-041 P.35
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	--	--	--	--	--	--	0.19-0.29	0.25	0.03	DYNAMIC	SD-BWI-DP-041 P.35
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	--	--	--	--	--	--	0.17-0.29	0.24	0.03	DYNAMIC	SD-BWI-DP-041 P.35
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	--	--	--	--	--	--	0.11-0.32	0.21	0.06	STATIC	SD-BWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	--	--	--	--	--	--	0.23-0.28	0.26	0.01	STATIC	SD-BWI-DP-041 P.34

SITE SUBSYSTEM
PARAMETER: POISSON'S RATIO

CHECKED BY: SP DATE: 10 06 84
QA BY: LH DATE: 10-27-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	--	--	--	--	--	--	0.22-0.28	0.25	0.02	STATIC	SD-BWI-DP-041 P.34
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	--	--	--	--	--	--	0.27-0.29	0.28	0.01	STATIC	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE COLONNADE	--	-	--	--	--	--	0.26-0.28	0.27	0.01	STATIC	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	--	--	--	--	--	--	0.14-0.25	0.20	0.08	STATIC	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT VESICULAR	--	--	--	--	--	--	0.21-0.33	0.29	0.06	STATIC	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	--	--	--	--	--	--	0.22-0.29	0.25	0.02	STATIC	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE	--	--	--	--	--	--	0.20-0.28	0.25	0.02	STATIC	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	--	--	--	--	--	--	--	0.16	--	STATIC	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	--	--	--	--	--	--	0.23-0.29	0.26	0.02	STATIC	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON COLONNADE	--	--	--	--	--	--	0.17-0.27	0.23	0.05	STATIC	SD-BWI-DP-041 P.32
GRANDE RONDE	OVER/UNDERLYING	FLOWTOP	--	--	--	--	--	--	--	0.20	0.04	TRIAXIAL	SD-BWI-TI-080 P.47
GRANDE RONDE	OVER/UNDERLYING	FLOWTOP	--	--	--	--	--	--	--	0.21	0.03	UNIAXIAL	SD-BWI-TI-080 P.47
GRANDE RONDE	OVER/UNDERLYING	ENTABLATURE	--	--	--	--	--	--	--	0.24	0.02	TRIAXIAL	SD-BWI-TI-080 P.47
GRANDE RONDE	OVER/UNDERLYING	ENTABLATURE	--	--	--	--	--	--	--	0.24	0.04	UNIAXIAL	SD-BWI-TI-080 P.47
GRANDE RONDE	OVER/UNDERLYING	COLONNADE	--	--	--	--	--	--	--	0.25	0.04	TRIAXIAL	SD-BWI-TI-080 P.47

SITE SUBSYSTEM
PARAMETER: POISSON'S RATIO

CHECKED BY: SD DATE: 10-29-84
QA BY: JH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	OVER/UNDERLYING	COLONNADE	--	--	--	--	--	--	--	0.25	0.04	UNIAXIAL	SD-BWI-TI-080 P.47
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	--	--	--	--	--	--	--	0.25	0.05	TRIAXIAL	SD-BWI-TI-080 P.47
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	--	--	--	--	--	-	--	0.25	0.05	TRIAXIAL	SD-BWI-TI-080 P.47
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	--	--	--	--	--	--	--	0.27	0.05	UNIAXIAL	SD-BWI-TI-080 P.47
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	--	--	--	--	--	--	--	0.24	0.05	TRIAXIAL	SD-BWI-TI-080 P.47
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	--	--	--	--	--	--	--	0.23	0.06	UNIAXIAL	SD-BWI-TI-080 P.47
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	--	--	--	--	--	0.15-0.32	0.24	0.04	DYNAMIC	SD-BWI-DP-041 P.47
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	--	--	--	--	--	0.15-0.32	0.27	0.05	STATIC	SD-BWI-DP-041 P.47
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	--	--	--	--	--	--	--	0.27	0.02	--	RHO-BW-SA-252P
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	--	--	--	--	0.27	0.05	--	RHO-BW-SA-252P
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	0.22-0.25	0.23	0.01	DYNAMIC	SD-BWI-TI-106 P.17
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	0.22-0.25	0.23	0.01	DYNAMIC	SD-BWI-DP-041 P.18
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	0.22-0.25	0.24	0.01	DYNAMIC	SD-BWI-DP-041 P.19
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	0.19-0.25	0.22	0.02	DYNAMIC	SD-BWI-DP-041 P.20

SITE SUBSYSTEM
PARAMETER: POISSON'S RATIO

CHECKED BY: SP DATE: 10-26-84
QA BY: TH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
SADDLE MOUNTAIN	POMONA	POMONA ENTABLATURE	—	—	—	—	—	—	—	0.27	0.03	TRIAXIAL	SD-BWI-TI-080 P.47
SADDLE MOUNTAIN	POMONA	POMONA ENTABLATURE	—	—	—	—	—	—	—	0.25	0.02	UNIAXIAL	SD-BWI-TI-080 P.47
SADDLE MOUNTAIN	POMONA	POMONA COLONNADE	—	—	—	—	—	—	—	0.25	0.02	TRIAXIAL	SD-BWI-TI-080 P.47
SADDLE MOUNTAIN	POMONA	POMONA COLONNADE	—	—	—	—	—	—	—	0.25	0.01	UNIAXIAL	SD-BWI-TI-080 P.47
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	—	—	—	—	—	—	0.22-0.24	0.23	0.01	STATIC	SD-BWI-TI-106 P.17
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	—	—	—	—	—	—	—	0.26	—	STATIC	SD-BWI-TI-106 P.18
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	—	—	—	—	—	—	—	0.22	—	STATIC	SD-BWI-TI-106 P.19
SADDLE MOUNTAIN	UMATILLA	UMATILLA COLONNADE	—	—	—	—	—	—	—	0.24	—	STATIC	SD-BWI-TI-106 P.20
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-1	—	—	—	—	—	0.22-0.30	0.255	0.03	DYMANIC	SD-BWI-TD-008 P.8
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-2	—	—	—	—	—	0.23-0.33	0.26	0.04	DYNAMIC	SD-BWI-TD-008 P.9
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-3	—	—	—	—	—	0.21-0.31	0.25	0.03	DYNAMIC	SD-BWI-DP-041 P.10
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-4	—	—	—	—	—	0.20-0.32	0.25	0.03	DYNAMIC	SD-BWI-TD-008 P.12

SITE SUBSYSTEM
PARAMETER: POISSON'S RATIO

CHECKED BY: SP DATE: 10-26-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD. DEV.	METHOD OR REFERENCE	SOURCE
SADDLE MOUNTAIN	POMONA	—	EXCLUSIVE OF RRL	—	—	—	—	—	0.20-0.32	0.26	0.01	DYNAMIC	SD-BWI-DP-041 P.47
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-5	—	—	—	—	—	0.18-0.33	0.25	0.04	DYNAMIC	SD-BWI-TD-008 P.14
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-6	—	—	—	—	—	0.21-0.26	0.24	0.01	DYNAMIC	SD-BWI-TD-008 P.15
SADDLE MOUNTAIN	POMONA	EXCLUDING UMTANUM	EXCLUSIVE OF RRL	—	—	—	—	—	0.21-0.27	0.24	0.04	STATIC	SD-BWI-DP-041 P.47
SADDLE MOUNTAIN	POMONA	—	EXCLUSIVE OF RRL	—	—	—	—	—	0.22-0.36	0.25	0.02	STATIC	SD-BWI-DP-041 P.47
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-1	—	—	—	—	—	0.23-0.28	0.25	0.01	STATIC	SD-BWI-TD-008 P.8
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-2	—	—	—	—	—	0.25-0.27	0.26	0.01	STATIC	SD-BWI-TD-008 P.9
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-3	—	—	—	—	—	0.24-0.31	0.265	0.02	STATIC	SD-BWI-TD-008 P.10
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-4	—	—	—	—	—	0.22-0.31	0.26	0.03	STATIC	SD-BWI-TD-008 P.12
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-5	—	—	—	—	—	0.20-0.30	0.25	0.03	STATIC	SD-BWI-TD-008 P.14
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-6	—	—	—	—	—	0.24-0.28	0.26	0.01	STATIC	SD-BWI-TD-008 P.15
SADDLE MOUNTAIN	POMONA	—	—	—	—	—	—	—	0.19-0.29	0.25	—	CORE ANAL	RHO-BWI-LD-11 P.23

SITE SUBSYSTEM
PARAMETER: COMPRESSIVE STRENGTH (MPa)

CHECKED BY: SP DATE: 10-26-84
QA BY: LA DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
--	--	UMTANUM & POMONA	--	--	--	0-69	2001	--	21-376	--	--	LABORATORY MEASUREMENT TRIAXIAL	NUREG/CR-2352
COLUMBIA RIVER	--	--	--	--	--	0	--	--	230-355	--	--	LABORATORY MEASUREMENT UNIAXIAL	NUREG/CR-2352
COLUMBIA RIVER	--	--	--	--	--	0	--	--	226-241	--	--	LABORATORY MEASUREMENT UNIAXIAL	NUREG/CR-2352
COLUMBIA RIVER	--	--	--	--	--	0	157-100	--	358-591	--	--	LABORATORY MEASUREMENT UNIAXIAL	NUREG/CR-2352
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	0-52	20-500	--	32-575	--	--	LABORATORY MEASUREMENT TRIAXIAL	NUREG/CR-2352
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	0-69	20-500	--	18-632	--	--	LABORATORY MEASUREMENT TRIAXIAL	NUREG/CR-2352
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	0-52	20-500	--	21-878	--	--	LABORATORY MEASUREMENT TRIAXIAL	NUREG/CR-2352

SITE SUBSYSTEM
PARAMETER: COMPRESSIVE STRENGTH (MPa)

CHECKED BY: SP DATE: 10-26-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	0-14	23-300	--	61-252	--	--	LABORATORY MEASUREMENT TRIAXIAL	NUREG/CR-2352
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWTOP	--	--	--	--	--	--	--	--	--	UNIAXIAL	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE VESICULAR	--	--	--	--	--	--	--	--	--	UNIAXIAL	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	--	--	--	--	--	--	--	382.40	--	UNIAXIAL	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE COLONNADE	--	--	--	--	--	--	--	171.49	--	UNIAXIAL	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	COHASSET FLOWTOP	--	--	--	--	--	--	18.70-97.60	62.08	19.10	UNIAXIAL	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSET VESICULAR	--	--	--	--	--	--	70.13-244.38	163.63	63.34	UNIAXIAL	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSET COLONNADE	--	--	--	--	--	--	214.06-355.16	288.30	38.31	UNIAXIAL	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	--	--	--	--	--	--	--	37.80	14.04	UNIAXIAL	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON VESICULAR	--	--	--	--	--	--	84.16-117.78	96.84	13.33	UNIAXIAL	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	--	--	--	--	--	--	176.08-404.49	330.12	48.01	UNIAXIAL	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON COLONNADE	--	--	--	--	--	--	99.58-107.83	103.71	5.83	UNIAXIAL	SD-BWI-DP-041 P.32

SITE SUBSYSTEM
PARAMETER: COMPRESSIVE STRENGTH (MPa)

CHECKED BY: SP DATE: 10-06-84
QA BY: ZH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	--	--	--	--	--	--	--	266	29	UNIAXIAL	RHO-BW-SA-252P
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	--	--	--	--	--	--	13.83-201.55	65.31	45.59	UNIAXIAL	SD-BWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM VESICULAR	--	--	--	--	--	--	--	--	--	UNIAXIAL	SD-BWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	--	--	--	--	--	--	207.11-468.40	352.97	63.56	UNIAXIAL	SD-BWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	--	--	--	--	--	--	336.38-404.38	385.70	27.42	UNIAXIAL	SD-BWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	0	20	--	81-369	212	106	TRIAXIAL	SD-BWI-TI-080 P.21
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	3.4	20	--	--	365	--	TRIAXIAL	SD-BWI-TI-080 P.21
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	6.9	20	--	--	277	--	TRIAXIAL	SD-BWI-TI-080 P.21
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	20.7	20	--	--	297	--	TRIAXIAL	SD-BWI-TI-080 P.21
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	34.5	20	--	357-671	461	90	TRIAXIAL	SD-BWI-TI-080 P.21
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	51.7	20	--	221-586	461	208	TRIAXIAL	SD-BWI-TI-080 P.21
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	--	--	0	--	--	81-369	212	106	UNCONFINED	SD-BWI-DP-041 P.48
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	--	--	34.5	--	--	357-671	420	90	CONFINED	SD-BWI-DP-041 P.48
GRANDE RONDE	SCHWANA	UMTANUM	--	--	--	--	--	--	--	212	106	UNIAXIAL	RHO-BW-SA-252P
GRANDE RONDE	SENTINEL BLUFFS	COHASSET ENTABLATURE	--	--	--	--	--	--	214.74-407.84	291.6	18.90	UNIAXIAL	SD-BWI-DP-041 P.30

SITE SUBSYSTEM
PARAMETER: COMPRESSIVE STRENGTH (MPa)

CHECKED BY: SP DATE: 10-04-84
QA BY: LH DATE: 10-24-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
HANFORD	--	--	--	--	--	0	--	--	193-400	--	--	LABORATORY MEASUREMENT UNIAXIAL	NUREG/CR-2352
HANFORD	--	--	--	--	--	0-34	20-500	--	10-365	--	--	LABORATORY MEASUREMENT TRIAXIAL	NUREG/CR-2352
SADDLE MOUNTAIN	POMONA	POMONA	--	--	--	0	--	--	3.7-378	--	--	LABORATORY MEASUREMENT UNIAXIAL	NUREG/CR-2352
SADDLE MOUNTAIN	POMONA	--	EXCLUSIVE OF RRL	--	--	0	--	--	266-416	356	42	UNCONFINED	SD-BWI-DP-041 P.48
SADDLE MOUNTAIN	POMONA	--	EXCLUSIVE OF RRL	--	--	13.8	--	--	434-525	490	35	CONFINED	SD-BWI-DP-041 P.48
SADDLE MOUNTAIN	POMONA	--	--	--	--	--	--	--	75-378	284	--	UNIAXIAL	RHO-BWI-LD-11 P.23
SADDLE MOUNTAIN	POMONA	--	--	--	--	--	--	--	141-379	272	--	TRIAXIAL	RHO-BWI-LD-11 P.23
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-1	--	--	0	--	--	130-296	216	54	CONFINED	SD-BWI-TD-008 P.8
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-2	--	--	0	--	--	156-296	228	43	CONFINED	SD-BWI-TD-008 P.9
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-3	--	--	0	--	--	183-363	275	61	CONFINED	SD-BWI-TD-008 P.10

SITE SUBSYSTEM
PARAMETER: COMPRESSIVE STRENGTH (MPa)

CHECKED BY: SP DATE: 10-26-84
QA BY: [illegible] DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD. DEV.	METHOD OR REFERENCE	SOURCE
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-4	--	--	0	--	--	89-369	203	88	CONFINED	SD-BWI-TD-008 P.12
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-5	--	--	0	--	--	67-331	172	88	CONFINED	SD-BWI-TD-008 P.14
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-6	--	--	0	--	--	63-378	219	132	CONFINED	SD-BWI-TD-008 P.15
SADDLE MOUNTAIN	POMONA	POMONA	--	--	--	0	20	--	266-416	356	42	TRIAXIAL	SD-BW-TI-080 P.21
SADDLE MOUNTAIN	POMONA	POMONA	--	--	--	3.4	20	--	365-441	408	28	TRIAXIAL	SD-BWI-TI-080 P.21
SADDLE MOUNTAIN	POMONA	POMONA	--	--	--	6.9	20	--	303-479	385	66	TRIAXIAL	SD-BW-TI-080 P.21
SADDLE MOUNTAIN	POMONA	POMONA	--	--	--	13.8	20	--	434-525	490	35	TRIAXIAL	SD-BW-TI-080 P.21
SADDLE MOUNTAIN	UMATILLA	UMATILLA COLONNADE	--	--	--	0	--	--	218-42-285.92	261.43	23.54	ASTM UNIAXIAL	SD-BWI-TI-106 P.17
SADDLE MOUNTAIN	UMATILLA	--	--	--	--	0	--	--	230.71-276.62	253.42	15.89	ASTM UNIAXIAL	SD-BWI-TI-106 P.17
SADDLE MOUNTAIN	UMATILLA	UMATILLA COLONNADE	--	--	--	0	--	--	204.68-258.97	236.29	17.40	ASTM UNIAXIAL	SD-BWI-TI-106 P.19
SADDLE MOUNTAIN	UMATILLA	UMATILLA COLONNADE	--	--	--	0	--	--	191.78-287.86	248.56	28.89	ASTM UNIAXIAL	SD-BWI-TI-106 P.20
SADDLE MOUNTAIN	POMONA	--	--	--	--	--	--	--	75-378	284	--	UNIAXIAL	RHO-BWI-LD-11 P.23

SITE SUBSYSTEM
PARAMETER: COMPRESSIVE STRENGTH (MPa)

CHECKED BY: SP DATE: 10-06-89
QA BY: LH DATE: 10-27-89

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
SADDLE MOUNTAIN	POMONA	—	—	—	—	—	—	—	141-379	272	—	TRIAXIAL	RHO-BWI-LD-11 P.23
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-1	—	—	0	—	—	130-296	216	54	CONFINED	SD-BWI-TD-008 P.8
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-2	—	—	0	—	—	156-296	228	63	CONFINED	SD-BWI-TD-008 P.9
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-3	—	—	0	—	—	183-363	275	61	CONFINED	SD-BWI-TD-008 P.10
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-4	—	—	0	—	—	89-369	203	88	CONFINED	SD-BWI-TD-008 P.12
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-5	—	—	0	—	—	67-331	172	88	CONFINED	SD-BWI-TD-008 P.14
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-6	—	—	0	—	—	63-378	219	132	CONFINED	SD-BWI-TD-008 P.15
SADDLE MOUNTAIN	POMONA	POMONA	—	—	—	0	20	—	266-416	336	42	TRIAXIAL	SD-BW-TI-080 P.21
SADDLE MOUNTAIN	POMONA	POMONA	—	—	—	3.4	20	—	365-441	408	28	TRIAXIAL	SD-BW-TI-080 P.21
SADDLE MOUNTAIN	POMONA	POMONA	—	—	—	6.9	20	—	303-479	385	66	TRIAXIAL	SD-BW-TI-080 P.21
SADDLE MOUNTAIN	POMONA	POMONA	—	—	—	13.8	20	—	434-525	490	35	TRIAXIAL	SD-BW-TI-080 P.21
SADDLE MOUNTAIN	UMATILLA	UMATILLA COLONNADE	—	—	—	0	—	—	218.42-285.92	261.43	23.54	ASTM UNIAXIAL	SD-BWI-TI-106 P.17

SITE SUBSYSTEM
PARAMETER: COMPRESSIVE STRENGTH (MPa)

CHECKED BY: SP DATE: 10-06-84
QA BY: [illegible] DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
SADDLE MOUNTAIN	UMATILLA	—	—	—	—	0	—	—	230.71-276.62	255.42	15.89	ASTM UNIAXIAL	SD-BWI-TI-106 P.18
SADDLE MOUNTAIN	UMATILLA	—	—	—	—	0	—	—	204.68-258.97	236.29	17.40	ASTM UNIAXIAL	SD-BWI-TI-106 P.19
SADDLE MOUNTAIN	UMATILLA	UMATILLA COLONNADE	—	—	—	0	—	—	191.78-287.86	248.56	28.89	ASTM UNIAXIAL	SD-BWI-TI-106 P.20
SADDLE MOUNTAINS	POMONA	POMONA	—	—	—	0-14	—	—	245-379	—	—	LABORATORY MEASUREMENT TRIAXIAL	NUREG/CR-2352
SADDLE MOUNTAINS	POMONA	POMONA	—	—	—	0-14	22-300	—	66-503	—	—	LABORATORY MEASUREMENT TRIAXIAL	NUREG/CR-2352
SADDLE MOUNTAINS	POMONA	POMONA	—	—	—	0-14	23-300	—	66-525	—	—	LABORATORY MEASUREMENT TRIAXIAL	NUREG/CR-2352

SITE SUBSYSTEM
PARAMETER: TENSILE STRENGTH (MPa)

CHECKED BY: SP DATE: 10-26-84
QA BY: [illegible] DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
COLUMBIA RIVER	--	--	--	--	--	--	--	--	11.10-14.48	--	--	LABORATORY MEASUREMENT	NUREG/CR-2352
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	--	--	--	--	--	--	2.7-11.0	6.5	4.2	BRAZILIAN SCHMIDT ET. AL. 1980	SD-BWI-TI-080 P.35
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	--	--	--	--	--	--	1.4-23.7	11.9	6.9	BRAZILIAN SCHMIDT ET. AL. 1980	SD-BWI-TI-080 P.35
GRANDE RONDE	--	COLONNADE	--	--	--	--	--	--	5.5-28.9	15.0	6.0	BRAZILIAN SCHMIDT ET. AL. 1980	SD-BWI-TI-080 P.35
GRANDE RONDE	--	ENTABLATURE	--	--	--	--	--	--	8.0-24.0	17.2	5.1	BRAZILIAN SCHMIDT ET. AL. 1980	SD-BWI-TI-080 P.35
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DC-2	N46-34-17 W119-31-4	--	--	--	--	1.4-23.7	14.3	8.6	BRAZILIAN SCHMIDT ET. AL. 1980	SD-BWI-TI-080 P.35
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DH-4	N46-45-33 W119-21-42	--	--	--	--	4.2-20.1	10.3	5.9	BRAZILIAN SCHMIDT ET. AL. 1980	SD-BWI-TI-080 P.35
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	DH-5	N46-45-17 W119-49-43	--	--	--	--	6.3-16.1	10.1	5.2	BRAZILIAN SCHMIDT ET. AL. 1980	SD-BWI-TI-080 P.35
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	DDH-3	N46-21-19 W119-23-27	--	--	--	--	2.7-11.0	6.5	4.2	BRAZILIAN SCHMIDT ET. AL. 1980	SD-BWI-TI-080 P.35

SITE SUBSYSTEM
PARAMETER: TENSILE STRENGTH (MPa)

CHECKED BY: SP DATE: 10-16-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	--	--	--	--	--	1.4-23.7	11.9	6.9	BRAZILIAN	SD-BWI-DP-041 P.47
GRANDE RONDE	--	EXCLUDING UMTANUM	EXCLUSIVE OF RRL	--	--	--	--	--	8.0-24.0	17.2	5.1	BRAZILIAN	SD-BWI-DP-041 P.47
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOWTOP	--	--	--	--	--	--	--	--	--	--	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE VESICULAR	--	--	--	--	--	--	--	--	--	--	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	--	--	--	--	--	--	--	9.08	--	--	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE COLONNADE	--	--	--	--	--	--	9.72-11.63	10.41	1.06	--	SD-BWI-DP-041 P.28
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOWTOP	--	--	--	--	--	--	2.65-12.10	6.53	1.82	--	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT VESICULAR	--	--	--	--	--	--	6.25-14.43	9.99	1.99	--	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT ENTABLATURE	--	--	--	--	--	--	8.73-19.57	14.54	3.32	--	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE	--	--	--	--	--	--	8.27-20.62	15.8	2.36	--	SD-BWI-DP-041 P.30
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	--	--	--	--	--	--	2.70-6.34	4.39	1.20	--	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON VESICULAR	--	--	--	--	--	--	7.16-26.82	11.77	5.49	--	SD-BWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	--	--	--	--	--	--	10.08-26.50	19.35	4.01	--	SD-BWI-DP-041 P.32

SITE SUBSYSTEM
PARAMETER: TENSILE STRENGTH (MPa)

CHECKED BY: SP DATE: 10-26-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON COLONNADE	—	—	—	—	—	—	9.40-12.88	11.59	1.91	—	SD-SWI-DP-041 P.32
GRANDE RONDE	SENTINEL BLUFFS	MIDDLE SENTINEL BLUFFS	—	—	—	—	—	—	—	14.7	3.9	BRAZILIAN	RHO-SW-SA-252P
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	—	—	—	—	—	—	2.18-13.73	6.09	2.99	—	SD-SWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM VESICULAR	—	—	—	—	—	—	—	—	—	—	SD-SWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	—	—	—	—	—	—	7.52-16.67	12.39	2.70	—	SD-SWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	—	—	—	—	—	—	12.70-20.89	19.24	2.85	—	SD-SWI-DP-041 P.34
GRANDE RONDE	SCHWANA	UMTANUM	—	—	—	—	—	—	—	11.9	6.9	BRAZILIAN	RHO-SW-SA-252P
HANFORD	--	--	—	—	—	—	—	—	12.40-24.00	—	—	LABORATORY MEASUREMENT	NUREG/CR-2352
HANFORD	--	--	—	—	—	—	—	—	8.34-20.83	—	—	LABORATORY MEASUREMENT	NUREG/CR-2352
SADDLE MTN	POMONA	POMONA COLONNADE	—	—	—	—	—	—	14.2-22.5	17.6	3.0	BRAZILIAN SCHMIDT ET. AL. 1980	SD-SWI-TI-080 P.35
SADDLE MTN	POMONA	POMONA ENTABLATURE	—	—	—	—	—	—	9.4-28.5	19.4	3.8	BRAZILIAN SCHMIDT ET. AL. 1980	SD-SWI-TI-080 P.35
SADDLE MTN	POMONA	—	EXCLUSIVE OF RRL	—	—	—	—	—	9.4-28.5	19.4	3.8	BRAZILIAN	SD-SWI-DP-041 P.47

SITE SUBSYSTEM
PARAMETER: TENSILE STRENGTH (MPa)

CHECKED BY: SP DATE: 10-04-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
SADDLE MTN	POMONA	LOWER POMONA	2-PC-1	—	—	—	—	—	8.55-11.84	10.80	1.84	BRAZILIAN	SD-BWI-TD-008 P.8
SADDLE MTN	POMONA	LOWER POMONA	2-PC-2	—	—	—	—	—	8.79-15.33	12.73	2.50	BRAZILIAN	SD-BWI-TD-008 P.9
SADDLE MTN	POMONA	LOWER POMONA	2-PC-3	—	—	—	—	—	11.60-17.29	15.30	2.66	BRAZILIAN	SD-BWI-TD-008 P.10
SADDLE MTN	POMONA	LOWER POMONA	2-PC-4	—	—	—	—	—	6.03-14.66	11.34	3.42	BRAZILIAN	SD-BWI-TD-008 P.12
SADDLE MTN	POMONA	LOWER POMONA	2-PC-5	—	—	—	—	—	10.80-18.38	14.19	2.63	BRAZILIAN	SD-BWI-TD-008 P.14
SADDLE MTN	POMONA	LOWER POMONA	2-PC-6	—	—	—	—	—	8.67-16.95	12.67	2.94	BRAZILIAN	SD-BWI-TD-008 P.15
SADDLE MTN	POMONA	—	—	—	—	—	—	—	15.0-28.5	21.4	—	BRAZILIAN	RHO-BWI-LD-11 P.23
SADDLE MTN.	POMONA	POMONA	—	—	—	—	—	—	0.43-28.69	—	—	LABORATORY MEASUREMENT	NUREG/CR-2352
SADDLE MTN.	POMONA	POMONA	—	—	—	—	—	—	15.00-28.50	—	—	LABORATORY MEASUREMENT	NUREG/CR-2352
SADDLE MTN.	POMONA	POMONA	—	—	—	—	—	—	13.44-25.30	—	—	LABORATORY MEASUREMENT	NUREG/CR-2352
SADDLE MTN.	POMONA	POMONA	—	—	—	—	—	—	17.03-21.72	—	—	LABORATORY MEASUREMENT	NUREG/CR-2352
SADDLE MTN.	POMONA	POMONA	—	—	—	—	—	—	0.55-9.10	—	—	LABORATORY MEASUREMENT	NUREG/CR-2352

SITE SUBSYSTEM
PARAMETER: COMPRESSIONAL WAVE VELOCITY (m/s)

CHECKED BY: SP DATE: 10-06-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	--	--	--	--	--	5360-6430	5860	310	--	SD-BWI-DP-041 P. 47
SADDLE MOUNTAIN	PAMONA	--	EXCLUSIVE OF RRL	--	--	--	--	--	5560-6290	5930	160	--	SD-BWI-DP-041 P. 47
SADDLE MOUNTAIN	PAMONA	LOWER PAMONA	2-PC-1	--	--	--	--	--	5553-6095	5882	164	DYNAMIC	SD-BWI-TD-008 P. 8
SADDLE MOUNTAIN	PAMONA	LOWER PAMONA	2-PC-2	--	--	--	--	--	5871-6265	5992	127	DYNAMIC	SD-BWI-TD-008 P. 9
SADDLE MOUNTAIN	PAMONA	LOWER PAMONA	2-PC-3	--	--	--	--	--	5677-6244	5944	151	DYNAMIC	SD-BWI-TD-008 P. 10
SADDLE MOUNTAIN	PAMONA	LOWER PAMONA	2-PC-4	--	--	--	--	--	5176-6157	5877	215	DYNAMIC	SD-BWI-TD-008 P. 12
SADDLE MOUNTAIN	PAMONA	LOWER PAMONA	2-PC-5	--	--	--	--	--	5585-6374	5913	160	DYNAMIC	SD-BWI-TD-008 P. 14
SADDLE MOUNTAIN	PAMONA	LOWER PAMONA	2-PC-6	--	--	--	--	--	5650-6062	5892	112	DYNAMIC	SD-BWI-TD-008 P. 15
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	4912-5343	5123	147	ASTM	SD-BWI-TI-106 P. 17
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	4991-5258	5148	94	ASTM	SD-BWI-TI-106 P. 18
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	5043-5259	5135	84	ASTM	SD-BWI-TI-106 P. 19
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	5010-5300	5151	121	ASTM	SD-BWI-TI-106 P. 20

SITE SUBSYSTEM
PARAMETER: SHEAR WAVE VELOCITY (m/s)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	PARAMETER RANGE	PARAMETER MEAN	PARAMETER STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	--	--	--	--	--	3080-3900	3420	180	--	SD-BWI-DP-041 P. 47
SADDLE MOUNTAIN	POMONA	--	EXCLUSIVE OF RRL	--	--	--	--	--	3070-3510	3390	90	--	SD-BWI-DP-041 P. 47
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-1	--	--	--	--	--	3207-3602	3389	116	DYNAMIC	SD-BWI-TD-008 P. 8
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-2	--	--	--	--	--	3064-3632	3388	184	DYNAMIC	SD-BWI-TD-008 P. 9
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-3	--	--	--	--	--	3196-3613	3434	113	DYNAMIC	SD-BWI-TD-008 P. 10
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-4	--	--	--	--	--	3038-3573	3420	147	DYNAMIC	SD-BWI-TD-008 P. 12
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-5	--	--	--	--	--	2995-3533	3399	157	DYNAMIC	SD-BWI-TD-008 P. 14
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-6	--	--	--	--	--	3326-3589	3442	69	DYNAMIC	SD-BWI-TD-008 P. 15
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	2947-??	??	??	ASTM	SD-BWI-TI-106 P. 17
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	2985-3125	3048	55	ASTM	SD-BWI-TI-106 P. 18
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	2962-3106	3029	53	ASTM	SD-BWI-TI-106 P. 19
SADDLE MOUNTAIN	UMATILA	UMATILA COLONNADE	--	--	--	--	--	--	2987-3119	3062	57	ASTM	SD-BWI-TI-106 P. 20

SITE SUBSYSTEM
PARAMETER: TOTAL POROSITY (%)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-87

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE ENTABLATURE	--	--	--	--	--	--	1.0-2.8	1.9	0.7	--	SD-BWI-DP-041 P. 29
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE COLONNADE	--	--	--	--	--	--	1.0-5.6	3.1	2.0	--	SD-BWI-DP-041 P. 29
GRANDE RONDE	SENTINEL BLUFFS	COHASSET FLOWTOP	--	--	--	--	--	--	16.8-29.5	23.24	5.32	--	SD-BWI-DP-041 P. 31
GRANDE RONDE	SENTINEL BLUFFS	COHASSET VESICULAR	--	--	--	--	--	--	11.3-14.8	12.02	1.50	--	SD-BWI-DP-041 P. 31
GRANDE RONDE	SENTINEL BLUFFS	COHASSET ENTABLATURE	--	--	--	--	--	--	1.4-5.1	2.85	0.79	--	SD-BWI-DP-041 P. 31
GRANDE RONDE	SENTINEL BLUFFS	COHASSET COLONNADE	--	--	--	--	--	--	1.7-10.1	4.37	1.47	--	SD-BWI-DP-041 P. 31
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOWTOP	--	--	--	--	--	--	22.5-30.5	27.70	4.5	--	SD-BWI-DP-041 P. 33
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON VESICULAR	--	--	--	--	--	--	--	6.60	--	--	SD-BWI-DP-041 P. 33
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON ENTABLATURE	--	--	--	--	--	--	1.0-5.8	2.49	1.70	--	SD-BWI-DP-041 P. 33
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON COLONNADE	--	--	--	--	--	--	--	13.00	--	--	SD-BWI-DP-041 P. 33
GRANDE RONDE	SCHWANA	UMTANUM FLOWTOP	--	--	--	--	--	--	12.6-35.8	22.51	6.17	--	SD-BWI-DP-041 P. 35
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	--	--	--	--	--	--	0.4-2.4	1.57	0.60	--	SD-BWI-DP-041 P. 35
GRANDE RONDE	SCHWANA	UMTANUM COLONNADE	--	--	--	--	--	--	1.0-3.2	2.29	0.587	--	SD-BWI-DP-041 P. 35
GRANDE RONDE	SCHWANA	UMTANUM	EXCLUSIVE OF RRL	--	--	--	--	--	0.4-9.7	3.6	2.4	--	SD-BWI-DP-041 P. 47

SITE SUBSYSTEM
PARAMETER: TOTAL POROSITY (%)

CHECKED BY: SD DATE: 10-02-84
QA BY: LH DATE: 10-24-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	PRESSURE (MPa)	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD. DEV.	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	EXCLUDING UMTANUM	EXCLUSIVE OF RRL	--	--	--	--	--	7.0-13.7	10.3	2.4	--	SD-BWI-DP-041 P. 47
SADDLE MOUNTAIN	POMONA	--	EXCLUSIVE OF RRL	--	--	--	--	--	1.0-8.1	4.8	2.0	--	SD-BWI-DP-041 P. 47
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-1	--	--	--	--	--	--	6.11	3.34	ASTM	SD-BWI-TD-008 P. 8
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-2	--	--	--	--	--	--	5.97	2.16	ASTM	SD-BWI-TD-008 P. 9
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-3	--	--	--	--	5.05	--	--	--	ASTM	SD-BWI-TD-008 P. 10
SADDLE MOUNTAIN	POMONA	LOWER POMONA	2-PC-5	--	--	--	--	2.42	--	--	--	ASTM	SD-BWI-TD-008 P. 13

SITE SUBSYSTEM
PARAMETER: VERTICAL STRESS (MPa)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-31-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1166	29.3	--	--	--	HYDRAULIC FRACTURING	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1160	--	--	37.5	1.1	HYDRAULIC FRACTURING	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-04 W119-32-28	1024	--	--	26.2	--	HYDRAULIC FRACTURING	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	--	N46-28-06 W119-32-26	1002-1042	--	--	26.2	0.3	ROCK DENSITY	RHO-BW SA-268AP
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	--	--	--	23.11	0.076	HYDRAULIC FRACTURING	SD-BWI DP-041 P. 26
GRANDE RONDE	SENTINEL BLUFFS	NO. 7	RRL-2	N46-32-55 W119-39-38	--	--	--	26.54	--	HYDRAULIC FRACTURING	SD-BWI DP-041 P. 26
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	--	--	--	29.27	0.11	HYDRAULIC FRACTURING	SD-BWI DP-041 P. 26
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	--	--	--	26.19	0.41	HYDRAULIC FRACTURING	SD-BWI DP-041 P. 45
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1002	27.6	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1013	27.6	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1021	27.6	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1031	27.6	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1036	27.6	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75

SITE SUBSYSTEM
PARAMETER: VERTICAL STRESS (MPa)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-27-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1042	27.6	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	924	23.1	--	--	--	HYDRAULIC FRACTURING	RHO-BW ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	928	23.2	--	--	--	HYDRAULIC FRACTURING	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1160	29.2	--	--	--	HYDRAULIC FRACTURING	RHO-BW ST-28P
WANAPUM	ROZA	ROZA	DB-15	N46-34-10 W119-29-31	--	--	--	8.30	--	HYDRAULIC FRACTURING	SD-BWI DP-041 P. 45
WANAPUM	ROZA	ROZA	DB-15	N46-34-10 W119-29-31	345	8.3	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75

SITE SUBSYSTEM
PARAMETER: RATIO MAXIMUM HORIZONTAL STRESS TO VERTICAL STRESS

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	--	--	--	2.50	0.32	HYDRAULIC FRACTURING	SD-BWI TP-041, P. 26
GRANDE RONDE	SENTINEL BLUFFS	NO. 7	RRL-2	N46-32-55 W119-39-38	--	--	--	2.19	--	HYDRAULIC FRACTURING	SD-BWI DP-041, P. 26
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	--	--	--	2.21	0.05	HYDRAULIC FRACTURING	SD-BWI DP-041, P. 26
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-04 W119-32-28	--	--	--	2.34	0.24	HYDRAULIC FRACTURING	SD-BWI DP-041, P. 45
WANAPUM	ROZA	ROZA	DB-15	N46-34-10 W119-29-31	--	--	--	2.0	--	HYDRAULIC FRACTURING	SD-BWI DP-041, P. 45

SITE SUBSYSTEM
PARAMETER: RATIO OF MAXIMUM TO MINIMUM HORIZONTAL STRESS

CHECKED BY: SP DATE: 10-02-84
QA BY: [illegible] DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	--	--	--	1.76	0.04	HYDRAULIC FRACTURING	SD-BWI DP-041, P. 26
GRANDE RONDE	SENTINEL BLUFFS	NO. 7	RRL-2	N46-32-55 W119-39-38	--	--	--	1.73	--	HYDRAULIC FRACTURING	SD-BWI DP-041, P. 26
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	--	--	--	1.77	0.04	HYDRAULIC FRACTURING	SD-BWI DP-041, P. 26
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-04 W119-32-28	--	--	--	1.76	0.08	HYDRAULIC FRACTURING	SD-BWI DP-041, P. 45
WANAPUM	ROZA	ROZA	DB-15	N46-34-10 W119-29-31	--	--	--	1.4	--	HYDRAULIC FRACTURING	SD-BWI DP-041, P. 45

SITE SUBSYSTEM
PARAMETER: MAXIMUM HORIZONTAL STRESS (MPa)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-30-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-04 W119-32-28	1024	--	--	61.2	--	HYDRAULIC FRACTURING	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	--	N46-28-06 W119-32-36	1002-1042	--	--	61.2	6.7	HYDRAULIC FRACTURING	RHO-BW SA-26BAP
GRANDE RONDE	SENTINEL BLUFFS	COHASSET	RRL-2	N46-32-55 W119-39-38	--	--	--	57.94	7.67	HYDRAULIC FRACTURING	SD-BWI TD-006, P. 10
GRANDE RONDE	SENTINEL BLUFFS	NO. 7	RRL-2	N46-32-55 W119-39-38	--	--	--	58.07	--	HYDRAULIC FRACTURING	SD-BWI TD-006, P. 10
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	--	--	--	64.56	1.03	HYDRAULIC FRACTURING	SD-BWI TD-006, P. 10
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	--	--	--	61.23	6.76	HYDRAULIC FRACTURING	SD-BWI TD-006, P. 15
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1002	53.8	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080, P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1013	56.9	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080, P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1021	50.0	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080, P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1031	55.2	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080, P. 75

SITE SUBSYSTEM
PARAMETER: MAXIMUM HORIZONTAL STRESS (MPa)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1036	68.3	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080, P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1042	59.3	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080, P. 75
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	924	--	--	52.5	2.7	HYDRAULIC FRACTURING	RHO-BWI-ST 28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	928	--	--	63.4	1.5	HYDRAULIC FRACTURING	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1160	--	--	65.3	4.1	HYDRAULIC FRACTURING	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1166	--	--	63.8	4.4	HYDRAULIC FRACTURING	RHO-BW ST-28P
WANAPUM	ROZA	ROZA	DB-15	N46-34-10 W119-29-31	345	16.5	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080, P. 75

SITE SUBSYSTEM
PARAMETER: MINIMUM HORIZONTAL STRESS (MPa)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SCHWANA	UMTANUM	--	N46-28-06 W119-29-26	1002-1042	--	--	34.7	2.8	HYDRAULIC FRACTURING	RHO-BW SA-268AP
GRANDE RONDE	SCHWANA	UMTANUM	--	N46-28-06 W119-32-26	1002-1042	--	--	61.2	6.7	HYDRAULIC FRACTURING	RHO-BW SA-268AP
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1002	32.4	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1013	32.4	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1021	32.4	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1031	33.1	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1036	38.6	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	1042	34.5	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080 P. 75
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	--	--	--	32.98	3.77	HYDRAULIC FRACTURING	SD-BWI TD-006 P. 10
GRANDE RONDE	SENTINEL BLUFFS	NO. 7	RRL-2	N46-32-55 W119-39-38	--	--	--	33.86	--	HYDRAULIC FRACTURING	SD-BWI TD-006 P. 10
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	--	--	--	36.49	1.41	HYDRAULIC FRACTURING	SD-BWI TD-006 P. 10
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	--	--	--	34.74	2.72	HYDRAULIC FRACTURING	SD-BWI TD-006 P. 15
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	924	--	--	30.3	0.7	HYDRAULIC FRACTURING	RHO-BW ST-28P

SITE SUBSYSTEM
PARAMETER: MINIMUM HORIZONTAL STRESS (MPa)

CHECKED BY: SD DATE: 10-09-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	928	--	--	35.6	0.7	HYDRAULIC FRACTURING	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1166	--	--	35.5	1.1	HYDRAULIC FRACTURING	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-4 W119-32-28	--	--	--	34.7	--	HYDRAULIC FRACTURING	RHO-BW ST-28P
WANAPUM	ROZA	ROZA	DB-15	N46-34-10 W119-29-31	345	11.7	--	--	--	HYDRAULIC FRACTURING	SD-BWI TI-080, P. 75

SITE SUBSYSTEM
PARAMETER: FRACTURE ORIENTATION (deg.)

CHECKED BY: SP DATE: 10-23-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	--	--	--	N3W	17	ORIENTED IMPRESSION PACKER	SD-BWI DP-041, P. 26
GRANDE RONDE	SENTINEL BLUFFS	NO. 7	RRL-2	N46-32-55 W119-39-38	--	N8W	--	--	--	ORIENTED IMPRESSION PACKER	SD-BWI DP-041, P. 26
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	--	--	--	N0E	9	ORIENTED IMPRESSION PACKER	SD-BWI DP-041, P. 26
GRANDE RONDE	SCHWANA	UMTANUM	DC-12	N46-28-04 W119-32-38	--	--	--	N23E	21	ORIENTED IMPRESSION PACKER	SD-BWI DP-041, P. 45
WANAPUM	ROZA	ROZA	DB-15	N46-34-10 W119-29-31	--	N20E	--	--	--	ORIENTED IMPRESSION PACKER	SD-BWI DP-041, P. 45

SITE SUBSYSTEM
PARAMETER: FRACTURE DENSITY (fractures/m)

CHECKED BY: SD DATE: 10-27-84
QA BY: TH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	--	SENTINEL GAP	0	--	2-6	4	--	SURFACE OUTCROP OBSERV.	RHO-BW ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	--	SENTINEL GAP	0	--	12-24	18	--	SURFACE OUTCROP OBSERV.	RHO-BW ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON	--	SENTINEL GAP	0	--	7-21	14	--	SURFACE OUTCROP OBSERV.	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	--	EMERSON NIPPLE	0	--	11-29	20	--	SURFACE OUTCROP OBSERV.	RHO-BW ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DH-5	N46-45-17 W119-49-43	--	--	2-25	11.8	--	CORE EXAM.	RHO-BW ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	912-992	--	0-27	6.5	--	CORE EXAM.	RHO-BW ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON	DH-5	N46-45-17 W119-49-43	--	--	1-17	8.9	--	CORE EXAM.	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	1099-1170	--	0-18	8.6	--	CORE EXAM.	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	DB-15	N46-34-10 W119-29-31	457	--	3.3-4.9	--	--	--	RHO-BWI-8A 183A

SITE SUBSYSTEM
PARAMETER: FRACTURE APERTURE (mm)

CHECKED BY: SP DATE: 10-02-84
QA BY: [illegible] DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	RRL-2	N46-32-55 W119-39-38	--	--	0.07-0.29	0.18	--	CORE EXAM. WITH HAND LENS	RHO-BW ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	--	--	0.01-0.45	0.23	--	CORE EXAM. WITH HAND LENS	RHO-BW ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON	RRL-2	N46-32-55 W119-39-38	--	--	0-0.61	0.26	--	CORE EXAM. WITH HAND LENS	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	--	--	0.07-0.21	0.14	--	CORE EXAM. WITH HAND LENS	RHO-BW ST-28P
GRANDE RONDE	SCHWANA	UMTANUM	RRL-2	N46-32-55 W119-39-38	--	--	0-0.27	0.13	--	CORE EXAM. WITH MICROSCOPE	RHO-BW ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-2	N46-32-55 W119-39-38	--	--	0-0.26	0.13	--	CORE EXAM. WITH MICROSCOPE	RHO-BW ST-28P

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-27-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Ac	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	50-200	100	--	--	NURE G/CR - 2352
Ac	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	50-200	100	--	--	NURE G/CR - 2352
Ac	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	190-251000	500	--	--	NURE G/CR - 2352
Am	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	340	--	--	--	--	SD-BWI-DP-001
Am	--	--	SECONDARY MINERALS	--	--	O	--	--	1000	--	--	--	--	SD-BWI-DP-001
Am	--	--	INTERBED MATERIALS	--	--	O	--	--	10000	--	--	--	--	SD-BWI-DP-001
Am	--	--	INTERBED MATERIALS	--	--	R	--	--	10000	--	--	--	--	SD-BWI-DP-001
Am	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	O	8.5-9.0	SYN. GRANDE RONDE	--	400-700	--	--	BATCH	RHO-BW-ST-35P
Am	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	O	8.5-9.0	SYN. GRANDE RONDE	--	1000-3000	--	--	BATCH	RHO-BW-ST-35P

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Am	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	O	8.5-9.0	SYN. GRANDE RONDE	--	4000-10000	--	--	BATCH	RHO-BW-ST-35P
Am	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	50-200	100	--	--	NURE G/CR-2352
Am	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	50-200	100	--	--	NURE G/CR-2352
Am	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	190-251000	500	--	--	NURE G/CR-2352
Am	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	O	--	GR-2	--	400-700	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Am	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	O	--	GR-2	--	1000-3000	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Am	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	O	--	GR-2	--	4000-10000	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Am241	SADDLE MOUNTAIN	POMONA	--	23	2.09E-10	O	8.0	GR-1	--	--	1355	152	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Am241	SADDLE MOUNTAIN	POMONA	--	60	2.09E-10	O	8.0	GR-1	--	--	1489	350	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: JH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Am241	HANFORD SEDIMENT	--	--	--	--	--	--	--	--	200-9700	--	--	--	RHO-BWI-LD-43 P.20
Am241	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	--	--	--	8.8	SYN. PATERSON WA	--	--	231	18	BATCH	RHO-ST-4
Am241	GRANDE RONDE	SCHWANA	UMTANUM	23	2.09E-10	0	8.0	GR-1	--	--	227	103	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Am241	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	2.09E-10	0	8.0	GR-1	--	--	622	180	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Am241	SADDLE MOUNTAIN	POMONA	--	23	2.09E-10	0	8.0	GR-1	--	--	696	93	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Am241	SADDLE MOUNTAIN	POMONA	--	60	2.09E-10	0	8.0	GR-1	--	--	717	3	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Am241	SADDLE MOUNTAIN	POMONA	--	60	2.09E-10	0	8.0	GR-1	--	--	400	245	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Am241	GRANDE RONDE	SCHWANA	UMTANUM	60	2.09E-10	0	8.0	GR-1	--	--	236	98	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Am241	GRANDE RONDE	SCHWANA	UMTANUM	150	2.31E-9	O	8.0	GR-1	--	--	>10000	--	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.11
Am241	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	340	230-600	--	--	BEST ESTIMATE	RHO-BWI-LD-48 P.11
Am241	--	--	BASALT SECONDARY MINERALIZATION	--	2.09E-10	O	--	--	--	--	1489	350	SALTER, ET.AL. 1981B	SD-BWI-TI-072 P.7
Cm	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	--	--	50	--	--	SD-BWI-DP-001
Cm	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	50-200	100	--	--	NURE G/DR - 2352
Cm	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	50-200	100	--	--	NURE G/CR - 2352
Cm	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	190-251000	500	--	--	NURE G/CR - 2352
Cr	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	100-1000	300	--	--	NURE G/CR - 2352

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SD DATE: 10-19-84
QA BY: JH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs	GRANDE RONDE	SCHWANA UMTANUM		--	--	O	--	--	500	--	--	--	--	SD-BWI-DP-001
Cs	GRANDE RONDE	SCHWANA UMTANUM		--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001
Cs	--	--	SECONDARY MINERALS	--	--	O	--	--	5000	--	--	--	--	SD-BWI-DP-001
Cs	--	--	SECONDARY MINERALS	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001
Cs	--	--	INTERBED MATERIALS	--	--	O	--	--	2200	--	--	--	--	SD-BWI-DP-001
Cs	--	--	INTERBED MATERIALS	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001
Cs	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	100-1000	300	--	--	NURE G/CR-2352
Cs	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	550-225000	2000	--	--	NURE G/CR-2352
Cs	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	O	8.6-9.0	SYN. GRANDE RONDE	--	500-1600	--	--	BATCH	RHO-BW-ST-35P

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SD DATE: 10-02-84
QA BY: LH DATE: 10-24-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	0	8.6-9.0	SYN. GRANDE RONDE	--	200-1400	--	--	BATCH	RHO-BW-ST-35P
Cs	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	0	8.6-9.0	SYN. GRANDE RONDE	--	100-700	--	--	BATCH	RHO-BW-ST-35P
Cs	GRANDE RONDE	SCHWANA	UMTANUM	23	--	0	8.15	SYNTHETIC	--	--	1200	300	BATCH 31 DAYS	RHO-BWI-ST-7
Cs	GRANDE RONDE	SCHWANA	UMTANUM	23	--	0	8.15	SYNTHETIC	--	--	1700	30	BATCH 63 DAYS	RHO-BWI-ST-7
Cs	GRANDE RONDE	SCHWANA	UMTANUM	60	--	0	8.9	SYNTHETIC	--	--	209	5	BATCH 11 DAYS	RHO-BWI-ST-7
Cs	GRANDE RONDE	SCHWANA	UMTANUM	60	--	0	8.9	SYNTHETIC	--	--	550	50	BATCH 59 DAYS	RHO-BWI-ST-7
Cs	GRANDE RONDE	SCHWANA	UMTANUM	150	--	0	8.9	SYNTHETIC	73	--	--	--	BATCH 14 DAYS	RHO-BWI-ST-7
Cs	GRANDE RONDE	SCHWANA	UMTANUM	150	--	0	8.9	SYNTHETIC	75	--	--	--	BATCH 48 DAYS	RHO-BWI-ST-7
Cs	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	0	8.5	SYNTHETIC	70000	--	--	--	BATCH 67 DAYS	RHO-BWI-ST-7
Cs	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	60	--	0	8.5	SYNTHETIC	--	--	22000	18000	BATCH 14 DAYS	RHO-BWI-ST-7
Cs	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	60	--	0	8.5	SYNTHETIC	--	--	17000	3600	BATCH 67 DAYS	RHO-BWI-ST-7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: LA DATE: 10-27-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	0	--	GR-2	--	500-1600	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Cs	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	0	--	GR-2	--	200-1400	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Cs	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	0	--	GR-2	--	100-700	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Cs137	SADDLE MOUNTAIN	POMONA	--	23	8.76E-10	0	8.0	GR-1	--	--	>10000	--	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Cs137	SADDLE MOUNTAIN	POMONA	--	60	8.76E-10	0	8.0	GR-1	--	--	1432	695	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Cs137	SADDLE MOUNTAIN	POMONA	--	23	1.00E-9	0	8.0	GR-1	--	--	>12000	--	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Cs137	SADDLE MOUNTAIN	POMONA	--	23	1.00E-9	0	10.0	GR-2	--	--	9795	3976	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Cs137	SADDLE MOUNTAIN	POMONA	--	23	1.00E-3	0	8.0	GR-1	--	--	212	4	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.15

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs137	SADDLE MOUNTAIN	POMONA	--	23	1.00E-5	0	8.0	GR-1	--	--	1080	50	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	--	23	1.00E-7	0	8.0	GR-1	--	--	10000	2050	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	--	23	1.00E-10	0	8.0	GR-1	--	--	>12000	--	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	--	60	1.00E-3	0	8.0	GR-1	--	--	167	3	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	--	60	1.00E-5	0	8.0	GR-1	--	--	960	144	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	--	60	1.00E-7	0	8.0	GR-1	--	--	12400	4400	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	--	60	1.00E-9	0	8.0	GR-1	--	--	11600	2500	BATCH CONTACT	RHO-BWI-LD-43 P.15

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: JP DATE: 10-07-84
QA BY: TH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs137	SADDLE MOUNTAIN	POMONA	—	60	1.00E-10	0	8.0	GR-1	--	—	11800	2900	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	—	23	1.00E-3	0	10.0	GR-2	--	—	228	3	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	—	23	1.00E-5	0	10.0	GR-2	--	—	2125	229	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	—	23	1.00E-7	0	10.0	GR-2	--	—	5968	512	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	—	23	1.00E-9	0	10.0	GR-2	--	—	9795	3976	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	—	23	1.00E-10	0	10.0	GR-2	--	—	>10000	--	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	—	60	1.00E-3	0	10.0	GR-2	--	—	153	5	BATCH CONTACT	RHO-BWI-LD-43 P.15

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-6-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs137	SADDLE MOUNTAIN	POMONA	--	60	1.00E-5	0	10.0	GR-2	--	--	1162	117	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	--	60	1.00E-7	0	10.0	GR-2	--	--	>10000	--	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	--	60	1.00E-9	0	10.0	GR-2	--	--	>10000	--	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	SADDLE MOUNTAIN	POMONA	--	60	1.00E-10	0	10.0	GR-2	--	--	4885	1899	BATCH CONTACT	RHO-BWI-LD-43 P.15
Cs137	HANFORD SEDIMENTS	--	--	--	--	--	--	--	--	--	0.300	--	--	RHO-BWI-LD-43 P.18
Cs137	HANFORD SEDIMENTS	--	--	--	--	--	--	--	--	3.0-1600	--	--	--	RHO-BWI-LD-43 P.18
Cs137	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	60	--	0	--	SYN. GRANDE RONDE	--	--	435	7	BATCH 60 DAYS	RHO-BW-ST-21P
Cs137	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	--	--	--	8.6	SYN. PATERSON WA	296	--	--	31	BATCH	RHO-ST-4

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: [illegible] DATE: 10-02-84
QA BY: [illegible] DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	23	—	—	—	—	1900	—	—	—	BATCH 46-59 DAYS	RHO-BWI-ST-7
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	60	—	—	—	—	550	—	—	—	BATCH 46-59 DAYS	RHO-BWI-ST-7
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	150	—	—	—	—	100	—	—	—	BATCH 46-59 DAYS	RHO-BWI-ST-7
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	23	—	—	—	—	—	—	1663	31	BATCH 63 DAYS	RHO-BWI-ST-7
Cs137	SADDLE MOUNTAIN	POMONA	—	23	—	—	—	—	—	—	2408	203	BATCH 63 DAYS	RHO-BWI-ST-7
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	23	1.0E-12	0	8.0	GR-1	—	—	1084	140	BATCH CONTACT	RHO-BWI-LD-48
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	23	1.0E-12	0	10.0	GR-2	—	—	1025	248	BATCH CONTACT	RHO-BWI-LD-48
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	60	1.0E-10	0	10.0	GR-2	—	—	435	7	BATCH CONTACT	RHO-BWI-LD-48
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	60	1.0E-10	0	8.0	GR-1	—	—	474	27	BATCH CONTACT	RHO-BWI-LD-48
Cs137	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	1.0E-10	0	8.0	GR-1	—	—	284	8	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-09-84
QA BY: LH DATE: 10-22-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs137	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	1.0E-10	0	10.0	GR-2	--	--	256	6	BATCH CONTACT	RHO-BWI-LD-48
Cs137	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	1.0E-12	0	10.0	GR-2	--	--	607	57	BATCH CONTACT	RHO-BWI-LD-48
Cs137	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	1.0E-12	0	8.0	GR-1	--	--	487	41	BATCH CONTACT	RHO-BWI-LD-48
Cs137	SADDLE MOUNTAIN	POMONA	--	23	1.0E-12	0	8.0	GR-1	--	--	1281	99	BATCH CONTACT	RHO-BWI-LD-48
Cs137	SADDLE MOUNTAIN	POMONA	--	23	1.0E-12	0	10.0	GR-2	--	--	908	280	BATCH CONTACT	RHO-BWI-LD-48
Cs137	SADDLE MOUNTAIN	POMONA	--	60	1.0E-10	0	8.0	GR-1	--	--	903	68	BATCH CONTACT	RHO-BWI-LD-48
Cs137	SADDLE MOUNTAIN	POMONA	--	60	1.0E-10	0	10.0	GR-2	--	--	908	44	BATCH CONTACT	RHO-BWI-LD-48
Cs137	SADDLE MOUNTAIN	POMONA	--	300	--	0	8.0	GR-1	--	--	540	70	BATCH CONTACT	RHO-BWI-LD-48
Cs137	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	300	--	0	8.0	GR-1	--	--	208	58	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-87
QA BY: LH DATE: 10-29-87

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	300	—	0	8.0	GR-1	--	—	330	62	BATCH CONTACT	RHO-BWI-LD-48
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	--	--	0	—	—	500	200-900	—	—	BEST ESTIMATE	RHO-BWI-LD-48
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	23	--	0	8.0	GR-1	--	—	722	104	BATCH CONTACT 56 DAYS	RHO-BWI-C-108 P.7
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	23	--	0	8.0	GR-1	--	—	701	176	BATCH CONTACT 56 DAYS	RHO-BWI-C-108 P.7
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	23	--	0	8.0	GR-1	--	—	703	151	BATCH CONTACT	RHO-BWI-C-108 P.7
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	23	--	0	8.0	GR-1	--	—	662	127	BATCH CONTACT 56 DAYS	RHO-BWI-C-108 P.7
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	23	—	0	8.0	GR-1	--	—	697	140	BATCH CONTACT 56 DAYS	RHO-BWI-C-108 P.7
Cs137	—	—	BASALT?	--	—	--	—	BASALT GROUNDWATER?	--	—	401	21	BATCH CONTACT	RHO-BWI-LD-47 P.2

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: 3D DATE: 10-02-84
QA BY: LH DATE: 10-24-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs137	--	--	BASALT?	--	--	--	--	BASALT GROUNDWATER?	--	--	31	2	BATCH CONTACT	RHO-BWI-LD-47 P.2
Cs137	--	--	BASALT?	--	--	--	--	BASALT GROUNDWATER?	--	--	265	4	BATCH CONTACT	RHO-BWI-LD-47 P.2
Cs137	--	--	BASALT?	--	--	--	--	BASALT GROUNDWATER?	-	--	296	10	BATCH CONTACT	RHO-BWI-LD-47 P.2
Cs137	--	--	BASALT?	--	--	--	--	BASALT GROUNDWATER?	--	--	290	70	BATCH CONTACT	RHO-BWI-LD-47 P.2
Cs137	--	--	BASALT?	--	--	--	--	BASALT GROUNDWATER?	--	--	380	5	BATCH CONTACT	RHO-BWI-LD-47 P.2
Cs137	--	--	BASALT?	--	--	--	--	BASALT GROUNDWATER?	--	--	453	12	BATCH CONTACT	RHO-BWI-LD-47 P.2
Cs137	--	--	BASALT?	--	--	--	--	BASALT GROUNDWATER	--	--	380	70	BATCH CONTACT	RHO-BWI-LD-47 P.2

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-31-84
QA BY: ZH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs137	--	--	BASALT?	--	--	--	--	BASALT GROUNDWATER?	--	--	255	7	BATCH CONTACT	RHO-BWI-LD-47 P.2
Cs137	--	--	CRUSHED BASALT	60	1.0E-10	0	--	--	--	--	435	7	WOOD ET. AL. 1982	SD-BWI-TI-072 P.5
Cs137	--	--	BASALT SECONDARY MINERALIZATION	--	8.76E-10	0	--	--	--	--	1432	695	WOOD ET. AL. 1982	SD-BWI-TI-072 P.7
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	--	--	1900	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	60	--	--	--	--	--	--	550	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Cs137	GRANDE RONDE	SCHWANA	UMTANUM	150	--	--	--	--	--	--	100	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Cs137	SADDLE MOUNTAIN	POMONA	--	23	8.76E-16	0	8.0	GR-1	--	--	1685	245	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Cs137	GRANDE RONDE	SENTINE FLOW E L BLUFFS	23	8.76E-10	0	8.0	GR-1	--	--	578	6	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Cs137	GRANDE RONDE	SCHWANA UMTANUM	23	8.76E-10	0	8.0	GR-1	--	--	705	18	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Cs137	GRANDE RONDE	SCHWANA UMTANUM	60	8.76E-10	0	8.0	GR-1	--	--	463	5	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Cs137	GRANDE RONDE	SCHWANA UMTANUM	150	1.83E-10	0	8.0	GR-1	--	--	100	3	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Cs137	GRANDE RONDE	SENTINE FLOW E L BLUFFS	150	1.83E-10	0	8.0	GR-1	--	--	70	7	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.11
Cs137	GRANDE RONDE	SENTINE FLOW E L BLUFFS	60	8.76E-10	0	8.0	GR-1	--	--	187	6	BATCH CONTACT 150 DAYS	RHO-BWI-LD-48 P.11
Cs137	SADDLE MOUNTAIN	POMONA --	60	8.76E-10	0	8.0	GR-1	--	--	747	37	BATCH CONTACT 150 DAYS	RHO-BWI-LD-48 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-27-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE	SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Eu	GRANDE RONDE	SCHWANA UMTANUM		--	--	O	--	--	50	--	--	--	--	SD-BWI-DP-001
Eu	GRANDE RONDE	SCHWANA UMTANUM		--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001
I	GRANDE RONDE	SCHWANA UMTANUM		--	--	O	--	--	0	--	--	--	--	SD-BWI-DP-001 P.7
I	GRANDE RONDE	SCHWANA UMTANUM		--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001 P.7
I	--	--	SECONDARY MATERIALS	--	--	O	--	--	0	--	--	--	--	SD-BWI-DP-001 P.7
I	--	--	SECONDARY MATERIALS	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001 P.7
I	--	--	INTERBED MATERIALS	--	--	O	--	--	0	--	--	--	--	SD-BWI-DP-001 P.7
I	--	--	INTERBED MATERIALS	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001 P.7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SA DATE: 10-02-84
QA BY: ZH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
I	FRESH BASALT ENV.	--	--	60	--	0	--	GR-2	--	0	0	--	--	NURE G/CR - 2352
I	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	0	0	--	--	NURE G/CR - 2352
I	ALTERED BASALT ENV.	--	--	--	--	0	--	GR-1	--	1-4	1	--	--	NURE G/CR - 2352
I	GRANDE RONDE	SCHWANA	UMTANUM	23	--	0	8.95	SYNTHETIC	--	--	1.3	0.3	BATCH 31 DAYS	RHO-BWI-ST-7
I	GRANDE RONDE	SCHWANA	UMTANUM	23	--	0	8.95	SYNTHETIC	--	--	3.1	0.5	BATCH 83 DAYS	RHO-BWI-ST-7
I	GRANDE RONDE	SCHWANA	UMTANUM	60	--	0	8.8	SYNTHETIC	0	--	--	--	BATCH 11 DAYS	RHO-BWI-ST-7
I	GRANDE RONDE	SCHWANA	UMTANUM	60	--	0	8.8	SYNTHETIC	0	--	--	--	BATCH 59 DAYS	RHO-BWI-ST-7
I	GRANDE RONDE	SCHWANA	UMTANUM	150	--	0	8.8	SYNTHETIC	0	--	--	--	BATCH 14 DAYS	RHO-BWI-ST-7
I	GRANDE RONDE	SCHWANA	UMTANUM	150	--	0	8.8	SYNTHETIC	8	--	--	--	BATCH 49 DAYS	RHO-BWI-ST-7
I	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	0	8.5	SYNTHETIC	--	--	3.3	0.3	BATCH 37 DAYS	RHO-BWI-ST-7
I	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	0	8.5	SYNTHETIC	--	--	2.3	0.2	BATCH 67 DAYS	RHO-BWI-ST-7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SD DATE: 10-07-84
QA BY: JH DATE: 10-20-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
I	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	60	--	0	8.6	SYNTHETIC	0	--	--	--	BATCH 37 DAYS	RHO-BWI-ST-7
I	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	60	--	0	8.6	SYNTHETIC	0	--	--	--	BATCH 67 DAYS	RHO-BWI-ST-7
I125	SADDLE MOUNTAIN	POMONA	--	23	4.24E-14	0	8.0	GR-1	--	--	14.0	1.6	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
I125	SADDLE MOUNTAIN	POMONA	--	60	4.24E-14	0	8.0	GR-1	--	--	0	--	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
I125	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	2	--	--	--	BATCH 46-59 DAYS	RHO-BWI-ST-7
I125	GRANDE RONDE	SCHWANA	UMTANUM	60	--	--	--	--	0	--	--	--	BATCH 46-59 DAYS	RHO-BWI-ST-7
I125	GRANDE RONDE	SCHWANA	UMTANUM	150	--	--	--	--	0	--	--	--	BATCH 46-59 DAYS	RHO-BWI-ST-7
I125	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	--	--	3.1	0.5	BATCH 83 DAYS	RHO-BWI-ST-7
I125	SADDLE MOUNTAIN	POMONA	--	23	--	--	--	--	--	--	0.5	0.4	BATCH 83 DAYS	RHO-BWI-ST-7
I125	GRANDE RONDE	SCHWANA	UMTANUM	23	--	0	8.0	GR-1	--	--	1.0	0.4	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SD DATE: 10-02-84
QA BY: JH DATE: 10-27-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE	SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
I125	GRANDE RONDE	SCHWANA UMTANUM		23	—	0	8.0	GR-1	—	—	1.0	0.4	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10
I125	GRANDE RONDE	SCHWANA UMTANUM		23	—	0	8.0	GR-1	—	—	—	—	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10
I125	GRANDE RONDE	SCHWANA UMTANUM		23	—	0	8.0	GR-1	—	—	2.0	1.0	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10
I125	GRANDE RONDE	SCHWANA UMTANUM		23	—	0	8.0	GR-1	—	—	—	—	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10
I125	GRANDE RONDE	SCHWANA UMTANUM		23	—	0	8.0	GR-1	—	—	14.0	1.8	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: JH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
I125	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	--	--	2	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
I125	GRANDE RONDE	SCHWANA	UMTANUM	60	--	--	--	--	--	--	0	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
I125	GRANDE RONDE	SCHWANA	UMTANUM	150	--	--	--	--	--	--	0	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
I125	--	--	BASALT SECONDARY MINERALIZATION	--	4.24E-14	0	--	--	--	--	0	--	SALTER, ET. AL. 1984	SD-BWI-TI-072 P.7
I125	GRANDE RONDE	SCHWANA	UMTANUM	23	4.24E-14	0	8.0	GR-1	--	--	6.8	1.3	BATCH CONTACT 90 DAYS	RHO-BWI-LD-48 P.11
I125	GRANDE RONDE	SENTINEL BLUFFS	FLOW	23	4.24E-14	0	8.0	GR-1	--	--	1.0	0.4	BATCH CONTACT 90 DAYS	RHO-BWI-LD-48 P.11
I125	SADDLE MOUNTAIN	POMONA	--	23	4.24E-14	0	8.0	GR-1	--	--	2.0	1.0	BATCH CONTACT 90 DAYS	RHO-BWI-LD-48 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
I125	SADDLE MOUNTAIN	POMONA	--	60	4.24E-14	0	8.0	GR-1	--	--	0	0	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
I125	GRANDE RONDE	SENTINE FLOW E L BLUFFS		60	4.24E-14	0	8.0	GR-1	--	--	0	0	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
I125	GRANDE RONDE	SENTINE FLOW E L BLUFFS		150	7.24E-13	0	8.0	GR-1	--	--	3.4	4.7	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48
I125	GRANDE RONDE	SCHWANA UMTANUM		150	7.24E-13	0	8.0	GR-1	--	--	0	0	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.12
I125	GRANDE RONDE	SCHWANA UMTANUM		60	4.24E-14	0	8.0	GR-1	--	--	0	0	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.12
I125	GRANDE RONDE	SCHWANA UMTANUM		--	--	0	--	--	0	0-7	--	--	BEST ESTIMATE	RHO-BWI-LD-48 P.12
I125	GRANDE RONDE	SCHWANA UMTANUM		23	--	0	8.0	GR-1	--	6.8	--	1.3	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: JP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
I125	GRANDE RONDE	SCHWANA	UMTANUM	23	--	O	8.0	GR-1	--	--	--	--	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10
Ni	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	50	--	--	--	--	SD-BWI-DP-001
Ni	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001
Np	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	10	--	-	--	--	SD-BWI-DP-001
Np	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	20	--	--	--	--	SD-BWI-DP-001
Np	--	--	SECONDARY MINERALS	--	--	O	--	--	50	--	--	--	--	SD-BWI-DP-001
Np	--	--	SECONDARY MINERALS	--	--	R	--	--	200	--	--	--	--	SD-BWI-DP-001
Np	--	--	INTERBED MATERIALS	--	--	O	--	--	20	--	--	--	--	SD-BWI-DP-001

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Np	--	--	INTERBED MATERIALS	--	--	R	--	--	50	--	--	--	--	SD-BWI-DP-001
Np	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	O	7.7-9.3	SYN. GRANDE RONDE	--	1000-5000	--	--	BATCH	RHO-BW-ST-35P
Np	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	O	7.7-9.3	SYN. GRANDE RONDE	--	2000-5000	--	--	BATCH	RHO-BW-ST-35P
Np	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	O	7.7-9.3	SYN. GRANDE RONDE	--	1000-5000	--	--	BATCH	RHO-BW-ST-35P
Np	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	4-80	20	--	--	NURE G/CR-2352
Np	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	0-450	30	--	--	NURE G/CR-2352
Np	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	9-180	10	--	--	NURE G/CR-2352
Np	GRANDE RONDE	SCHWANA	UMTANUM	23	--	O	8.5	SYNTHETIC	--	--	8	1	BATCH 31 DAYS	RHO-BWI-ST-7
Np	GRANDE RONDE	SCHWANA	UMTANUM	23	--	O	8.5	SYNTHETIC	--	--	9	1	BATCH 83 DAYS	RHO-BWI-ST-7
Np	GRANDE RONDE	SCHWANA	UMTANUM	60	--	O	8.8	SYNTHETIC	--	--	9	1	BATCH 11 DAYS	RHO-BWI-ST-7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Np	GRANDE RONDE	SCHWANA	UMTANUM	60	--	O	8.6	SYNTHETIC	--	--	13	1	BATCH 59 DAYS	RHO-BWI-ST-7
Np	GRANDE RONDE	SCHWANA	UMTANUM	23	--	R	8.5	SYNTHETIC	150	--	--	--	BATCH 60 DAYS	RHO-BWI-ST-7
Np	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	O	8.3	SYNTHETIC	--	--	12	2	BATCH 37 DAYS	RHO-BWI-ST-7
Np	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	O	8.3	SYNTHETIC	9	--	--	--	BATCH 67 DAYS	RHO-BWI-ST-7
Np	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	R	8.3	SYNTHETIC	--	--	79	10	BATCH 60 DAYS	RHO-BWI-ST-7
Np	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	60	--	O	8.6	SYNTHETIC	--	--	17	4	BATCH 37 DAYS	RHO-BWI-ST-7
Np	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	60	--	O	8.6	SYNTHETIC	--	--	11	5	BATCH 67 DAYS	RHO-BWI-ST-7
Np	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	R	--	GR-2	--	1000-5000	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Np	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	R	--	GR-2	--	2000-5000	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Np	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	R	--	GR-2	--	1000-9000	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Np237	SADDLE MOUNTAIN	POMONA	--	23	6.47E-8	O	8.0	GR-1	--	--	36.9	7.5	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-27-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Np237	SADDLE MOUNTAIN	POMONA	—	60	6.47E-8	0	8.0	GR-1	--	—	53.5	18.8	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Np237	SADDLE MOUNTAIN	POMONA	—	23	6.7E-8	0	8.0	GR-1	--	--	75	38	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Np237	SADDLE MOUNTAIN	POMONA	—	23	6.7E-8	0	10.0	GR-2	--	—	157	40	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.11
Np237	HANFORD SEDIMENTS	—	—	--	--	--	—	—	--	0.3-4.0	—	--	--	RHO-BWI-LD-43 P.21
Np237	HANFORD SEDIMENTS	—	—	—	--	--	--	--	--	7-14	--	--	--	RHO-BWI-LD-43 P.21
Np237	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	60	--	0	—	SYN. GRANDE RONDE	--	—	42	11	BATCH 60 DAYS	RHO-BW-ST-21P
Np237	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	60	—	R	—	SYN. GRANDE RONDE	--	--	1015	164	BATCH 60 DAYS	RHO-BW-ST-21P
Np237	GRANDE RONDE	SCHWANA	UMTANUM	23	—	--	--	--	10	—	—	—	BATCH 46-59 DAYS	RHO-BWI-ST-7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE	SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Np237	GRANDE RONDE	SCHWANA	UMTANUM	60	--	--	--	--	13	--	--	--	BATCH 46-59 DAYS	RHO-BWI-ST-7
Np237	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	--	--	9	1	BATCH 63 DAYS	RHO-BWI-ST-7
Np237	SADDLE MOUNTAIN	POMONA	--	23	--	--	--	--	--	--	5	0.8	BATCH 63 DAYS	CS
Np237	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	--	--	10	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Np237	GRANDE RONDE	SCHWANA	UMTANUM	60	--	--	--	--	--	--	13	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Np237	GRANDE RONDE	SCHWANA	UMTANUM	23	6.47E-8	0	8.0	GR-1	--	--	30	13	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Np237	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	6.47E-8	0	8.0	GR-1	--	--	4.1	0.9	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Np237	SADDLE MOUNTAIN	POMONA	--	23	6.47E-8	0	8.0	GR-1	--	--	9.8	0.5	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Np237	SADDLE MOUNTAIN	POMONA	--	60	6.47E-8	0	8.0	GR-1	--	--	12.1	3.2	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-94
QA BY: [illegible] DATE: 10-29-94

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE	SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Np237	GRANDE RONDE	SENTINE FLOW E L BLUFFS		60	6.47E-8	O	8.0	GR-1	--	--	8.3	0.5	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Np237	GRANDE RONDE	SCHWANA UMTANUM		60	6.47E-8	O	8.0	GR-1	--	--	31.2	4.7	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Np237	GRANDE RONDE	SCHWANA UMTANUM		60	3.91E-13	R	10.0	GR-2	--	--	1015	164	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48
Np237	GRANDE RONDE	SCHWANA UMTANUM		60	4.19E-13	O	10.0	GR-2	--	--	42	11	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Np237	GRANDE RONDE	SCHWANA UMTANUM		23	6.7E-8	O	8.0	GR-1	--	--	13	1	BATCH CONTACT	RHO-BWI-LD-48
Np237	GRANDE RONDE	SCHWANA UMTANUM		23	6.7E-8	O	10.0	GR-2	--	--	7	3	BATCH CONTACT	RHO-BWI-LD-48
Np237	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23	6.7E-8	O	8.0	GR-1	--	--	7	1	BATCH CONTACT	RHO-BWI-LD-48
Np237	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23	6.7E-8	O	10.0	GR-2	--	--	0.5	0.1	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-24-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CD (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Np237	SADDLE MOUNTAIN	POMONA	--	23	6.7E-8	0	8.0	GR-1	--	--	9	1	BATCH CONTACT	RHO-BWI-LD-48
Np237	SADDLE MOUNTAIN	POMONA	--	23	6.7E-8	0	10.0	GR-2	--	--	52	16	BATCH CONTACT	RHO-BWI-LD-48
Np237	GRANDE RONDE	SCHWANA	UMTANUM	--	--	0	--	--	--	7-42	15	--	BEST ESTIMATE	RHO-BWI-LD-48
Np237	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	--	150-2000	200	--	BEST ESTIMATE	RHO-BWI-LD-48
Np237	--	--	BASALT SECONDARY MINERALIZATION	--	6.47E-3	0	--	--	--	--	53.5	18.8	SALTER, ET. AL. 1981P	SD-BWI-TI-072 P.7
Np237	--	--	CRUSHED BASALT	60	4.19E-13	0	--	--	--	--	42	11	WOOD, ET. AL. 1982	SD-BWI-TI-072 P.5
Np237	--	--	CRUSHED BASALT	60	3.91E-13	R	--	--	--	--	1015	164	WOOD, ET. AL. 1982	SD-BWI-TI-072 P.5
Pa	GRANDE RONDE	SCHWANA	UMTANUM	--	--	0	--	--	100	--	--	--	--	SD-BWI-DP-001

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Pa	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	50-200	100	--	--	NURE G/CR - 2352
Pa	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	50-200	100	--	--	NURE G/CR - 2352
Pa	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	190-251000	500	--	--	NURE G/CR - 2352
Pb	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	25	--	--	--	--	SD-BWI-DP-001
Pb	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001
Pb	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	50-150	100	--	--	NURE G/CR - 2352
Pb	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	90-240	100	--	--	NURE G/CR - 2352
Pb	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	50-2000	200	--	--	NURE G/CR - 2352
Pd	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	50	--	--	--	--	SD-BWI-DP-001 P.7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-22-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Pd	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001 P.7
Po	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	50-200	100	--	--	NURE G/CR - 2352
Po	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	50-200	100	--	--	NURE G/CR - 2352
Po	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	190-251000	500	--	--	NURE G/CR - 2352
Pu	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	22	--	--	--	--	SD-BWI-DP-001
Pu	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	42	--	--	--	--	SD-BWI-DP-001
Pu	--	--	SECONDARY MINERALS	--	--	O	--	--	2000	--	--	--	--	SD-BWI-DP-001
Pu	--	--	SECONDARY MINERALS	--	--	R	--	--	4000	--	--	--	--	SD-BWI-DP-001
Pu	--	--	INTERBED MATERIALS	--	--	O	--	--	300	--	--	--	--	SD-BWI-DP-001

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-09-84
QA BY: JH DATE: 10-22-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Pu	--	--	INTERBED MATERIALS	--	--	R	--	--	470	--	--	--	--	SD-BWI-DP-001
Pu	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	5-500	25	--	--	NURE G/CR - 2352
Pu	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	3-5000	100	--	--	NURE G/CR - 2352
Pu	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	110-5000	200	--	--	NURE G/CR - 2352
Pu	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	--	--	--	8.6	SYN. PATERSON WA	19.8	--	--	4.0	BATCH	RHO-ST-4
Pu237	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	60	--	O	--	SYN. GRANDE RONDE	--	--	25	5	BATCH 60 DAYS	RHO-BW-ST-21P
Pu237	GRANDE RONDE	SCHWANA	UMTANUM	23	2.51E-14	R	10.0	GR-2	--	--	42	5	BATCH CONTACT	RHO-BWI-LD-48
Pu237	GRANDE RONDE	SCHWANA	UMTANUM	23	6.81E-14	O	10.0	GR-2	--	--	20	3	BATCH CONTACT	RHO-BWI-LD-48
Pu237	GRANDE RONDE	SCHWANA	UMTANUM	23	1.00E-11	O	8.0	GR-1	--	--	102	97	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Pu237	GRANDE RONDE	SCHWANA	UMTANUM	60	6.81E-14	O	10.0	GR-2	--	--	25	5	BATCH CONTACT	RHO-BWI-LD-48
Pu237	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	1.00E-11	O	8.0	GR-1	--	--	165	16	BATCH CONTACT	RHO-BWI-LD-48
Pu237	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	2.51E-14	R	10.0	GR-2	--	--	37	5	BATCH CONTACT	RHO-BWI-LD-48
Pu237	SADDLE MOUNTAIN	POMONA	--	23	2.51E-14	R	10.0	GR-2	--	--	47	5	BATCH CONTACT	RHO-BWI-LD-48
Pu237	SADDLE MOUNTAIN	POMONA	--	23	1.00E-11	O	8.0	GR-1	--	--	267	18	BATCH CONTACT	RHO-BWI-LD-48
Pu237	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	22	20-25	--	--	BEST ESTIMATE	RHO-BWI-LD-48
Pu237	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	42	--	--	--	BEST ESTIMATE	RHO-BWI-LD-48
Pu237	--	--	CRUSHED BASALT	60	6.8E-14	O	--	--	--	--	25	5	WOOD, ET. AL. 1982	SD-BWI-TI-072 P.5
Pu241	SADDLE MOUNTAIN	POMONA	--	23	1.62E-11	O	830	GR-1	--	--	2572	341	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Pu241	SADDLE MOUNTAIN	POMONA	--	60	1.62E-11	0	8.0	GR-1	--	--	3328	609	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Pu241	HANFORD SEDIMENT	--	--	--	--	--	--	--	--	--	C.10000	--	--	RHO-BWI-LD-43 P.18
Pu241	HANFORD SEDIMENT	--	--	--	--	--	--	--	--	--	>1500	--	--	RHO-BWI-LD-43 P.18
Pu241	GRANDE RONDE	SCHWANA UMTANUM		23	1.62E-11	0	8.0	GR-1	--	--	102	97	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Pu241	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	1.62E-11	0	8.0	GR-1	--	--	165	16	BATCH CONTAT 50 DAYS	RHO-BWI-LD-48 P.11
Pu241	SADDLE MOUNTAIN	POMONA	--	23	1.62E-11	0	8.0	GR-1	--	--	267	18	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Pu241	SADDLE MOUNTAIN	POMONA	--	60	1.62E-11	0	8.0	GR-1	--	--	700	108	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Pu241	SADDLE MOUNTAIN	POMONA	--	150	9.09E-15	0	8.0	GR-1	--	--	45	6	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.11
Pu241	SADDLE MOUNTAIN	POMONA	--	150	2.52E-15	0	8.0	GR-1	--	--	48	9	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.11
Pu241	GRANDE RONDE	SENTINEL BLUFFS	FLOW E	300	4.41E-15	0	8.0	GR-1	--	--	91	30	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.11
Pu241	GRANDE RONDE	SENTINEL BLUFFS	FLOW E	150	1.51E-10	0	8.0	GR-1	--	--	4000	--	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.11
Pu241	GRANDE RONDE	SCHWANA	UMTANUM	60	1.62E-11	0	8.0	GR-1	--	--	353	224	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.11
Pu241	GRANDE RONDE	SENTINEL BLUFFS	FLOW E	60	1.62E-11	0	8.0	GR-1	--	--	300	26	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.11
Pu241	--	--	BASALT SECONDARY MINERALIZATION	--	1.62E-11	0	--	--	--	--	3328	609	SALTER. ET. AL. 1981B	SD-BWI-TI-072 P.7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-22-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Ra	GRANDE RONDE	SCHWANA	UMTANUM	--	--	0	--	--	200	--	--	--	--	SD-BWI-DP-001
Ra	--	--	SECONDARY MINERALS	--	--	0	--	--	100	--	--	--	--	SD-BWI-DP-001
Ra	--	--	INTERBED MATERIALS	--	--	0	--	--	4000	--	--	--	--	SD-BWI-DP-001
Ra	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	0	8.5E-9	SYN. GRANDE RONDE	--	2000-6000	--	--	BATCH	RHO-BW-ST-35P
Ra	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	0	8.5E-9	SYN. GRANDE RONDE	--	800-1500	--	--	BATCH	RHO-BW-ST-35P
Ra	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	0	8.5E-9	SYN. GRANDE RONDE	--	1000-3000	--	--	BATCH	RHO-BW-ST-35P
Ra	FRESH BASALT ENV.	--	--	60	--	0	--	GR-2	--	50-150	100	--	--	NURE G/CR - 2352
Ra	FRESH BASALT ENV.	--	--	--	--	0	--	COMPOSITE	--	90-240	100	--	--	NURE G/CR - 2352
Ra	ALTERED BASALT ENV.	--	--	--	--	0	--	GR-1	--	50-2000	200	--	--	NURE G/CR - 2352

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Ra	GRANDE RONDE	SCHWANA	URTANUM	23	--	0	7.9	SYNTHETIC	--	--	67	2	BATCH 31 DAYS	RHO-BWI-ST-7
Ra	GRANDE RONDE	SCHWANA	URTANUM	23	--	0	7.9	SYNTHETIC	--	--	64	3	BATCH 85 DAYS	RHO-BWI-ST-7
Ra	GRANDE RONDE	SCHWANA	URTANUM	60	--	0	8.5	SYNTHETIC	--	--	125	23	BATCH 11 DAYS	RHO-BWI-ST-7
Ra	GRANDE RONDE	SCHWANA	URTANUM	60	--	0	8.5	SYNTHETIC	--	--	66	6	BATCH 39 DAYS	RHO-BWI-ST-7
Ra	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	0	8.3	SYNTHETIC	--	--	117	0.3	BATCH 14 DAYS	RHO-BWI-ST-7
Ra	SADDLE MOUNTAIN	POMONA'	SECONDARY MINERALS	23	--	0	8.3	SYNTHETIC	--	--	100	2	BATCH 67 DAYS	RHO-BWI-ST-7
Ra	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	60	--	0	8.4	SYNTHETIC	--	--	90	7	BATCH 37 DAYS	RHO-BWI-ST-7
Ra	SADDLE MOUNTAIN	POMONA'	SECONDARY MINERALS	60	--	0	8.4	SYNTHETIC	--	--	180	25	BATCH 67 DAYS	RHO-BWI-ST-7
Ra	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	0	--	GR-2	--	2000-6000	--	--	BATCH 14 DAYS	RHO-BW-ST-198P
Ra	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	0	--	GR-2	--	800-1500	--	--	BATCH 14 DAYS	RHO-BW-ST-198P
Ra	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	0	--	GR-2	--	1000-3000	--	--	BATCH 14 DAYS	RHO-BW-ST-198P

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: ZH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Ra226	SADDLE MOUNTAIN	POMONA	--	23	8.51E-9	0	8.0	GR-1	--	--	102	2	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Ra226	SADDLE MOUNTAIN	POMONA	--	60	9.84E-9	0	8.0	GR-1	--	--	146	39	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.12
Ra226	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	60	--	0	--	SYN. GRANDE RONDE	--	--	238	47	BATCH 60 DAYS	RHO-BW-ST-21P
Ra226	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	60	--	R	--	SYN. GRANDE RONDE	--	--	394	79	BATCH 60 DAYS	RHO-BW-ST-21P
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	--	--	64	3	BATCH 83 DAYS	RHO-BWI-ST-7
Ra226	SADDLE MOUNTAIN	POMONA	--	23	--	--	--	--	--	--	54	2	BATCH 83 DAYS	RHO-BWI-ST-7
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	23	8.42E-10	0	8.0	GR-1	--	--	187	24	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Ra226	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	8.42E-10	0	8.0	GR-1	--	--	127	21	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: ZH DATE: 10-27-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Ra226	SADDLE MOUNTAIN	POMONA	--	23	8.42E-10	0	8.0	GR-1	--	--	158	8	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Ra226	SADDLE MOUNTAIN	POMONA	--	60	8.42E-10	0	8.0	GR-1	--	--	399	80	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Ra226	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	8.42E-10	0	8.0	GR-1	--	--	313	50	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	60	8.42E-10	0	8.0	GR-1	--	--	360	69	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	23	1.11E-9	0	10.0	GR-2	--	--	75	15	BATCH CONTACT 11 DAYS	RHO-BWI-LD-48 P.11
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	60	1.11E-9	0	10.0	GR-2	--	--	238	47	BATCH CONTACT 11 DAYS	RHO-BWI-LD-48 P.11
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	23	1.16E-9	R	10.0	GR-2	--	--	55	10	BATCH CONTACT 11 DAYS	RHO-BWI-LD-48 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE	SEDIMENT	TEMP (C)	CD (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	60	1.16E-9	R	10.0	GR-2	--	--	394	79	BATCH CONTACT 11 DAYS	RHO-BWI-LD-48 P.11
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	--	--	0	--	--	200	50-400	--	--	BEST ESTIMATE	RHO-BWI-LD-48 P.11
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	23	8.42E-10	0	8.0	GR-1	--	--	187	24	BATCH CONTACT	RHO-BWI-LD-48
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	60	8.42E-10	0	8.0	GR-1	--	--	360	69	BATCH CONTACT	RHO-BWI-LD-48
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	23	1.11E-9	0	10.0	GR-2	--	--	55	5	BATCH CONTACT	RHO-BWI-LD-48
Ra226	GRANDE RONDE	SCHWANA	UMTANUM	60	1.16E-9	0	10.0	GR-2	--	--	394	79	BATCH CONTACT	RHO-BWI-LD-48
Ra226	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	8.42E-10	0	8.0	GR-1	--	--	127	21	BATCH CONTACT	RHO-BWI-LD-48
Ra226	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	8.42E-10	0	8.0	GR-1	--	--	313	50	BATCH CONTACT	RHO-BWI-LD-48
Ra226	SADDLE MOUNTAIN	POMONA	--	23	8.42E-10	0	8.0	GR-1	--	--	158	5	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Ra226	SADDLE MOUNTAIN	POMONA	--	60	8.42E-10	0	8.0	GR-1	--	--	399	80	BATCH CONTACT	RHO-BWI-LD-48
Ra226	--	--	BASALT SECONDARY MINERALIZATION	--	9.84E-9	0	--	--	--	--	146	39	SALTER, ET. AL. 1981B	SD-BWI-TI-072 P.7
Ra226	--	--	CRUSHED BASALT	60	1.11E-9	0	--	--	--	--	238	47	WOOD, ET. AL. 1982	SD-BWI-TI-072 P.5
Ra226	--	--	CRUSHED BASALT	60	1.16E-9	R	--	--	--	--	344	79	WOOD, ET. AL. 1982	SD-BWI-TI-072 P.5
Ru106	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	--	--	--	8.4	SYN. PATERSON WA	38.0	--	--	8.1	BATCH	RHO-ST-4
Se	GRANDE RONDE	SCHWANA	UMTANUM	--	--	0	--	--	4	--	--	--	--	SD-BWI-DP-001
Se	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	8	--	--	--	--	SD-BWI-DP-001
Se	--	--	SECONDARY MINERALS	--	--	0	--	--	5	--	--	--	--	SD-BWI-DP-001
Se	--	--	SECONDARY MINERALS	--	--	R	--	--	8	--	--	--	--	SD-BWI-DP-001

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Se	--	--	INTERBED MATERIALS	--	--	O	--	--	0	--	--	--	--	SD-BWI-DP-001
Se	--	--	INTERBED MATERIALS	--	--	R	--	--	2	--	--	--	--	SD-BWI-DP-001
Se	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	1-20	3	--	--	NURE G/CR - 2352
Se	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	0-10	1	--	--	NURE G/CR - 2352
Se	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	O	7.7-9.3	SYN. GRANDE RONDE	--	5-10	--	--	BATCH	RHO-BW-ST-35P
Se	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	O	7.7-9.3	SYN. GRANDE RONDE	--	50-100	--	--	BATCH	RHO-BW-ST-35P
Se	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	O	7.7-9.3	SYN. GRANDE RONDE	--	200-300	--	--	BATCH	RHO-BW-ST-35P
Se	GRANDE RONDE	SCHWANA	UMTANUM	23	--	O	8.9	SYNTHETIC	--	--	5	0.3	BATCH 21 DAYS	RHO-BWI-ST-7
Se	GRANDE RONDE	SCHWANA	UMTANUM	23	--	O	8.9	SYNTHETIC	--	--	4	0.4	BATCH 83 DAYS	RHO-BWI-ST-7
Se	GRANDE RONDE	SCHWANA	UMTANUM	60	--	O	8.45	SYNTHETIC	--	--	9	1	BATCH 11 DAYS	RHO-BWI-ST-7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Se	GRANDE RONDE	SCHWANA	UMTANUM	60	—	O	8.45	SYNTHETIC	--	—	10	1	BATCH 59 DAYS	RHO-BWI-ST-7
Se	GRANDE RONDE	SCHWANA	UMTANUM	150	—	O	8.5	SYNTHETIC	23	—	—	—	BATCH 14 DAYS	RHO-BWI-ST-7
Se	GRANDE RONDE	SCHWANA	UMTANUM	150	--	O	8.5	SYNTHETIC	122	—	—	—	BATCH 48 DAYS	RHO-BWI-ST-7
Se	GRANDE RONDE	SCHWANA	UMTANUM	23	—	R	8.9	SYNTHETIC	--	—	17	4	BATCH 60 DAYS	RHO-BWI-ST-7
Se	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	—	O	8.5	SYNTHETIC	0	—	—	—	BATCH 67 DAYS	RHO-BWI-ST-7
Se	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	60	—	O	8.75	SYNTHETIC	0	—	—	—	BATCH 60 DAYS	RHO-BWI-ST-7
Se	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	R	8.5	SYNTHETIC	3	—	—	—	BATCH 60 DAYS	RHO-BWI-ST-7
Se	SADDLE MOUNTAIN	—	RATTLESNAKE RIDGE	23	--	R	—	CR-2	--	5-10	--	—	BATCH 14 DAYS	RHO-BW-SA-198P
Se	SADDLE MOUNTAIN	—	RATTLESNAKE RIDGE	60	—	R	—	CR-2	--	50-100	—	—	BATCH 14 DAYS	RHO-BW-SA-198P
Se	SADDLE MOUNTAIN	—	RATTLESNAKE RIDGE	85	—	R	—	CR-2	--	200-300	—	—	BATCH 14 DAYS	RHO-BW-SA-198P
Se75	SADDLE MOUNTAIN	POMONA	—	23	2.63 E-13	O	8.0	CR-1	--	—	7.6	0.3	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE	SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Se75	SADDLE MOUNTAIN	POMONA	--	60	2.63 E-13	0	8.0	GR-1	--	--	0.0	--	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Se75	GRANDE RONDE	SCHWANA UMTANUM		23	--	--	--	--	5	--	--	--	BATCH	RHO-BWI-ST-7
Se75	GRANDE RONDE	SCHWANA UMTANUM		--	--	--	--	--	10	--	--	--	BATCH 46-59 DAYS	RHO-BWI-ST-7
Se75	GRANDE RONDE	SCHWANA UMTANUM		150	--	--	--	--	100	--	--	--	BATCH 46-59 DAYS	RHO-BWI-ST-7
Se75	GRANDE RONDE	SCHWANA UMTANUM		23	--	--	--	--	--	--	4	0.4	BATCH 63 DAYS	RHO-BWI-ST-7
Se75	SADDLE MOUNTAIN	POMONA	--	23	--	--	--	--	0	--	--	--	BATCH 63 DAYS	RHO-BWI-ST-7
Se75	GRANDE RONDE	SCHWANA UMTANUM		23	2.63E-13	--	8	GR-1	--	--	5.4	1.3	BATCH CONTACT. 50 DAYS	RHO-BWI-C-108. P.10
Se75	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23	2.6E-13	0	8.0	GR-1	--	--	1.2	0.3	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Se75	SADDLE MOUNTAIN	POMONA	--	23	2.6E-13	0	8.0	GR-1	--	--	2.4	0.7	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: JH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Se75	SADDLE MOUNTAIN	POMONA	--	60	2.6E-13	0	8.0	GR-1	--	--	0	0	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Se75	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	2.6E-13	0	8.0	GR-1	--	--	1.0	0.1	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.12
Se75	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	150	1.74E-12	0	8.0	GR-1	--	--	118	5	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.12
Se75	GRANDE RONDE	SCHWANA	UMTANUM	150	1.74E-12	0	8.0	GR-1	--	--	91	13	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.12
Se75	GRANDE RONDE	SCHWANA	UMTANUM	60	2.63E-13	0	8.0	GR-1	--	--	0	0	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.12
Se75	--	--	BASALT SECONDARY MINERALIZATI ON	--	2.63E-13	0	--	--	--	--	0	--	SALTER, ET.AL. 1981B	SD-BWI-TI-072 P.7
Se75	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	8.0	GR-1	--	--	5.4	1.3	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Se75	GRANDE RONDE	SCHWANA UMTANUM		60	--	--	8.0	GR-1	--	--	0	--	BATCH CONTACT 30 DAYS	RHO-BWI-C-108 PNL-3462 P.10
Se75	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23	--	--	8.0	GR-1	--	--	1.2	0.3	BATCH CONTACT 30 DAYS	RHO-BWI-C-108 PNL-3462 P.10
Se75	GRANDE RONDE	SENTINE FLOW E L BLUFFS		60	--	--	8.0	GR-1	--	--	1.0	0.1	BATCH CONTACT 30 DAYS	RHO-BWI-C-108 PNL-3462 P.10
Se75	SADDLE MOUNTAIN	POMONA	--	60	--	--	8.0	GR-1	--	--	0	--	BATCH CONTACT 30 DAYS	RHO-BWI-C-108 PNL-3462 P.10
Se75	SADDLE MOUNTAIN	POMONA	--	23	--	--	8.0	GR-1	--	--	2.4	0.7	BATCH CONTACT 30 DAYS	RHO-BWI-C-108 PNL-3462 P.10

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-12-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Se75	--	--	SECONDARY MINERALIZATION	23	--	--	8.0	GR-1	--	--	7.6	0.3	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10
Se75	--	--	SECONDARY MINERALIZATION	60	--	--	8.0	GR-1	--	--	0	--	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10
Se75	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	--	--	5	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Se75	GRANDE RONDE	SCHWANA	UMTANUM	60	--	--	--	--	--	--	10	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Se75	GRANDE RONDE	SCHWANA	UMTANUM	150	--	--	--	--	--	--	100	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Se75	GRANDE RONDE	SCHWANA	UMTANUM	23	2.6E-13	0	8.0	GR-1	--	--	5.4	1.3	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Se79	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	60	--	0	--	--	--	--	2.0	0.9	BATCH 60 DAYS	RHO-BW-ST-21P

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Se79	GRANDE RONDE	SCHWANA	URTANUM SURFACE OUTCROP	60	--	R	--	--	--	--	7.2	3.0	BATCH 60 DAYS	RHO-SW-ST-21P
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	1.09E-13	O	10.0	GR-2	--	--	7.0	0.3	BATCH CONTACT	RHO-SWI-LD-48
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	1.09E-13	O	10.0	GR-2	--	--	3.0	0.4	BATCH CONTACT	RHO-SWI-LD-48
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	1.98-E13	R	10.0	GR-2	--	--	4.9	0.2	BATCH CONTACT	RHO-SWI-LD-48
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	1.98E-13	R	10.0	GR-2	--	--	4.7	0.2	BATCH CONTACT	RHO-SWI-LD-48
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	1.84E-13	R	8.0	GR-1	--	--	4.2	0.4	BATCH CONTACT	RHO-SWI-LD-48
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	1.84E-13	R	8.0	GR-1	--	--	5.3	0.9	BATCH CONTACT	RHO-SWI-LD-48
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	1.09E-13	O	8.0	GR-1	--	--	2.0	0.2	BATCH CONTACT	RHO-SWI-LD-48
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	1.09-E13	O	8.0	GR-1	--	--	1.7	0.3	BATCH CONTACT	RHO-SWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	2.16E-13	0	10.0	GR-2	--	--	3.0	0.4	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	2.16E-13	0	10.0	GR-2	--	--	3.0	0.3	BATCH CONTACT	RHO-BWI-LD-48
Se79	SADDLE MOUNTAIN	POMONA	--	23	2.16E-13	0	10.0	GR-2	--	--	9.0	0.3	BATCH CONTACT	RHO-BWI-LD-48
Se79	SADDLE MOUNTAIN	POMONA	--	60	2.16E-13	0	10.0	GR-2	--	--	9.2	0.9	BATCH CONTACT	RHO-BWI-LD-48
Se79	SADDLE MOUNTAIN	POMONA	--	23	1.09E-13	0	8.0	GR-1	--	--	2.0	0.3	BATCH CONTACT	RHO-BWI-LD-48
Se79	SADDLE MOUNTAIN	POMONA	--	60	1.09E-13	0	8.0	GR-1	--	--	1.6	0.3	BATCH CONTACT	RHO-BWI-LD-48
Se79	SADDLE MOUNTAIN	POMONA	--	23	1.09E-13	0	8.0	GR-1	--	--	2.0	0.2	BATCH CONTACT	RHO-BWI-LD-48
Se79	SADDLE MOUNTAIN	POMONA	--	60	1.09E-13	0	8.0	GR-1	--	--	2.0	0.3	BATCH CONTACT	RHO-BWI-LD-48
Se79	SADDLE MOUNTAIN	POMONA	--	23	1.09E-13	0	10.0	GR-2	--	--	9.0	0.3	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: CH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Se79	SADDLE MOUNTAIN	POMONA	--	60	1.09E-13	O	10.0	GR-2	--	--	9.0	0.3	BATCH CONTACT	RHO-BWI-LD-48
Se79	SADDLE MOUNTAIN	POMONA	--	23	1.84E-13	R	8.0	GR-1	--	--	14.9	1.9	BATCH CONTACT	RHO-BWI-LD-48
Se79	SADDLE MOUNTAIN	POMONA	--	60	1.84E-13	R	8.0	GR-1	--	--	16.3	2.2	BATCH CONTACT	RHO-BWI-LD-48
Se79	SADDLE MOUNTAIN	POMONA	--	23	1.98E-13	R	10.0	GR-2	--	--	18.2	0.6	BATCH CONTACT	RHO-BWI-LD-48
Se79	SADDLE MOUNTAIN	POMONA	--	60	1.98E-13	R	10.0	GR-2	--	--	16.1	0.2	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	4	2-9	--	--	BEST ESTIMATE	RHO-BWI-LD-48
Se79	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	8	3-18	--	--	BEST ESTIMATE	RHO-BWI-LD-48
Se79	--	--	CRUSHED BASALT	60	1.09E-13	O	--	--	--	--	2.0	0.9	WOOD, ET. AL. 1982	SD-BWI-TI-072 P.5
Se79	--	--	CRUSHED BASALT	60	1.98E-13	R	--	--	--	--	7.2	3.0	WOOD, ET. AL. 1982	SD-BWI-TI-072 P.5

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: [illegible] DATE: [illegible]

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Se79	GRANDE RONDE	SCHWANA UMTANUM	23	1.09E-13	0	8.0	GR-1	--	--	3.0	0.5	BATCH CONTACT 30 DAYS	RHO-BWI-LD-48 P.12
Se79	GRANDE RONDE	SCHWANA UMTANUM	23	2.16E-13	0	10.0	GR-2	--	--	2.0	0.9	BATCH CONTACT 30 DAYS	RHO-BWI-LD-48 P.12
Se79	GRANDE RONDE	SCHWANA UMTANUM	60	1.09E-13	0	8.0	GR-1	--	--	3.0	0.3	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SCHWANA UMTANUM	60	2.16E-13	0	10.0	GR-2	--	--	2.1	0.3	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SCHWANA UMTANUM	23	1.09E-13	0	10.0	GR-2	--	--	4.0	1.0	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SCHWANA UMTANUM	60	1.09E-13	0	10.0	GR-2	--	--	2.0	0.9	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SCHWANA UMTANUM	23	1.09E-13	0	8.0	GR-1	--	--	4.0	1.2	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SCHWANA UMTANUM	60	1.09E-13	0	8.0	GR-1	--	--	3.0	0.5	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SCHWANA UMTANUM	23	1.84E-13	R	8.0	GR-1	--	--	3.6	0.4	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: L.H DATE: 10-22-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Se79	GRANDE RONDE	SCHWANA	UMTANUM	60	1.84E-13	R	8.0	GR-1	--	--	6.6	1.3	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SCHWANA	UMTANUM	23	1.98E-13	R	10.0	GR-2	--	--	3.5	0.5	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SCHWANA	UMTANUM	60	1.98E-13	R	10.0	GR-2	--	--	7.2	3.0	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	1.09E-13	O	8.0	GR-1	--	--	1.0	0.4	BATCH CONTACT	RHO-BWI-LD-48
Se79	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	1.09E-13	O	8.0	GR-1	--	--	3.0	0.4	BATCH CONTACT	RHO-BWI-LD-48
Sm	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	50	--	--	--	--	SD-BWI-DP-001
Sm	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001
Sm	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	50-200	100	--	--	NURE G/CR-2352
Sm	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	50-200	100	--	--	NURE G/CR-2352

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: CD DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sm	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	190-231000	500	--	--	NURE G/CR - 2352
Sn	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	100	--	--	--	--	SD-BWI-DP-001 P.7
Sn	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	10	--	--	--	--	SD-BWI-DP-001 P.7
Sr	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	170	--	--	--	--	SD-BWI-DP-001
Sr	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001
Sr	--	--	SECONDARY MINERALS	--	--	O	--	--	200	--	--	--	--	SD-BWI-DP-001
Sr	--	--	SECONDARY MINERALS	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001
Sr	--	--	INTERBED MATERIALS	--	--	O	--	--	340	--	--	--	--	SD-BWI-DP-001
Sr	--	--	INTERBED MATERIALS	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 12-13-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sr	FRESH BASALT ENV.	--	--	60	--	0	--	GR-2	--	60-200	100	--	--	NURE G/CR - 2352
Sr	FRESH BASALT ENV.	--	--	60	--	0	--	GR-2	--	2-10	3	--	--	NURE G/CR - 2352
Sr	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	100-400	100	--	--	NURE G/CR - 2352
Sr	ALTERED BASALT ENV.	--	--	--	--	0	--	GR-1	--	230-480	300	--	--	NURE G/CR - 2352
Sr	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	0	8.6-9.0	SYN. GRANDE RONDE	--	500-600	--	--	BATCH	RHO-BW-ST-35P
Sr	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	0	8.6-9.0	SYN. GRANDE RONDE	--	600-700	--	--	BATCH	RHO-BW-ST-35P
Sr	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	0	8.6-9.0	SYN. GRANDE RONDE	--	200-600	--	--	BATCH	RHO-BW-ST-35P
Sr	GRANDE RONDE	SCHWANA	UMTANUM	23	--	0	8.4	SYNTHETIC	--	--	92	2	BATCH 31 DAYS	RHO-BWI-ST-7
Sr	GRANDE RONDE	SCHWANA	UMTANUM	23	--	0	8.4	SYNTHETIC	--	--	103	3	BATCH 83 DAYS	RHO-BWI-ST-7
Sr	GRANDE RONDE	SCHWANA	UMTANUM	60	--	0	8.95	SYNTHETIC	--	--	82	10	BATCH 11 DAYS	RHO-BWI-ST-7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-22-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sr	GRANDE RONDE	SCHWANA	UMTANUM	60	--	0	8.95	SYNTHETIC	--	--	240	40	BATCH 59 DAYS	RHO-BWI-ST-7
Sr	GRANDE RONDE	SCHWANA	UMTANUM	150	--	0	8.9	SYNTHETIC	100	--	--	--	BATCH 14 DAYS	RHO-BWI-ST-7
Sr	GRANDE RONDE	SCHWANA	UMTANUM	150	--	0	8.9	SYNTHETIC	90	--	--	--	BATCH 48 DAYS	RHO-BWI-ST-7
Sr	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	0	8.55	SYNTHETIC	--	--	440	20	BATCH 37 DAYS	RHO-BWI-ST-7
Sr	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	0	8.55	SYNTHETIC	--	--	480	125	BATCH 67 DAYS	RHO-BWI-ST-7
Sr	SADDLE MOUNTIAN	POMONA	SECONDARY MINERALS	60	--	0	8.8	SYNTHETIC	--	--	500	170	BATCH 37 DAYS	RHO-BWI-ST-7
Sr	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	60	--	0	8.8	SYNTHETIC	--	--	250	40	BATCH 67 DAYS	RHO-BWI-ST-7
Sr	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	0	--	GR-2	--	500-600	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Sr	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	0	--	GR-2	--	600-700	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Sr	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	0	--	GR-2	--	200-600	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Sr85	SADDLE MOUNTAIN	POMONA	--	23	9.54 E-12	0	8.0	GR-1	--	--	274	16	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sr85	SADDLE MOUNTAIN	POMONA	--	60	5.54 E-12	0	8.0	GR-1	--	--	339	5	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.00 E-10	0	8.0	GR-1	--	--	451	103	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.00 E-10	0	10.0	GR-2	--	--	249	49	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.00 E-4	0	8.0	GR-1	--	--	266	40	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.00 E-6	0	8.0	GR-1	--	--	357	82	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.00 E-8	0	8.0	GR-1	--	--	305	34	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.00 E-12	0	8.0	GR-1	--	--	372	116	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10 03 84
QA BY: LH DATE: 10 29 84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.00 E-4	0	8.0	GR-1	--	--	470	161	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.00 E-6	0	8.0	GR-1	--	--	599	110	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.00E-8	0	8.0	GR-1	--	--	942	620	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.00E-10	0	8.0	GR-1	--	--	380	62	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.00E-12	0	8.0	GR-1	--	--	1078	129	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.00E-4	0	10.0	GR-2	--	--	223	50	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.00E-6	0	10.0	GR-2	--	--	215	58	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: [illegible] DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.00E-8	0	10.0	GR-2	--	--	214	41	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.00E-10	0	10.0	GR-2	--	--	249	49	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.00E-12	0	10.0	GR-2	--	--	343	62	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.00E-4	0	10.0	GR-2	--	--	304	83	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.00E-6	0	10.0	GR-2	--	--	275	22	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.00E-8	0	10.0	GR-2	--	--	273	50	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.00E-10	0	10.0	GR-2	--	--	226	24	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: [illegible] DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.00E-12	0	10.0	GR-2	--	--	239	32	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.17
Sr85	HANFORD SEDIMENTS	--	--	--	--	0	--	--	--	--	50	--	--	RHO-BWI-LD-43 P.18
Sr85	HANFORD SEDIMENTS	--	--	--	--	0	--	--	--	<1-170	--	--	--	RHO-BWI-LD-43 P.18
Sr85	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	60	--	0	--	SYN. GRANDE RONDE	--	--	174	26	BATCH 60 DAYS	RHO-BW-ST-21P
Sr85	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	103	--	--	--	BATCH 46-59 DAYS	RHO-BWI-ST-7
Sr85	GRANDE RONDE	SCHWANA	UMTANUM	60	--	--	--	--	237	--	--	--	BATCH 46-59 DAYS	RHO-BWI-ST-7
Sr85	GRANDE RONDE	SCHWANA	UMTANUM	150	--	--	--	--	400	--	--	--	BATCH 46-59 DAYS	RHO-BWI-ST-7
Sr85	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	--	--	105	3	BATCH 63 DAYS	RHO-BWI-ST-7
Sr85	SADDLE MOUNTAIN	POMONA	--	23	--	--	--	--	--	--	137	7	BATCH 63 DAYS	RHO-BWI-ST-7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sr85	GRANDE RONDE	SCHWANA UMTANUM		23	--	--	8.0	GR-1	--	--	105	4	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 ANL 3462 P.10
Sr85	GRANDE RONDE	SCHWANA UMTANUM		60	--	--	830	GR-1	--	--	122	3	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 ANL 3462 P.10
Sr85	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23	--	--	8.0	GR-1	--	--	91	5	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 ANL 3462 P.10
Sr85	GRANDE RONDE	SENTINE FLOW E L BLUFFS		60	--	--	8.0	GR-1	--	--	104	1	BATCH CONTACT	RHO-BWI-C-108 ANL 3462 P.10
Sr85	SADDLE MOUNTAIN	POMONA	->	23	--	--	8.0	GR-1	--	--	121	9	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 ANL 3462 P.10

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: JH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sr85	SADDLE MOUNTAIN	POMONA	--	60	--	--	8.0	GR-1	--	--	130	4	BATCH CONTACT	RHO-BWI-C-108 ANL 3462 P.10
Sr85	--	--	SECONDARY MINERALIZATION	23	--	--	8.0	GR-1	--	--	274	16	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 ANL 3462 P.10
Sr85	--	--	SECONDARY MINERALIZATION	60	--	--	8.0	GR-1	--	--	339	5	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 ANL 3462 P.10
Sr85	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	103	--	--	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Sr85	GRANDE RONDE	SCHWANA	UMTANUM	60	--	--	--	--	237	--	--	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Sr85	GRANDE RONDE	SCHWANA	UMTANUM	150	--	--	--	--	>400	--	--	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: JP DATE: 10-03-84
QA BY: LH DATE: 10-24-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sr85	GRANDE RONDE	SCHWANA	URTANUM	23	5.54E-12	0	8.0	GR-1	--	--	105	4	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P. 11
Sr85	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	5.54E-12	0	8.0	GR-1	--	--	91	5	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P. 11
Sr85	SADDLE MOUNTAIN	POMONA	--	23	5.54E-12	0	8.0	GR-1	--	--	121	9	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P. 11
Sr85	SADDLE MOUNTAIN	POMONA	--	60	5.54E-12	0	8.0	GR-1	--	--	130	4	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P. 12
Sr85	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	5.54E-12	0	8.0	GR-1	--	--	104	1	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P. 12
Sr85	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	150	1.26E-12	0	8.0	GR-1	--	--	83	6	BATCH CONTACT 55-60 DAYS	RHO-BWI-LD-48 P. 11
Sr85	GRANDE RONDE	SCHWANA	URTANUM	150	1.26E-12	0	8.0	GR-1	--	--	>1000	--	BATCH CONTACT 55-60 DAYS	RHO-BWI-LD-48 P. 11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: ZH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE	SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sr85	GRANDE RONDE	SCHWANA UMTANUM		60	5.54E-12	0	8.0	GR-1	--	--	122	3	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Sr85	GRANDE RONDE	SCHWANA UMTANUM		23	1.0E-12	0	8.0	GR-1	--	--	158	26	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Sr85	GRANDE RONDE	SCHWANA UMTANUM		60	1.0E-12	0	8.0	GR-1	--	--	150	22	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Sr85	GRANDE RONDE	SCHWANA UMTANUM		23	1.0E-12	0	10.0	GR-2	--	--	133	16	BATCH CONTACT	RHO-BWI-LD-48
Sr85	GRANDE RONDE	SCHWANA UMTANUM		60	1.0E-12	0	10.0	GR-2	--	--	174	26	BATCH CONTACT	RHO-BWI-LD-48
Sr85	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23	1.0E-12	0	10.0	GR-2	--	--	174	16	BATCH CONTACT	RHO-BWI-LD-48
Sr85	GRANDE RONDE	SENTINE FLOW E L BLUFFS		60	1.0E-12	0	10.0	GR-2	--	--	178	72	BATCH CONTACT	RHO-BWI-LD-48
Sr85	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23	1.0E-12	0	8.0	GR-1	--	--	178	27	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Sr85	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	1.0E-12	0	8.0	GR-1	--	--	141	21	BATCH CONTACT	RHO-BWI-LD-48
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.0E-12	0	8.0	GR-1	--	--	164	21	BATCH CONTACT	RHO-BWI-LD-48
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.0E-12	0	8.0	GR-1	--	--	149	22	BATCH CONTACT	RHO-BWI-LD-48
Sr85	SADDLE MOUNTAIN	POMONA	--	23	1.0E-12	0	10.0	GR-2	--	--	185	23	BATCH CONTACT	RHO-BWI-LD-48
Sr85	SADDLE MOUNTAIN	POMONA	--	60	1.0E-12	0	10.0	GR-2	--	--	178	27	BATCH CONTACT	RHO-BWI-LD-48
Sr85	GRANDE RONDE	SCHWANA	UMTANUM	--	--	0	--	--	170	--	--	--	BEST ESTIMATE	RHO-BWI-LD-48
Sr85	--	--	BASALT SECONDARY MINERALIZATI ON	--	5.54E-12	0	--	--	--	--	339	5	GALTER, ET. AL. 1981B	SD-BWI-TI-072 P.7
Sr90	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	--	--	--	7.9	SYN. PATERSON WA	151	--	--	18	BATCH	RHO-ST-4
Tc	GRANDE RONDE	SCHWANA	UMTANUM	--	--	0	--	--	0	--	--	--	--	SD-BWI-DP-001 P.7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 11-07-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Tc	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	29	--	--	--	--	SD-BWI-DP-001 P.7
Tc	--	--	SECONDARY MINERALS	--	--	O	--	--	0	--	--	--	--	SD-BWI-DP-001 P.7
Tc	--	--	SECONDARY MINERALS	--	--	R	--	--	50	--	--	--	--	SD-BWI-DP-001 P.7
Tc	--	--	INTERBED MATERIALS	--	--	O	--	--	0	--	--	--	--	SD-BWI-DP-001 P.7
Tc	--	--	INTERBED MATERIALS	--	--	R	--	--	70	--	--	--	--	SD-BWI-DP-001 P.7
Tc	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	0-10	0	--	--	NUREG/CR-2352
Tc	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	3-4500	50	--	--	NUREG/CR-2352
Tc	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	1-6	1	--	--	NUREG/CR-2352

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: JH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR FLOW SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Tc	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	O	7.7-9.3	SYN. GRANDE RONDE	--	100-1400	--	--	BATCH	RHO-BW-ST-35P
Tc	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	O	7.7-9.3	SYN. GRANDE RONDE	--	30-100	--	--	BATCH	RHO-BW-ST-35P
Tc	SADDLE MOUNTIAN	--	RATTLESNAKE RIDGE	85	--	O	7.7-9.3	SYN. GRANDE RONDE	--	40-80	--	--	BATCH	RHO-BW-ST-35P
Tc	GRANDE RONDE	SCHWANA	UMTANUM	23	--	O	9.0	SYNTHETIC	--	--	15	5	BATCH 31 DAYS	RHO-BWI-ST-7
Tc	GRANDE RONDE	SCHWANA	UMTANUM	23	--	O	9.0	SYNTHETIC	--	--	12	3	BATCH 83 DAYS	RHO-BWI-ST-7
Tc	GRANDE RONDE	SCHWANA	UMTANUM	23	--	R	9.0	SYNTHETIC	4000	--	--	--	BATCH 60 DAYS	RHO-BWI-ST-7
Tc	GRANDE RONDE	SCHWANA	UMTANUM	60	--	O	8.4	SYNTHETIC	--	--	40	15	BATCH 11 DAYS	RHO-BWI-ST-7
Tc	GRANDE RONDE	SCHWANA	UMTANUM	60	--	O	8.4	SYNTHETIC	--	--	40	25	BATCH 59 DAYS	RHO-BWI-ST-7
Tc	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	O	8.3	SYNTHETIC	0	--	--	--	BATCH 67 DAYS	RHO-BWI-ST-7
Tc	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	60	--	O	8.5	SYNTHETIC	0	--	--	--	BATCH 67 DAYS	RHO-BWI-ST-7
Tc	SADDLE MOUNTAIN	POMONA	SECONDARY MINERALS	23	--	R	8.3	SYNTHETIC	0	--	--	--	BATCH 60 DAYS	RHO-BWI-ST-7

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-94
QA BY: LH DATE: 10-24-94

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Tc	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	R	--	GR-2	--	100-1400	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Tc	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	R	--	GR-2	--	30-100	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Tc	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	R	--	GR-2	--	60-80	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
Tc99	SADDLE MOUNTAIN	POMONA	--	23	6.55E-8	O	8.0	GR-1	--	--	0	--	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Tc99	SADDLE MOUNTAIN	POMONA	--	60	6.55E-8	O	8.0	GR-1	--	--	0	--	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Tc99	SADDLE MOUNTAIN	POMONA	--	23	6.55E-8	O	10.0	GR-2	--	--	0	--	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
Tc99	HANFORD SEDIMENTS	--	--	--	--	--	--	--	--	--	0	--	--	RHO-BWI-LD-43 P.22
Tc99	GRANDE RONDE	SCHWANA	UMTANUM SURFACE OUTCROP	60	--	O	--	--	--	--	0.9	0.7	BATCH 60 DAYS	RHO-BW-ST-21P

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SD DATE: 10-19-84
QA BY: [illegible] DATE: 10-24-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE	SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	13	--	--	--	BATCH 46-59 DAYS	RHO-BWI-ST-7
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	60	--	--	--	--	36	--	--	--	BATCH 46-59 DAYS	RHO-BWI-ST-7
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	23	--	--	--	--	--	--	12	3	BATCH 83 DAYS	RHO-BWI-ST-7
Tc99	SADDLE MOUNTAIN	POMONA	--	23	--	--	--	--	0	--	--	--	BATCH 83 DAYS	RHO-BWI-ST-7
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	23	2.62E-7	0	8.0	GR-1	--	--	3.9	2.6	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	60	2.62E-7	0	8.0	GR-1	--	--	4.2	2.4	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	23	1.96E-7	0	8.0	GR-1	--	--	2.2	1.4	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	60	1.96E-7	0	8.0	GR-1	--	--	1.6	0.9	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	23	7.10E-7	0	8.0	GR-1	--	--	2.5	1.7	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	60	7.10E-7	0	8.0	GR-1	--	--	1.3	1.0	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: [illegible] DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE	SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Tc99	GRANDE RONDE	SCHWANA UMTANUM		23	7.10E-7	0	10.0	GR-2	--	--	1.6	0.7	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA UMTANUM		60	7.10E-7	0	10.0	GR-2	--	--	0.9	0.5	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA UMTANUM		23	1.96E-7	0	10.0	GR-2	--	--	1.7	0.4	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA UMTANUM		60	1.96E-7	0	10.0	GR-2	--	--	0.7	0.7	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA UMTANUM		23	2.62E-7	0	10.0	GR-2	--	--	1.7	0.3	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA UMTANUM		60	2.62E-7	0	10.0	GR-2	--	--	0.5	0.7	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA UMTANUM		23	6.55E-8	0	8.0	GR-1	--	--	26.8	21.9	BATCH CONTACT 30 DAYS	RHO-BWI-LD-48 P.11
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23-60	6.55E-8	0	8.0	GR-1	--	--	0	0	BATCH CONTACT 30 DAYS	RHO-BWI-LD-48 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Tc99	--	--	BASALT SECONDARY MINERALIZATION	--	6.55E-8	0	--	--	--	--	0	--	SALTER, ET. AL. 1981B	SD-BWI-TI-072 P. 7
Tc99	SADDLE MOUNTAIN	POMONA	--	23	6.55E-8	0	8.0	GR-1	--	--	0	0	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P. 11
Tc99	SADDLE MOUNTAIN	POMONA	--	60	6.55E-8	0	8.0	GR-1	--	--	0	0	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P. 11
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	60	6.55E-8	0	8.0	GR-1	--	--	25.5	5.2	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P. 11
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	23	3.27E-7	R	10.0	GR-2	--	--	29.4	2.5	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P. 11
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	23	1.96E-7	0	10.0	GR-2	--	--	2.5	1.7	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P. 11
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	60	6.55E-8	0	10.0	GR-2	--	--	0.9	0.7	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P. 11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 11-07-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Tc99	GRANDE RONDE	SCHWANA UMTANUM	23	6.55E-8	0	10.0	GR-2	--	--	1.3	.04	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Tc99	GRANDE RONDE	SCHWANA UMTANUM	23	6.55E-8	0	8.0	GR-1	--	--	5.6	3.5	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Tc99	GRANDE RONDE	SCHWANA UMTANUM	60	6.55E-8	0	8.0	GR-1	--	--	3.0	2.3	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS	23	6.55E-8	0	8.0	GR-1	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS	60	6.55E-8	0	8.0	GR-1	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS	23	6.55E-8	0	10.0	GR-2	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS	60	6.55E-8	0	10.0	GR-2	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS	23	1.96E-7	0	10.0	GR-2	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SD DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Tc99	SADDLE MOUNTAIN	POMONA	--	23	1.96E-7	0	10.0	GR-2	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	SADDLE MOUNTAIN	POMONA	--	23	6.55E-8	0	10.0	GR-2	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	SADDLE MOUNTAIN	POMONA	--	60	6.55E-8	0	10.0	GR-2	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	SADDLE MOUNTAIN	POMONA	--	23	6.55E-8	0	8.0	GR-1	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	SADDLE MOUNTAIN	POMONA	--	60	6.55E-8	0	8.0	GR-1	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SCHWANA UMTANUM		23	--	--	8.0	GR-1	--	--	26.8	21.9	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10
Tc99	GRANDE RONDE	SCHWANA UMTANUM		60	--	--	8.0	GR-1	--	--	25.5	5.2	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SD DATE: 10-07-84
QA BY: LH DATE: 10-24-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE	SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23-60	--	--	8.0	GR-1	--	--	0	--	BATCH CONTACT 50 DAYS	RHO-BWI-C-108 PNL-3462 P.10
Tc99	GRANDE RONDE	SCHWANA UMTANUM		23	--	--	--	--	--	--	13	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Tc99	GRANDE RONDE	SCHWANA UMTANUM		60	--	--	--	--	--	--	36	--	BATCH CONTACT 46-59 DAYS	RHO-BWI-LD-47 P.11
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23	2.62E-7	0	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23	1.96E-7	0	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS		23	7.10E-7	0	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS		60	2.62E-7	0	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48
Tc99	GRANDE RONDE	SENTINE FLOW E L BLUFFS		60	1.96E-7	0	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-07-94
QA BY: LH DATE: 10-29-94

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Tc99	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	7.10E-7	O	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-SWI-LD-48
Tc99	SADDLE MOUNTAIN	POMONA	--	23	2.62E-7	O	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-SWI-LD-48
Tc99	SADDLE MOUNTAIN	POMONA	--	23	1.96E-7	O	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-SWI-LD-48
Tc99	SADDLE MOUNTAIN	POMONA	--	23	7.10E-7	O	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-SWI-LD-48
Tc99	SADDLE MOUNTAIN	POMONA	--	60	2.62E-7	O	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-SWI-LD-48
Tc99	SADDLE MOUNTAIN	POMONA	--	60	1.96E-7	O	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-SWI-LD-48
Tc99	SADDLE MOUNTAIN	POMONA	--	60	7.10E-7	O	8 & 10	GR-1 & GR-2	--	--	0	0	BATCH CONTACT	RHO-SWI-LD-48
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	0	0-1	--	--	BEST ESTIMATE	RHO-SWI-LD-48
Tc99	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	29	--	--	--	BEST ESTIMATE	RHO-SWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
Tc99	--	--	CRUSHED BASALT	60	6.55	O	--	--	--	--	0.9	0.7	WOOD, ET. AL.	SD-BWI-TI-72 P.5
Th	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	500	--	--	--	--	SD-BWI-DP-001
Th	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	50-200	100	--	--	NURE G/CR - 2352
Th	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	50-200	100	--	--	NURE G/CR - 2352
Th	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	190-251000	500	--	--	NURE G/CR - 2352
U	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	6	--	--	--	--	SD-BWI-DP-001
U	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	40	--	--	--	--	SD-BWI-DP-001
U	--	--	SECONDARY MINERALS	--	--	O	--	--	70	--	--	--	--	--
U	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	O	7.7-9.3	SYN. RONDE GRANDE	--	30-40	--	--	BATCH	RHO-BW-ST-35P

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-22-84
QA BY: ZH DATE: 10-22-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
U	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	O	7.7-9.3	SYN. GRANDE RONDE	--	100-300	--	--	BATCH	RHO-BW-ST-35P
U	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	O	7.7-9.3	SYN. GRANDE RONDE	--	60-300	--	--	BATCH	RHO-BW-ST-35P
U	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	3-70	8	--	--	NURE G/CR - 2352
U	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	38-52	30	--	--	NURE G/CR - 2352
U	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	12-3030	20	--	--	NURE G/CR - 2352
U	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	23	--	R	--	GR-2	--	30-40	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
U	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	60	--	R	--	GR-2	--	100-300	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
U	SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	85	--	R	--	GR-2	--	60-300	--	--	BATCH 14 DAYS	RHO-BW-SA-198P
U233	SADDLE MOUNTAIN	POMONA	--	23	1.00E-7	O	8.0	GR-1	--	--	76	31	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
U233	SADDLE MOUNTAIN	POMONA	--	60	1.00E-7	0	8.0	GR-1	--	--	1450	297	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
U233	SADDLE MOUNTAIN	POMONA	--	23	8.16E-9	0	8.0	GR-1	--	--	147	70	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
U233	SADDLE MOUNTAIN	POMONA	--	23	8.16E-9	0	10.0	GR-2	--	--	72	2	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
U233	SADDLE MOUNTAIN	POMONA	--	23	1.00E-4	0	8.0	GR-1	--	--	27	2	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
U233	SADDLE MOUNTAIN	POMONA	--	23	1.00E-5	0	8.0	GR-1	--	--	39	5	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
U233	SADDLE MOUNTAIN	POMONA	--	23	1.00E-6	0	8.0	GR-1	--	--	127	7	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
U233	SADDLE MOUNTAIN	POMONA	--	60	1.00E-4	0	8.0	GR-1	--	--	363	311	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
U233	SADDLE MOUNTAIN	POMONA	--	60	1.00E-5	0	8.0	GR-1	--	--	1007	127	BATCH CONTACT 50 DAYS	RHO-BWI-LD-43 P.9
U233	SADDLE MOUNTAIN	POMONA	--	60	1.00E-6	0	8.0	GR-1	--	--	1032	830	BATCH CONTACT	RHO-BWI-LD-43 P.12
U233	SADDLE MOUNTAIN	POMONA	--	23	1.00E-4	0	10.0	GR-2	--	--	12	0.4	EXIT	RHO-BWI-LD-43 P.12
U233	SADDLE MOUNTAIN	POMONA	--	23	1.00E-5	0	10.0	GR-2	--	--	42	18	BATCH CONTACT	RHO-BWI-LD-43 P.12
U233	SADDLE MOUNTAIN	POMONA	--	23	1.00E-6	0	10.0	GR-2	--	--	48	38	BATCH CONTACT	RHO-BWI-LD-43 P.12
U233	SADDLE MOUNTAIN	POMONA	--	23	1.00E-7	0	10.0	GR-2	--	--	22	1	BATCH CONTACT	RHO-BWI-LD-43 P.12
U233	SADDLE MOUNTAIN	POMONA	--	60	1.00E-4	0	10.0	GR-2	--	--	1042	433	BATCH CONTACT	RHO-BWI-LD-43 P.12

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SD DATE: 10-07-84
QA BY: ZH DATE: 12-28-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
U233	SADDLE MOUNTAIN	POMONA	--	60	1.00E-5	0	10.0	GR-2	--	--	771	279	BATCH CONTACT	RHO-BWI-LD-43 P.12
U233	SADDLE MOUNTAIN	POMONA	--	60	1.00E-6	0	10.0	GR-2	--	--	1168	333	BATCH CONTACT	RHO-BWI-LD-43 P.12
U233	GRANDE RONDE	SCHWANA	UNTANUM SURFACE OUTCROP	60	--	0	--	--	--	--	12	3	BATCH 60 DAYS	RHO-BW-ST-21P
U233	GRANDE RONDE	SCHWANA	UNTANUM SURFACE OUTCROP	60	--	R	--	--	--	--	65	9	BATCH 60 DAYS	RHO-BW-ST-21P
U233	GRANDE RONDE	SCHWANA	UNTANUM	23	2.15E-6	0	8.0	GR-1	--	--	56	11	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
U233	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	2.15E-8	0	8.0	GR-1	--	--	13	1	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
U233	SADDLE MOUNTAIN	POMONA	--	23	2.15E-6	0	8.0	GR-1	--	--	16	2	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
U233	SADDLE MOUNTAIN	POMONA	--	60	2.15E-8	0	8.0	GR-1	--	--	116	22	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-12-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
U233	GRANDE RONDE	SENTINE FLOW E L BLUFFS	60	2.15E-8	0	8.0	GR-1	--	--	52	5	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
U233	GRANDE RONDE	SENTINE FLOW E L BLUFFS	300	5.04E-7	0	8.0	GR-1	--	--	>10000	--	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.11
U233	GRANDE RONDE	SCHWANA UMTANUM	150	1.95E-6	0	8.0	GR-1	--	--	2807a	--	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.11
U233	GRANDE RONDE	SCHWANA UMTANUM	300	5.11E-7	0	8.0	GR-1	--	--	>21500a	--	BATCH CONTACT 55-65 DAYS	RHO-BWI-LD-48 P.11
U233	GRANDE RONDE	SCHWANA UMTANUM	60	2.15E-8	0	8.0	GR-1	--	--	103	12	BATCH CONTACT 50 DAYS	RHO-BWI-LD-48 P.11
U233	GRANDE RONDE	SCHWANA UMTANUM	23	8.16E-9	0	8.0	GR-1	--	--	56	11	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA UMTANUM	23	8.16E-9	0	10.0	GR-2	--	--	2.8	0.9	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA UMTANUM	60	1.07E-6	0	8.0	GR-1	--	--	70	8	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: JP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE	SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
U233	GRANDE RONDE	SCHWANA	UMTANUM	60	1.07E-6	O	10.0	GR-2	--	--	12	3	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA	UMTANUM	23	2.45E-7	R	10.0	GR-2	--	--	53	6	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA	UMTANUM	23	1.00E-7	O	10.0	GR-2	--	--	2.5	0.9	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA	UMTANUM	60	2.45E-7	R	10.0	GR-2	--	--	65	9	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA	UMTANUM	60	1.00E-7	O	10.0	GR-2	--	--	12	3	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA	UMTANUM	23	2.45E-7	R	8.0	GR-1	--	--	190	10	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA	UMTANUM	23	2.45E-7	R	8.0	GR-1	--	--	171	17	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA	UMTANUM	23	1.00E-7	O	8.0	GR-1	--	--	20	1	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA	UMTANUM	60	1.00E-7	O	8.0	GR-1	--	--	91	21	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR FLOW OR SEQUENCE SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
U233	GRANDE RONDE	SENTINE FLOW E L BLUFFS	23	1.00E-7	O	8.0	GR-1	--	--	2.9	0.2	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SENTINE FLOW E L BLUFFS	60	1.00E-7	O	8.0	GR-1	--	--	26	2	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SENTINE FLOW E L BLUFFS	23	1.00E-7	O	10.0	GR-2	--	--	0.2	0.5	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SENTINE FLOW E L BLUFFS	60	1.00E-7	O	10.0	GR-2	--	--	1.6	0.3	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SENTINE FLOW E L BLUFFS	23	2.45E-7	R	10.0	GR-2	--	--	17	2	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SENTINE FLOW E L BLUFFS	60	2.45E-7	R	10.0	GR-2	--	--	19	1	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SENTINE FLOW E L BLUFFS	23	2.45E-7	R	10.0	GR-1	--	--	61	3	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SENTINE FLOW E L BLUFFS	60	2.45E-7	R	10.0	GR-1	--	--	62	3	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SENTINE FLOW E L BLUFFS	23	8.16E-9	O	8.0	GR-1	--	--	13	1	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: JP DATE: 10-02-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
U233	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	23	8.16E-9	0	10.0	GR-2	--	--	1.0	0.2	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	1.07E-6	0	8.0	GR-1	--	--	23	6	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SENTINE L BLUFFS	FLOW E	60	1.07E-6	0	10.0	GR-2	--	--	1.6	0.3	BATCH CONTACT	RHO-BWI-LD-48
U233	SADDLE MOUNTAIN	POMONA	--	60	1.07E-6	0	8.0	GR-1	--	--	57	1	BATCH CONTACT	RHO-BWI-LD-48
U233	SADDLE MOUNTAIN	POMONA	--	60	1.07E-6	0	10.0	GR-2	--	--	15	3	BATCH CONTACT	RHO-BWI-LD-48
U233	SADDLE MOUNTAIN	POMONA	--	23	8.16E-9	0	8.0	GR-1	--	--	16	2	BATCH CONTACT	RHO-BWI-LD-48
U233	SADDLE MOUNTAIN	POMONA	--	23	8.16E-9	0	10.0	GR-2	--	--	0.9	0.2	BATCH CONTACT	RHO-BWI-LD-48
U233	SADDLE MOUNTAIN	POMONA	--	23	1.00E-7	0	10.0	GR-2	--	--	0.4	0.2	BATCH CONTACT	RHO-BWI-LD-48
U233	SADDLE MOUNTAIN	POMONA	--	23	1.00E-7	0	8.0	GR-1	--	--	5.8	0.3	BATCH CONTACT	RHO-BWI-LD-48

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-03-84
QA BY: LH DATE: 10-29-84

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CO (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
U233	SADDLE MOUNTAIN	POMONA	--	60	1.00E-6	O	10.0	GR-2	--	--	15	3	BATCH CONTACT	RHO-BWI-LD-48
U233	SADDLE MOUNTAIN	POMONA	--	60	1.00E-6	O	8.0	GR-1	--	--	612	4	BATCH CONTACT	RHO-BWI-LD-48
U233	SADDLE MOUNTAIN	POMONA	--	60	2.45E-7	R	8.0	GR-1	--	--	105	14	BATCH CONTACT	RHO-BWI-LD-48
U233	SADDLE MOUNTAIN	POMONA	--	60	2.45E-7	R	10.0	GR-2	--	--	32	2	BATCH CONTACT	RHO-BWI-LD-48
U233	SADDLE MOUNTAIN	POMONA	--	23	2.45E-7	R	10.0	GR-2	--	--	19	2	BATCH CONTACT	RHO-BWI-LD-48
U233	SADDLE MOUNTAIN	POMONA	--	23	2.45E-7	R	8.0	GR-1	--	--	72	2	BATCH CONTACT	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	--	1-15	6	--	BEST ESTIMATE	RHO-BWI-LD-48
U233	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	-	--	17-65	40	--	BEST ESTIMATE	RHO-BWI-LD-48
U233	--	--	CRUSHED BASALT	60	1.07E-7	O	--	--	--	--	12	3	WOOD, ET. AL. 1982	SD-BWI-TI-072 P.5

SITE SUBSYSTEM
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 10-22-91
QA BY: LH DATE: 12-30-91

SPECIES	FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	TEMP (C)	CD (M)	EH	pH	GRD. WTR TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD	SOURCE
U233	--	--	CRUSHED BASALT	60	2.45E-7	R	--	--	--	--	65	9	WOOD, ET. AL. 1982	SD-BWI-TI-072 P.5
U233	--	--	BASALT SECONDARY MINERALIZATION	--	1.00E-7	O	--	--	--	--	1450	297	SALTER, ET. AL. 1981B	SD-BWI-TI-072 P.7
Zr	GRANDE RONDE	SCHWANA	UMTANUM	--	--	O	--	--	500	--	--	--	--	SD-BWI-DP-001 P.7
Zr	GRANDE RONDE	SCHWANA	UMTANUM	--	--	R	--	--	--	--	--	--	--	SD-BWI-DP-001 P.7
Zr	FRESH BASALT ENV.	--	--	60	--	O	--	GR-2	--	50-200	100	--	--	NURE G/CR-2352
Zr	FRESH BASALT ENV.	--	--	--	--	R	--	COMPOSITE	--	50-200	100	--	--	NURE G/CR-2352
Zr	ALTERED BASALT ENV.	--	--	--	--	O	--	GR-1	--	190-251000	500	--	--	NURE G/CR-2352

SITE SUBSYSTEM
PARAMETER: HYDRAULIC HEAD (m above msl)

CHECKED BY: SP DATE: 10-01-84
QA BY: DH DATE: 10-27-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
--	--	MABTON INTERBED	RRL-2	N46-32-55 W119-39-38	397.5 TO 470.6	--	127.4	SD-BWI-TI-113 P.57
--	--	VANTAGE INTERBED	RRL-2	N46-32-55 W119-39-38	812.3-826.9	--	121.6	SD-BWI-TI-113 P.57
--	--	MABTON INTERBED	DC-16A	N46-31-37 W119-39-34	425.2-477.9	--	128.0	SD-BWI-TI-135 P.30
--	--	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	814.1-832.1	--	122.5	SD-BWI-TI-135 P.30
--	--	MABTON INTERBED	DC-19D	N46-31-10 W119-36-20	409.0-461.5	04-30-84/1020	128.1	SD-BWI-DP-045 P.32
--	--	MABTON INTERBED	DC-20D	N46-34-11 W119-38-39	403.9-441.0	04-30-84/0901	126.2	SD-BWI-DP-045 P.41
--	--	MABTON INTERBED	DC-22C	N46-33-38 W119-41-17	456.3-469.5	04-30-84/1023	124.9	SD-BWI-DP-045 P.50
--	--	MABTON	DB-1	N46-26-31 W119-16-29	--	1979	117	RHO-BWI-ST-5
--	--	MABTON	DB-2	N46-28-46 W119-16-39	--	1979	117	RHO-BWI-ST-5
--	--	MABTON	DB-4	N46-32-03 W119-26-09	--	1979	128	RHO-BWI-ST-5
--	--	MABTON	DB-5	N46-34-56 W119-32-02	--	1979	124	RHO-BWI-STI5
--	--	MABTON	DB-7	N46-29-01 W119-25-16	--	1979	123	RHO-BWI-STI5
--	--	MABTON	DB-9	N46-36-39 W119-32-55	--	1979	123	RHO-BWI-ST-5
--	--	MABTON	DB-10	N46-34-48 W119-28-06	--	1979	123	RHO-BWI-ST-5
--	--	MABTON	DB-12	N46-36-51 W119-42-11	--	1979	123	RHO-BWI-ST-5

SITE SUBSYSTEM
PARAMETER: HYDRAULIC HEAD (m above msl)

CHECKED BY: SP DATE: 10-01-84
QA BY: LH DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
--	--	MABTON	DB-13	N46-29-15 W119-30-56	--	1979	128	RHO-BWI-ST-5
--	--	MABTON	DB-14	N46-30-35 W119-38-35	--	1979	129	RHO-BWI-ST-5
--	--	MABTON	DH-8	N46-36-24 W119-32-43	--	1979	123	RHO-BWI-ST-5
GRANDE RONDE	SENTINEL BLUFFS	UPPER FLOW TOPS	RRL-2	N46-32-55 W119-39-38	828.8-887.9	--	121.0	SD-BWI-TI-113 P.57
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	RRL-2	N46-32-55 W119-39-38	908.6-920.5	--	121.6	SD-BWI-TI-113 P.57
GRANDE RONDE	SENTINEL BLUFFS	COGASSETT VESICULAR	RRL-2	N46-32-55 W119-39-38	931.8-966.8	--	--	SD-BWI-TI-113 P.57
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT COLONNADE/ENTAB LATURE	RRL-2	N46-32-55 W119-39-38	967.7-988.8	--	--	SD-BWI-TI-113 P.57
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	989.7-1019.3	--	123.7	SD-BWI-TI-113 P.57
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-2	N46-32-55 W119-39-38	1087.5 - 1152.4	--	123.7	SD-BWI-TI-113 P.57
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP LOWER PORTION	RRL-2	N46-32-55 W119-39-38	1135.4 - 1152.4	--	124 1	SD-BWI-TI-113 P.57
GRANDE RONDE	SCHWANA	UMTANUM ENTABLATURE	RRL-2	N46-32-55 W119-39-38	1146.7 - 1159.8	--	--	SD-BWI-TI-113 P.58
GRANDE RONDE	SCHWANA	UMTANUM FRACTURE ZONE	RRL-2	N46-32-55 W119-39-38	1152.4 - 1166.5	--	124.1	SD-BWI-TI-113 P.58
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	1169.5 - 1185.4	--	124.1	SD-BWI-TI-113 P.58

SITE SUBSYSTEM
PARAMETER: HYDRAULIC HEAD (m above msl)

CHECKED BY: SP DATE: 10-01-84
QA BY: LH DATE: 10-24-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	--	DC-16A	N46-31-37 W119-39-34	813.8-860.1	--	121.3-122.5	SD-BWI-TI-135 P.30
GRANDE RONDE	SENTINEL BLUFFS	--	DC-16A	N46-31-37 W119-39-34	864.4-897.9	--	121.6-122.2	SD-BWI-TI-135 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	DC-16A	N46-31-37 W119-39-34	905.3-940.6	--	121.6-122.2	SD-BWI-TI-135 P.30
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	DC-16A	N46-31-37 W119-39-34	991.8-1024.1	--	121.3-122.5	SD-BWI-TI-135 P.30
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOW TOP	DC-16A	N46-31-37 W119-39-34	1070.5-1081.7	--	121.9-122.5	SD-BWI-TI-135 P.30
GRANDE RONDE	SCHWANA	VERY HIGH MG FLOW BOTTOM	DC-16A	N46-31-37 W119-39-34	1193.0-1231.1	--	121.9-122.5	SD-BWI-TI-171 P.19
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	RRL-14	N46-33-18 W119-41-20	916.5-959.2	--	124.7	SD-BWI-TI-186 P.27
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	RRL-14	N46-33-18 W119-41-20	1004.0-1037.2	--	124.7	SD-BWI-TI-186 P.27
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-14	N46-33-18 W119-41-20	1132.3-1162.5	--	124.4	SD-BWI-TI-186 P.27
GRANDE RONDE	SCHWANA	UMTANUM FLOW BOTTOM	RRL-14	N46-33-18 W119-41-20	1180.8-1204.6	--	125.3	SD-BWI-TI-186 P.27
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-19C	N46-31-11 W119-36-22	847.6-879.7	04-30-84/0917	119.3	SD-BWI-DP-045 P.29
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	DC-19C	N46-31-11 W119-36-22	913.2-947.0	04-30-84/0942	122.0	SD-BWI-DP-045 P.30
GRANDE RONDE	SCHWANA	UMTANUM	DC-19C	N46-31-11 W119-36-22	1088.4-1143.6	04-30-84/0937	121.7	SD-BWI-DP-045 P.31

SITE SUBSYSTEM
PARAMETER: HYDRAULIC HEAD (m above msl)

CHECKED BY: SP DATE: 10-01-94
QA BY: LH DATE: 10-27-94

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-20C	N46-34-9 W119-38-37	832.7-863.8	04-30-84/0824	122.7	SD-BWI-DP-045 P.38
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	DC-20C	N46-34-9 W119-38-37	886.1-911.7	04-30-84/0821	122.7	SD-BWI-DP-045 P.39
GRANDE RONDE	SCHWANNA	UMTANUM	DC-20C	N46-34-9 W119-38-37	1079.9 - 1115.0	04-30-84/0817	122.8	SD-BWI-DP-045 P.40
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-22C	N46-33-38 W119-41-17	870.2-892.8	04-30-84/0942	120.7	SD-BWI-EP-045 P.47
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	DC-22C	N46-33-38 W119-41-17	920.5-952.2	04-30-84/0932	122.2	SD-BWI-DP-045 P.48
GRANDE RONDE	SCHWANA	UMTANUM	DC-22C	N46-33-38 W119-41-17	1118.0 - 1168.9	04-30-84/0924	122.6	SD-BWI-DP-045 P.49
GRANDE RONDE	SCHWANA	LOW MG FLOW ABOVE UMTANUM	DC-7	N46-28-46 W119-23-12	--	07/04-10/79	419.7	RHO-BW-CR-131P P.E31
GRANDE RONDE	SCHWANA	--	DC-8	N46-28-47 W119-23-13	--	07/04-10/79	418.6	RHO-BW-CR-131P P.E31
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW TOP	DC-12	N46-28-4 W119-32-28	740	--	124.0	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW TOP	DC-14	N46-40-16 W119-27-31	676	--	143.0	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW TOP	DC-15	N46-23-45 W119-16-13	695	--	118.5	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW TOP	DC-16A	N46-31-37 W119-39-34	874	--	112.0	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW TOP	RRL-2	N46-32-55 W119-39-38	857	--	121.0	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	DC-6	N46-35-14 W119-23-46	776	--	129.0	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	DC-14	N46-40-16 W119-27-31	746	--	135.0	RHO-BW-ST-28P

SITE SUBSYSTEM
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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	DC-15	N46-23-45 W119-16-13	767	--	119.0	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	DC-16A	N46-31-37 W119-39-34	921	--	122.0	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	RRL-2	N46-32-55 W119-39-38	916	--	121.5	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW TOP	RRL-14	N46-33-18 W119-41-20	NA	--	124.5	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOW TOP	DC-7/8	N46-28-46 W119-23-12	1051	--	123.5	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CNAYON FLOW TOP	DC-14	N46-40-16 W119-27-31	884	--	133.0	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOW TOP	DC-15	N46-23-45 W119-16-13	868	--	119.0	RHO-BW-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOW TOP	DC-16A	N46-31-37 W119-39-34	1086	--	122.0	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	DC-1	--	NA	--	124.0	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	DC-6	N46-35-14 W119-23-46	909	--	134.5	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	DC-12	N46-28-4 W119-32-28	990	--	124.5	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	DC-14	N46-40-16 W119-27-31	946	--	134.5	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	DC-15	N46-23-45 W119-16-13	929	--	121.5	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-2	N46-32-55 W119-39-38	1014	--	123.5	RHO-BW-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-14	N46-33-18 W119-41-20	NA	--	123.5	RHO-BW-ST-28P
GRANDE RONDE	--	--	DC-1	--	600-658	ABOUT 1970	124	RHO-BWI-ST-5

SITE SUBSYSTEM
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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
GRANDE RONDE	--	--	DC-1	--	661-678	ABOUT 1970	124	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	740-795	ABOUT 1970	123	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	792-847	ABOUT 1970	123	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	832-887	ABOUT 1970	125	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	959-986	ABOUT 1970	125	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	965-974	ABOUT 1970	125	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	977-989	ABOUT 1970	123	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	1012-1052	ABOUT 1970	124	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	1150-1199	ABOUT 1970	116	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	1192-1240	ABOUT 1970	112	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-1	--	1244-1305	ABOUT 1970	112	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	692-701	1977-1978	143	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	713-722	1977-1978	135	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	714-724	1977-1978	135	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	724-734	1977-1978	129	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	800-809	1977-1978	133	RHO-BWI-ST-5

SITE SUBSYSTEM
PARAMETER: HYDRAULIC HEAD (m above msl)

CHECKED BY: SD DATE: 10-01-84
QA BY: [illegible] DATE: 10-29-84

FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	852-861	1977-1978	128	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	901-916	1977-1978	128	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	902-911	1977-1978	120	GRANDE RONDE
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	920-936	1977-1978	128	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	935-952	1977-1978	136	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	950-966	1977-1978	129	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	963-972	1977-1978	115	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	988-998	1977-1978	110	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	683-692	8/9 1978	137	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	731-741	8/9 1978	136	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	748-757	8/9 1978	139	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	825-835	8/9 1978	129	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-6	N46-35-14 W119-23-46	883-895	8/9 1978	138	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	922-931	8/9 1978	140	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	1018-1322	8/9 1978	130	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	1019-1028	8/9 1978	135	RHO-BWI-ST-5

SITE SUBSYSTEM
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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	1060-1322	8/9 1978	133	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	1098-1322	8/9 1978	132	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	1103-1112	8/9 1978	128	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	1112-1122	8/9 1978	132	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	1123-1132	8/9 1978	131	RHO-BWI-ST-5
GRANDE RONDE	--	--	DC-2	N46-34-17 W119-31-4	1125-1134	8/9 1978	132	RHO-BWI-ST-5
RINGOLD	--	RINGOLD	DC-19A	N46-31-8 W119-36-23	151.5-175.9	04-30-84/1036	137.3	SD-BWI-DP-045 P.24
RINGOLD	--	RINGOLD	DC-20A	N46-34-8 W119-38-36	146.9-166.1	04-30-84/0842	138.5	SD-BWI-DP-045 P.33
RINGOLD	--	RINGOLD	DC-22A	N46-33-36 W119-41-13	199.6-206.3	04-30-84/1448	135.4	SD-BWI-DP-045 P.42
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	DC-16A	N46-31-37 W119-39-34	203.6-254.5	--	136.6	SD-BWI-TI-135 P.30
SADDLE MOUNTAIN	--	SELAH INTERBED	DC-16A	N46-31-37 W119-39-34	282.9-311.2	--	133.8	SD-BWI-TI-135 P.30
SADDLE MOUNTAIN	--	COLD CREEK INTERBED	DC-16A	N46-31-37 W119-39-34	329.2-369.4	--	127.4	SD-BWI-TI-135 P.30
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	DC-19A	N46-31-8 W119-36-23	196.6-245.1	04-30-84/1029	133.0	SD-BWI-DP-045 P.25
SADDLE MOUNTAIN	--	RATTLESNAKE, RIDGE INTERBED	DC-20A	N46-34-8 W119-38-36	18.4-230.1	04-30-84/0847	135.4	SD-BWI-DP-045 P.34
SADDLE MOUNTAIN	--	RATTLESNAKE	DC-22A	N46-33-36 W119-41-13	230.1-262.2	04-30-84/1044	134.7	SD-BWI-DP-045 P.43
SADDLE MOUNTAIN	--	LEVEY INTERBED	699-S11-E12A	--	72.5-80.8	03-14-80	115.0	RHO-BWI-LD-27 P.19

SITE SUBSYSTEM
PARAMETER: HYDRAULIC HEAD (m above msl)

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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
SADDLE MOUNTAIN	--	LEVEY INTERBED	699-S11-E12A	--	--	--	115.5	RHO-BWI-LD-27 P.21
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	699-25-80(DB-14)	--	63.4-68.4	09/06-07/78	136.6	RHO-BWI-LD-67 P.13
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-52-48	--	--	04/02-03/80	123.7	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-53-50	--	99	04-15-80	123.3	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-51-46	--	--	05-06-80	123.9	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-52-46	--	--	05-08-80	124.2	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-50-45	--	--	05/29-30/80	124.1	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-50-48	--	--	06-09-80	123.7	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-47-50	--	--	06/24-26/80	123.4	RHO-ST-38
SADDLE MOUNTAIN	ELEPHANT MOUNTAIN	--	DB-13	N46-29-15 W119-30-56	--	1978	127.0	RHO-BWI-ST-5
SADDLE MOUNTAIN	ELEPHANT MOUNTAIN	--	DB-13	N46-29-15 W119-30-56	--	1978	127	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	DB-13	N46-29-15 W119-30-56	--	1978	127	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	DB-14	N46-30-35 W119-38-35	--	1978	137	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	WPPSS-3	--	--	1979	116	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-14-E6Q	--	--	1969	119	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	199-H4-2	--	--	1968	126	RHO-BWI-ST-5

SITE SUBSYSTEM
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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
SADDLE MOUNTAIN	--	SELAH	DB-12	N46-36-51 W119-42-11	--	1978	123	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	SELAH	DB-14	N46-30-35 W119-38-35	--	1978	129	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	SELAH	DC-1	--	--	1969	124	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	COLD CREEK	DB-13	N46-29-15 W119-30-56	--	1978	128	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	COLD CREEK	DB-14	N46-30-35 W119-38-35	--	1978	129	RHO-BWI-ST-5
SADDLE MOUNTAIN	--	COLD CREEK	DC-1	--	--	1969	125	RHO-BWI-ST-5
WANAPUM	PRIEST RAPIDS	FLOW TOP	RRL-2	N46-32-55 W119-39-38	479.8 TO 522.4	--	122.2	SD-BWI-TI-113 P.57
WANAPUM	PRIEST RAPIDS	--	DC-16A	N46-31-37 W119-39-34	515.1-526.7	--	116.4	SD-BWI-TI-135 P.30
WANAPUM	ROZA	--	DC-16A	N46-31-37 W119-39-34	536.4-557.2	--	122.8	SD-BWI-TI-135 P.30
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	576.7-609.6	--	122.5	SD-BWI-TI-135 P.30
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	641.6-657.1	--	122.8	SD-BWI-TI-135 P.30
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	670.9-689.2	--	122.2	SD-BWI-TI-135 P.30
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	690.7-722.7	--	122.8	SD-BWI-TI-135 P.30
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	754.7-780.0	--	122.5	SD-BWI-TI-135 P.30
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	787.9-802.2	--	122.5	SD-BWI-TI-135 P.30

SITE SUBSYSTEM
PARAMETER: HYDRAULIC HEAD (m above msl)

CHECKED BY: SP DATE: 10-01-84
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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
WANAPUM	PRIEST RAPIDS	--	DC-19C	N46-31-11 W119-36-22	502.0-513.9	04-30-84/1006	121.9	SD-BWI-DP-045 P.26
WANAPUM	FRENCHMAN SPRINGS	SENTINEL GAP	DC-19C	N46-31-11 W119-36-22	568.8-596.5	04-29-84/0737	122.0	SD-BWI-DP-045 P.27
WANAPUM	FRENCHMAN SPRINGS	GINKO	DC-19C	N46-31-11 W119-36-22	732.7-765.4	04-29-84/0730	122.0	SD-BWI-DP-045 P.28
WANAPUM	PRIEST RAPIDS	--	DC-20C	N46-34-9 W119-38-37	486.8-502.6	04-30-84/0813	122.3	SD-BWI-DP-045 P.35
WANAPUM	FRENCHMAN SPRINGS	SENTINEL GAP	DC-20C	N46-34-9 W119-38-37	560.8-581.6	04-30-84/0831	122.3	SD-BWI-DP-045 P.36
WANAPUM	FRENCHMAN SPRINGS	GINKO	DC-20C	N46-34-9 W119-38-37	726.3-751.9	04-30-84/0826	122.4	SD-BWI-DP-045 P.37
WANAPUM	PRIEST RAPIDS	PRIEST RAPIDS	DC-22C	N46-33-38 W119-41-17	524.3-543.2	04-30-84/1003	122.0	SD-BWI-DP-045 P.44
WANAPUM	FRENCHMAN SPRINGS	SENTINEL GAP	DC-22C	N46-33-38 W119-41-17	596.5-627.6	04-30-84/0956	122.1	SD-BWI-DP-045 P.45
WANAPUM	FRENCHMAN SPRINGS	GINKO	DC-22C	N46-33-38 W119-41-17	776.0-806.5	04-29-84/0917	122.0	SD-BWI-DP-045 P.46
WANAPUM	--	--	DC-1	--	250-363	1970	123	RHO-BWI-ST-5
WANAPUM	--	--	DC-1	--	344-363	1970	125	RHO-BWI-ST-5
WANAPUM	--	--	DC-1	--	406-463	1970	123	RHO-BWI-ST-5
WANAPUM	--	--	DC-1	--	475-533	1970	123	RHO-BWI-ST-5
WANAPUM	--	--	DC-1	--	536-594	ABOUT 1970	124	RHO-BWI-ST-5
WANAPUM	--	--	DC-1	--	600-658	ABOUT 1970	124	RHO-BWI-ST-5
WANAPUM	--	--	DC-8	N46-28-47 W119-23-13	521-530	ABOUT 1970	132	RHO-BWI-ST-5

SITE SUBSYSTEM
PARAMETER: HYDRAULIC HEAD (m above msl)

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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
WANAPUM	--	--	DC-8	N46-28-47 W119-23-13	552-561	ABOUT 1970	131	RHO-BWI-ST-5
WANAPUM	--	--	DC-8	N46-28-47 W119-23-13	607-616	ABOUT 1970	133	RHO-BWI-ST-5
WANAPUM	--	--	DC-8	N46-28-47 W119-23-13	620-629	ABOUT 1970	129	RHO-BWI-ST-5
WANAPUM	ROZA	FLOW TOP	RRL-2	N46-32-55 W119-39-38	528.8-540.4	--	123.1	SD-BWI-TI-113 P. 57
WANAPUM	FRENCHMAN SPRINGS	UPPER FLOW TOPS	RRL-2	N46-32-55 W119-39-38	581.3-677.3	--	122.5	SD-BWI-TI-113 P. 57
WANAPUM	FRENCHMAN SPRINGS	LOWER FLOW TOPS	RRL-2	N46-32-55 W119-39-38	684.0-805.9	--	121.9	SD-BWI-TI-113 P. 57

SITE SUBSYSTEM
PARAMETER: TEMPERATURE (deg. K)

CHECKED BY: SP DATE: 10-01-84
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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
—	—	MABTON INTERBED	DC-16A	N46-31-37 W119-39-34	--	—	25.4	SD-BWI-TI-135, P. 42
—	—	VANTAGE INTERBED	DC-16A	N46-31-37 W119-39-34	--	—	23.4	SD-BWI-TI-135 P. 42
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW TOP	RRL-2	N46-32-55	86	1982	48.6	RHO-BWI-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	990	1982	53.7	RHO-BWI-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-2	N46-32-55 W119-39-38	1100	1982	56.9	RHO-BWI-ST-28P
GRANDE RONDE	SCHWANA	UMTANUM FRACTURE ZONE	RRL-2	N46-32-55 W119-39-38	1159	1982	58.8	RHO-BWI-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW TOP	DC-14	N46-40-16 W119-27-31	666	1982	41.8	RHO-BWI-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE FLOW BOTTOM	DC-14	N46-40-16 W119-27-31	945	1982	54.9	RHO-BWI-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON FLOW BOTTOM	DC-15	N46-23-45 W119-16-13	925	1982	52.0	RHO-BWI-ST-28P
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	DC-16A	N46-31-37 W119-39-34	--	—	25.0	SD-BWI-TI-135 P. 42
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	RRL-6	N46-31-59 W119-40-47	891.2-942.6	—	49.3	SD-BWI-TI-167 P. 17
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-6	N46-31-59 W119-40-47	942.6-1019.3	—	52.0	SD-BWI-TI-167 P. 17
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON	RRL-6	N46-31-59 W119-40-47	1090.0 - 1132.5	—	58	SD-BWI-TI-167 P. 17
GRANDE RONDE	SCHWANA	UMTANUM	RRL-6	N46-31-59 W119-40-47	1132.5 - 1202.7	—	60.0	SD-BWI-TI-167 P. 17
GRANDE RONDE	SENTINEL BLUFFS	ROCKY COULEE	RRL-14	N46-33-18 W119-41-20	884.5-939.4	—	46.9	SD-BWI-TI-186 P. 17

SITE SUBSYSTEM
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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT	RRL-14	N46-33-18 W119-41-20	939.4-1012.2	--	48.0	SD-BWI-TI-186 P.17
GRANDE RONDE	SENTINEL BLUFFS	MCCOY CANYON	RRL-14	N46-33-18 W119-41-20	1090.0 - 1134.9	--	56.1	SD-BWI-TI-186 P.17
GRANDE RONDE	SCHWANA	UMTANUM	RRL-14	N46-33-18 W119-41-20	1134.9 - 1195.4	--	56.6	SD-BWI-TI-186 P.17
GRANDE RONDE	SENTINEL BLUFFS	UPPER	RRL-2	N46-32-55 W119-39-38	--	--	26.9	SD-BWI-TI-113 P.71
GRANDE RONDE	SENTINEL BLUFFS	COHASSETT FLOW BOTTOM	RRL-2	N46-32-55 W119-39-38	--	--	23.4	SD-BWI-TI-113 P.71
GRANDE RONDE	SCHWANA	UMTANUM FLOW TOP	RRL-2	N46-32-55 W119-39-38	--	--	29.4	SD-BWI-TI-113 P.71
GRANDE RONDE	SCHWANA	UMTANUM FRACTURE ZONE	RRL-2	N46-32-55 W119-39-38	--	--	25.9	SD-BWI-TI-113 P.71
GRANDE RONDE	SCHWANA	VERY HIGH MG FLOW TOP	RRL-2	N46-32-55 W119-39-38	--	--	22.3	SD-BWI-TI-113 P.71
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-52-48	--	51.8	4/80 - 6/80	16.8	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-53-50	--	51.8	4/80 - 6/80	16.8	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-51-46	--	43.6	4/80 - 6/80	16.5	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-52-46	--	59.6	4/80 - 6/80	17.8	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-50-45	--	47.5	4/80 - 6/80	16.8	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-50-48	--	70.4	4/80 - 6/80	18.2	RHO-ST-38
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	699-47-50	--	84.7	4/80 - 6/80	18.3	RHO-ST-38

SITE SUBSYSTEM
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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	DC-16A	N46-31-37 W119-39-34	--	--	21.0	SD-BWI-TI-135 P.42
SADDLE MOUNTAIN	--	SELAH INTERBED	DC-16A	N46-31-37 W119-39-34	--	--	24.1	SD-BWI-TI-135 P.42
SADDLE MOUNTAIN	--	LEVEY INTERBED	S11-E12A	N46-24-30 W119-16-51	72.5-80.8	04-18-80	18.0	RHO-BWI-LD-27 P.7
SADDLE MOUNTAIN	ELEPHANT MOUNTAIN	--	DB-14	N46-30-35 W119-38-35	50.6	09-19-78	19.0	RHO-BWI-LD-67 P.8
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE	DB-14	N46-30-35 W119-38-35	79.2	09-07-78/0030	18.6	RHO-BWI-LD-67 P.27
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	DB-14	N46-30-35 W119-38-35	79.2	09-08-78/1230	19.2	RHO-BWI-LD-67 P.33
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	DB-14	N46-30-35 W119-38-35	79.2	09-09-80/0100	18.5	RHO-BWI-LD-67 P.35
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	DB-14	N46-30-35 W119-38-35	79.2	09-10-78/0230	18.8	RHO-BWI-LD-67 P.37
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	DB-14	N46-30-35 W119-38-35	79.2	09-10-78/0800	18.9	RHO-BWI-LD-67 P.37
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	DB-14	N46-30-35 W119-38-35	82.3	09-19-78	19.2	RHO-BWI-LD-67 P. 8
SADDLE MOUNTAIN	--	RATTLESNAKE RIDGE INTERBED	DB-14	N46-30-35 W119-38-35	79.2	09-16-78/1540	21.4	RHO-BWI-LD-67 P. 26
WANAPUM	PRIEST RAPIDS/ROZA	--	DC-16A	N46-31-37 W119-39-34	--	--	28.7	SD-BWI-TI-135 P.42
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	--	--	21.5	SD-BWI-TI-135 P.42
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	--	--	23.8	SD-BWI-TI-135 P.42
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	--	--	22.4	SD-BWI-TI-135 P.42

SITE SUBSYSTEM
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FORMATION	MEMBER OR SEQUENCE	FLOW OR SEDIMENT	WELL ID	LOCATION	DEPTH (M)	TIME AND DATE	VALUE	SOURCE
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	--	--	31.6	GD-BWI-TI-135 P.42
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	--	--	34.2	GD-BWI-TI-135 P.42
WANAPUM	FRENCHMAN SPRINGS	--	DC-16A	N46-31-37 W119-39-34	--	--	36.0	GD-BWI-TI-135 P.42
WANAPUM	PRIEST RAPIDS	--	RRL-2	N46-32-55 W119-39-38	--	--	6.5	GD-BWI-TI-113 P.71
WANAPUM	ROZA	FLOW TOP	RRL-2	N46-32-55 W119-39-38	--	--	21.8	GD-BWI-TI-113 P.71
WANAPUM	FRENCHMAN SPRINGS	--	RRL-2	N46-32-55 W119-39-38	--	--	29.1	GD-BWI-TI-113 P.71

APPENDIX A REFERENCES
SITE SUBSYSTEM DATA TABLES

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APPENDIX C

WASTE PACKAGE SUBSYSTEM DATA TABLES

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-24-84

MATERIAL	BULK DENSITY (g/cc)	PACKING TECHNIQUE	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD REFERENCE	SOURCE
10% ORE BENTONITE, 90% SAND	—	95% OF MAX DRY DENSITY	—	9.5E-10	—	—	—	FALLING HEAD TEST ON PLUG	RHO-BWI-ST-7
50% CRUSHED BASALT, 25% CRUSHED ZEOLITE, 19 % RINGOLD CLAY 6% SHURGEL	—	CONSOL. PRESSURE OF 0.45	—	E-10	—	—	—	FALLING HEAD TEST	RHO-BWI-ST-7
75% BASALT, 25% BENTONITE	1.56	—	25	4.2E-10	—	—	—	—	RHO-BWI-SA-309A P
75% BASALT, 25% BENTONITE	1.70	—	25	9.4E-11	—	—	—	—	RHO-BWI-SA-309A P
75% BASALT, 25% BENTONITE	1.70	—	25	4.1E-11	—	—	—	—	RHO-BWI-SA-309A P
75% BASALT, 25% BENTONITE	1.71	—	25	1.3E-11	—	—	—	—	RHO-BWI-SA-309A P
75% BASALT, 25% BENTONITE	1.71	—	25	6.2E-12	—	—	—	—	RHO-BWI-SA-309A P
75% BASALT, 25% BENTONITE	1.85	—	25	2.4E-12	—	—	—	—	RHO-BWI-SA-309A P

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	BULK DENSITY (g/cc)	PACKING TECHNIQUE	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD REFERENCE	SOURCE
75% CRUSHED BASALT, 25% BENTONITE	—	—	—	—	3.6E-13 TO 4.1E-10	2.8E-11	9.1E-11	—	—
75% CRUSHED BASALT, 25% BENTONITE	1.91	—	20	2.3E-12	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.70	—	20	4.1E-11	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.70	—	20	1.1E-11	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.71	—	20	1.1E-11	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.71	—	20	4.8E-12	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.73	—	20	4.1E-13	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SD DATE: 09-29-84
QA BY: LH DATE: 10-24-84

MATERIAL	BULK DENSITY (g/cc)	PACKING TECHNIQUE	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD REFERENCE	SOURCE
75% CRUSHED BASALT, 25% BENTONITE	1.75	—	20	3.6E-13	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.93	—	20	2.0E-12	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.56	—	20	4.1E-10	—	—	—	PERME-AMETER	SD-BWI-TI-155
75% CRUSHED BASALT, 25% BENTONITE	1.69	—	60	7.7E-12	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.70	—	60	3.4E-11	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.73	—	60	4.2E-13	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.81	—	60	6.4E-13	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 09-29-84
QA BY: [illegible] DATE: 10-29-84

MATERIAL	BULK DENSITY (g/cc)	PACKING TECHNIQUE	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD REFERENCE	SOURCE
75% CRUSHED BASALT, 25% BENTONITE	1.93	—	60	5.8E-12	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.61	—	90	3.5E-12	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.69	—	90	6.3E-12	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.79	—	90	2.5E-12	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	1.89	—	90	8.0E-13	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	2.00	—	90	3.1E-12	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
75% CRUSHED BASALT, 25% BENTONITE	2.03	—	90	2.2E-11	—	—	—	PERME-AMETER	SD-BWI-TI-155 P.60
BENTONITE	1.75	100% WATER SATURATED	—	1E-14	—	—	—	PUSCH 1979	RHO-BWI-ST-7

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: HYDRAULIC CONDUCTIVITY (m/s)

CHECKED BY: SP DATE: 09-29-84
QA BY: JH DATE: 10-29-84

MATERIAL	BULK DENSITY (g/cc)	PACKING TECHNIQUE	TEMP (C)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD REFERENCE	SOURCE
BENTONITE	2.00	100% WATER SATURATED	--	5E-14	--	--	--	PUSCH 1979	RHO-BWI-ST-7
BENTONITE	2.30	100% WATER SATURATED	--	1E-13	--	--	--	PUSCH 1979	RHO-BWI-ST-7
COMPACTED BENTONITE	2.1	--	--	2E-14	--	--	--	--	RSD-BWI-TI-022 P.16

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: DENSITY (g/cc)

CHECKED BY: SP DATE: 09-29-84
QA BY: DH DATE: 10-29-84

MATERIAL	TEMP	PARAMETER VALUE	RANGE	MEAN	STANDARD DEVIATION	METHOD OR REFERENCE	SOURCE
20% CRUSHED BASALT, 45% CRUSHED ZEOLITE, 27% RINGOLD CLAY, 8% SHURGEL	--	1.63	--	--	--	--	RHO-BWI-ST-7
50% CRUSHED BASALT, 25% CRUSHED ZEOLITE, 19% RINGOLD CLAY, 6% SHURGEL	--	1.71	--	--	--	--	RHO-BWI-ST-7
75% CRUSHED BASALT, 25% BENTONITE	--	1.70	--	--	--	--	RHO-BW-SA-330P
75% CRUSHED BASALT, 25% BENTONITE	--	1.70	1.65-1.75	--	--	--	CARLSON 1984
89% CRUSHED BASLAT, 9% BENTONITE PELLETS, 2% SHURGEL	--	1.93	--	--	--	--	RHO-BWI-ST-7
98% CRUSHED BASALT, 2% SHURGEL	--	--	1.95-2.07	--	--	--	RHO-BWI-ST-7
AQUAGEL A-05	--	2.46	2.2-2.7	--	--	PYCNOMETER	RHO-BWI-ST-7
HYDROTHERMAL CEMENT FONDU, A-74	--	3.34	--	--	--	PYCNOMETER	RHO-BWI-ST-7
HYDROTHERMAL CEMENT, SECAR, A-83	--	3.06	--	--	--	PYCNOMETER	RHO-BWI-ST-7
OREG. BENTONITE 20 TO 160 MESH	--	2.73	--	--	--	--	RHO-BWI-ST-7

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: DENSITY (g/cc)

CHECKED BY: SD DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	TEMP	PARAMETER VALUE	RANGE	MEAN	STANDARD DEVIATION	METHOD OR REFERENCE	SOURCE
OREG. BENTONITE, 200 MESH	--	2.85	--	--	--	--	RHO-BWI-ST-7
OREGON ZEOLITE A-59	--	2.30	2.0-2.4	--	--	PYCNOMETER	RHO-BWI-ST-7
OREGON ZEOLITE A-73	--	2.20	2.0-2.4	--	--	PYCNOMETER	RHO-BWI-ST-7
P0330/AN CEMENT A-02	--	3.15	--	--	--	PYCNOMETER	RHO-BWI-ST-7
RINGOLD CLAY A-77	--	2.71	2.6-2.7	--	--	PYCNOMETER	RHO-BWI-ST-7
SAND A-79	--	2.64	--	--	--	PYCNOMETER	RHO-BWI-ST-7
SILICA FLOUR A-84	--	2.68	--	--	--	PYCNOMETER	RHO-BWI-ST-7
TYPE II CEMENT A-75	--	3.26	--	--	--	PYCNOMETER	RHO-BWI-ST-7
TYPE V CEMENT A-01	--	3.16	--	--	--	PYCNOMETER	RHO-BWI-ST-7
WYO. BENTONITE	--	2.77	--	--	--	--	RHO-BWI-ST-7

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: THERMAL CONDUCTIVITY (w/m deg. K)

CHECKED BY: SP DATE: 09-29-84
QA BY: [illegible] DATE: 10-29-84

MATERIAL	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
25% BENTONITE 75% CRUSHED BASALT	--	0.70	--	--	--	WATER-SATURATED	CARLSON 1984
25% BENTONITE 75% CRUSHED BASALT	--	0.5	--	--	--	DRY	CARLSON 1984
BENTONITE CLAY 0% H20	20	0.4	--	--	--	--	RHO-BWI-ST-18
BENTONITE CLAY 0% H20	100	0.4	--	--	--	--	RHO-BWI-ST-18
BENTONITE CLAY 0% H20	300	0.4	--	--	--	--	RHO-BWI-ST-18
BENTONITE CLAY 10% H20	20	0.75	--	--	--	--	RHO-BWI-ST-18
BENTONITE CLAY 10% H20	100	0.75	--	--	--	--	RHO-BWI-ST-18
BENTONITE CLAY 10% H20	300	0.75	--	--	--	--	RHO-BWI-ST-18
BENTONITE CLAY 19% H20	20	1.4	--	--	--	--	RHO-BWI-STI18
BENTONITE CLAY 19% H20	100	1.4	--	--	--	--	RHO-BWI-ST-18
BENTONITE CLAY 19% H20	300	1.4	--	--	--	--	RHO-BWI-ST-18

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: THERMAL CONDUCTIVITY (w/m deg. K)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
CRUSHED BASALT & BENTONITE	--	--	0.3-0.9	--	--	DRY MIXTURES	RHO-BW-SA-330P
CRUSHED BASALT-CLAY MIXTURE	20	1.26	--	--	--	--	RHO-BWI-ST-18
CRUSHED BASALT-CLAY MIXTURE	100	1.26	--	--	--	--	RHO-BWI-ST-18
CRUSHED BASALT-CLAYMIXTURE	300	1.26	--	--	--	--	RHO-BWI-ST-18

WASTE PACKAGE SUBSYTEM: PACKING MATERIAL
PARAMETER: SPECIFIC HEAT (kJ/kg deg. K)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
25% BENTONITE 75% CRUSHED BASALT	--	0.96	--	--	--	--	CARLSON 1984

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: COMPRESSIVE STRENGTH (MPa)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	TEMP	PARAMETER VALUE	RANGE	MEAN	STANDARD DEVIATION	METHOD OR REFERENCE	SOURCE
30% OREG. BENTONITE, 70% CLAY	--	2.67	--	--	--	UNCONFINED	RHO-BWI-SA-80
30% WYO. BENTONITE, 70% CLAY	--	1.90	--	--	--	UNCONFINED	RHO-BWI-SA-80
50% OREG. BENTONITE, 50% CLAY	--	2.90	--	--	--	UNCONFINED	RHO-BWI-SA-80
50% WYO. BENTONITE, 50% CLAY	--	1.95	--	--	--	UNCONFINED	RHO-BWI-SA-80
70% OREG. BENTONIETE, 30% CLAY	--	2.03	--	--	--	UNCONFINED	RHO-BWI-SA-80
70% WYO. BENTONITE, 30% CLAY	--	1.15	--	--	--	UNCONFINED	RHO-BWI-SA-80
90% OREG. BENTONITE, 10% CLAY	--	0.77	--	--	--	UNCONFINED	RHO-BWI-SA-80
90% RINGOLD CLAY D, 10% CLAY	--	0.13	--	--	--	UNCONFINED	RHO-BWI-SA-80
90% WYO. BENTONITE, 10% CLAY	--	0.90	--	--	--	UNCONFINED	RHO-BWI-SA-80

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: YOUNG'S MODULUS (MPa)

CHECKED BY: SP DATE: 09-29-84
QA BY: DH DATE: 10-29-84

MATERIAL	TEMP	PARAMETER VALUE	RANGE	MEAN	STANDARD DEVIATION	METHOD OR REFERENCE	SOURCE
30% OREG. BENTONITE, 70% CLAY	--	72.0	--	--	--	--	RHO-BWI-SA-80
30% WYO. BENTONITE, 70% CLAY	--	56.5	--	--	--	--	RHO-BWI-SA-80
50% OREG. BENTONITE, 50% CLAY	--	81.1	--	--	--	--	RHO-BWI-SA-80
50% WYO. BENTONITE, 50% CLAY	--	65.6	--	--	--	--	RHO-BWI-SA-80
70% OREG. BENTONITE, 30% CLAY	--	70.4	--	--	--	--	RHO-BWI-SA-80
70% WYO. BENTONITE, 30% CLAY	--	40.9	--	--	--	--	RHO-BWI-SA-80
90% OREG. BENTONITE, 10% CLAY	--	53.3	--	--	--	--	RHO-BWI-SA-80
90% RINGOLD CLAY D, 10% CLAY	--	7.5	--	--	--	--	RHO-BWI-SA-80
90% WYO. BENTONITE, 10% CLAY	--	40.9	--	--	--	--	RHO-BWI-SA-80

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: POROSITY (%)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	PACKING TECHNIQUE	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
75% CRUSHED BASALT, 25% BENTONITE	PNEUMATIC	--	40	--	--	--	--	RHO-BWI-SA-330P
75% CRUSHED BASALT, 25% BENTONITE	PNEUMATIC	--	38	36-43	--	--	--	CARLSON 1984

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: DIFFUSION COEFFICIENT (sq. m/s)

CHECKED BY: SP DATE: 09-29-84
QA BY: TH DATE: 10-29-84

SPECIES	MATERIAL	DENSITY	TEMP	TIME (d)	DIFF. COEF.	METHOD OR REFERENCE	SOURCE
—	COMPACTED BENTONITE	—	100-200	—	6.25E-11	—	RSD-BWI-TI-022 P.18
Am	MX-80	2.0	--	524	2.0E-15	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Am	0.1M ACETATE SOLUTION	2.0	--	68	4.0E-15	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Am	Pb 12	2.0	--	68	4.0E-15	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Am	600 MG/1 HCO3-	2.0	--	350	2.8E-15	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Cl-	MX-80 BENTONITE	2.1	25	17	6.0E-12	CONCENTRATION PROFILE ANAL.	ERICKSON & JACOBSON, 1982
Cl-	MX-80 BENTONITE	2.1	25	--	3.1E-13	STEADY-STATE TRANSPORT	ERICKSON & JACOBSON, 1982
Cs	MX-80	2.0	--	53	1.4E-12	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
H2	MX-80 BENTONITE	2.1	25	--	3.6E-12	STEADY-STATE TRANSPORT	ERICKSON & JACOBSON, 1982
HS-	MX-80 BENTONITE	2.1	25	17	9.0E-12	CONCENTRATION PROFILE ANAL.	ERICKSON & JACOBSON, 1982
HS-	MX-80 BENTONITE	2.1	25	--	1.8E-14	STEADY-STATE TRANSPORT	ERICKSON & JACOBSON, 1982
HS-	ERBSLOH BENTONITE	2.1	25	17	4.0E-12	CONCENTRATION PROFILE ANAL.	ERICKSON & JACOBSON, 1982
I	MX-80	2.0	--	157	3.2E-14	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
I	1% CHALCOPYRITE/PYRITE	2.0	--	213	2.0E-14	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
I	1% CINNABAR	2.0	--	213	2.6E-14	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
I	1% PbO	2.0	--	213	3.0E-14	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
I-	MX-80 BENTONITE	2.1	25	17	4.0E-12	CONCENTRATION PROFILE ANAL.	ERICKSON & JACOBSON, 1982
I-	MX-80 BENTONITE	2.1	25	--	2.1E-13	STEADY-STATE TRANSPORT	ERICKSON & JACOBSON, 1982
I-	ERBSLOH BENTONITE	2.1	25	17	1.0E-12	CONCENTRATION PROFILE ANAL.	ERICKSON & JACOBSON, 1982
I-	ERBSLOH BENTONITE	2.1	25	--	1.3E-13	STEADY-STATE TRANSPORT	ERICKSON & JACOBSON, 1982
Np	MX-80	2.0	--	69	2.2E-13	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Np	1% Fe3(PO4)2	2.0	--	212	6.6E-15	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Np	0.5% Fe(s)	2.0	--	322	4.5E-15	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Np	0.5% Fe	2.0	--	322	8.0E-15	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Pa	MX-80	2.0	--	76	5.7E-13	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Pu	MX-80	2.0	--	316	3.2E-15	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Sr	MX-80 BENTONITE	2.0	--	50	1.8E-12	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983

Tc	—	2.0	--	69	1.4E-12	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Tc	1% PYRITE	2.0	--	70	1.4E-12	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Tc	1% OLIVINE	2.0	--	70	1.4E-12	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Tc	1% Fe3(PO4)2(s)	2.0	--	225	6.6E-14	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Tc	0.5% Fe(s)	2.0	--	70	3.0E-13	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Tc	0.5% Fe	2.0	--	218	1.7E-13	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
Th	MX-80	2.0	--	64	4.6E-15	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
U	MX-80	2.0	--	62	5.8E-13	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
U	600MG/1 HCO3-	2.0	--	54	1.9E-13	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
U	10 MG/L HUMIC ACID	2.0	--	62	5.7E-13	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
U	1% Fe3(PO4)2(s)	2.0	--	63	2.0E-13	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983
U	0.5% Fe(s)	2.0	--	53	4.5E-14	CONCENTRATION PROFILE ANAL.	TORSTENFELT ET AL., 1983

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 09-29-84
QA BY: ZH DATE: 10-29-84

SPE-CIES	MATERIAL	TEMP	CD (M)	EH	pH	GROUND WATER TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
CS	SODIUM BENTONITE	65	1.000E-4	O	--	SIM. GRANDE RONDE	--	--	186	9	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
CS	SODIUM BENTONITE	65	1.000E-4	R	--	SIM. GRANDE RONDE	--	--	423	--	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
CS	SODIUM BENTONITE	65	1.000E-6	O	--	SIM. GRANDE RONDE	--	--	206	5	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
CS	SODIUM BENTONITE	65	1.000E-6	R	--	SIM. GRANDE RONDE	--	--	431	--	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
CS	SODIUM BENTONITE	65	1.016E-8	O	--	SIM. GRANDE RONDE	--	--	229	16	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
CS	SODIUM BENTONITE	65	1.015E-8	R	--	SIM. GRANDE RONDE	--	--	448	--	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
CS	SODIUM BENTONITE	65	1.519E-10	O	--	SIM. GRANDE RONDE	--	--	254	5	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
CS	SODIUM BENTONITE	65	1.491E-10	R	--	SIM. GRANDE RONDE	--	--	468	--	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
NP	SODIUM BENTONITE	65	3.876E-12	O	--	SIM. GRANDE RONDE	--	--	199	4.0	WOOD ET AL 1982	SD-BWI-TI-072 P. 9
NP	SODIUM BENTONITE	65	3.786E-12	R	--	SIM. GRANDE RONDE	--	--	976	66	WOOD ET AL 1982	SD-BWI-TI-072 P. 9
PU	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	8.8	3.4	BATCH CONTACT	RHO-BWI-LD-47 P. 2
PU	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	1000	590	BATCH CONTACT	RHO-BWI-LD-47 P. 2
PU	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	13000	8000	BATCH CONTACT	RHO-BWI-LD-47 P. 2
PU	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	30	26	BATCH CONTACT	RHO-BWI-LD-47 P. 2
PU	BASALT --	--	--	--	--	BASALT GROUNDWATER	--	--	580	12	BATCH CONTACT	RHO-BWI-LD-47 P. 2
PU	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	592	134	BATCH CONTACT	RHO-BWI-LD-47 P. 2
PU	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	312	66	BATCH CONTACT	RHO-BWI-LD-47 P. 2

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-25-84

SPE-CIES	MATERIAL	TEMP	CO (M)	EH	pH	GROUND WATER TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
PU	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	200	170	BATCH CONTACT	RHO-BWI-LD-47 P. 2
PU	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	89	17	BATCH CONTACT	RHO-BWI-LD-47 P. 2
SR	SODIUM BENTONITE	65	5.000E-5	O	--	SIM. GRANDE RONDE	--	--	526	22	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
SR	SODIUM BENTONITE	65	5.000E-5	R	--	SIM. GRANDE RONDE	--	--	720	--	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
SR	SODIUM BENTONITE	65	5.000E-7	O	--	SIM. GRANDE RONDE	--	--	508	41	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
SR	SODIUM BENTONITE	65	5.000E-7	R	--	SIM. GRANDE RONDE	--	--	759	--	WOOD ET AL. 1982	SD-BWI-TI-072 P. 10
SR	SODIUM BENTONITE	65	5.000E-9	O	--	SIM. GRANDE RONDE	--	--	491	52	WOOD ET AL. 1982	SD-BWI-TI-072 P. 10
SR	SODIUM BENTONITE	65	5.000E-9	R	--	SIM. GRANDE RONDE	--	--	713	--	WOOD ET AL. 1982	SD-BWI-TI-072 P. 10
SR	SODIUM BENTONITE	65	5.011E-11	O	--	SIM. GRANDE RONDE	--	--	502	14	WOOD ET AL. 1982	SD-BWI-TI-072 P. 10
SR	SODIUM BENTONITE	65	5.011E-11	R	--	SIM. GRANDE RONDE	--	--	700	--	WOOD ET AL 1982	SD-BWI-TI-072 P. 10
SR	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	81	1	BATCH CONTACT	RHO-BWI-LD-47 P. 2
SR	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	55	2	BATCH CONTACT	RHO-BWI-LD-47 P. 2
SR	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	45	1	BATCH CONTACT	RHO-BWI-LD-47 P. 2
SR	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	89	5	BATCH CONTACT	RHO-BWI-LD-47 P. 2
SR	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	93	6	BATCH CONTACT	RHO-BWI-LD-47 P. 2
SR	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	92	3	BATCH CONTACT	RHO-BWI-LD-47 P. 2
SR	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	73	4	BATCH CONTACT	RHO-BWI-LD-47 P. 2

WASTE PACKAGE SUBSYSTEM: PACKING MATERIAL
PARAMETER: DISTRIBUTION COEFFICIENT (ml/g)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

SPE-CIES	MATERIAL	TEMP	CO (M)	EH	pH	GROUND WATER TYPE	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
SR	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	68	17	BATCH CONTACT	RHO-BWI-LD-47 P. 2
SR	BASALT	--	--	--	--	BASALT GROUNDWATER	--	--	41	6	BATCH CONTACT	RHO-BWI-LD-47 P. 2
U	SODIUM BENTONITE	65	3.582E-7	O	--	SIM. GRAND RONDE	--	--	119	5.7	WOOD ET AL. 1982	SD-BWI-TI-072 P. 9
U	SODIUM BENTONITE	65	--	R	--	SIM. GRANDE RONDE	--	--	165	3.6	WOOD ET AL. 1982	SD-BWI-TI-072 P. 9
U	SODIUM BENTONITE	65	1.006E-4	O	--	SIM. GRANDE RONDE	--	--	24	3	WOOD ET AL. 1982	SD-BWI-TI-072 P. 9
U	SODIUM BENTONITE	65	1.005E-4	R	--	SIM. GRANDE RONDE	--	--	103	8	WOOD ET AL. 1982	SD-BWI-TI-072 P. 10
U	SODIUM BENTONITE	65	1.056E-5	O	--	SIM. GRANDE RONDE	--	--	48	3	WOOD ET AL. 1982	SD-BWI-TI-072 P. 10
U	SODIUM BENTONITE	65	1.055E-5	R	--	SIM. GRANDE RONDE	--	--	129	6	WOOD ET AL. 1982	SD-BWI-TI-072 P. 10
U	SODIUM BENTONITE	65	1.547E-6	O	--	SIM. GRANDE RONDE	--	--	67	2	WOOD ET AL. 1982	SD-BWI-TI-072 P. 10
U	SODIUM BENTONITE	65	1.544E-6	R	--	SIM. GRANDE RONDE	--	--	167	20	WOOD ET AL. 1982	SD-BWI-TI-072 P. 10
U	SODIUM BENTONITE	65	5.409E-7	O	--	SIM. GRANDE RONDE	--	--	72	3	WOOD ET AL. 1982	SD-BWI-TI-072 P. 10
U	SODIUM BENTONITE	65	5.434E-7	R	--	SIM. GRANDE RONDE	--	--	186	17	WOOD ET AL. 1982	SD-BWI-TI-072 P. 10

WASTE PACKAGE SUBSYSTEM: CANISTER
PARAMETER: CORROSION RATE (micrometers/yr)

CHECKED BY: [illegible] DATE: 09-29-84
QA BY: [illegible] DATE: 10-29-84

MATERIAL	TEMP	GROUND WATER TYPE	EXPOSURE TIME (MO)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
1.25% Cr, 0.5% Mo CAST STEEL	250	GRANDE RONDE	1	—	—	19.5	7.8	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1.25% Cr, 0.5% Mo CAST STEEL	150	GRANDE RONDE	1	—	—	2.0	0.	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1.25% Cr, 0.5% Mo CAST STEEL	250	GRANDE RONDE	3	—	—	5.9	2.2	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1.25% Cr, 0.5% Mo CAST STEEL	150	GRANDE RONDE	3	—	—	3.1	0.8	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1.25% Cr, 0.5% Mo CAST STEEL	250	GRANDE RONDE	6	—	—	3.8	2.8	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1.25% Cr, 0.5% Mo CAST STEEL	150	GRANDE RONDE	6	—	—	2.8	0.5	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1.25% Cr, 0.5% Mo CAST STEEL	250	GRANDE RONDE	12	—	1.3-1.6	1.4	0.2	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1.25% Cr, 0.5% Mo CAST STEEL	150	GRANDE RONDE	12	—	1.4-5.6	2.8	1.9	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1.25% Cr, 0.5% Mo CAST STEEL	250	GRANDE RONDE	17	—	—	2.3	0.7	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1.25% Cr, 0.5% Mo CAST STEEL	150	GRANDE RONDE	17	—	—	2.9	0.6	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1.25%Cr, 0.5% Mo CAST STEEL	250	SYN. GRANDE RONDE	5-6	—	1.8-5.8	—	—	OXIC, CRUSHED BASALT	RHO-BW-SA-330P
1020 WROUGHT STEEL	250	GRANDE RONDE	2	—	7.6-10.7	9.1	1.1	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
1020 WROUGHT STEEL	150	GRANDE RONDE	2	—	13-39	21.7	14.2	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1020 WROUGHT STEEL	250	GRANDE RONDE	3	—	—	5.5	0.2	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1020 WROUGHT STEEL	150	GRANDE RONDE	3	—	3.6-71	26.8	38.3	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1020 WROUGHT STEEL	250	GRANDE RONDE	5	—	3.0-4.6	3.6	0.7	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1020 WROUGHT STEEL	150	GRANDE RONDE	5	—	7.6-46	20.6	22.0	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10

WASTE PACKAGE SUBSYSTEM: CANISTER
PARAMETER: CORROSION RATE (micrometers/yr)

CHECKED BY: SP DATE: 09-29-84
QA BY: [illegible] DATE: 10-29-84

MATERIAL	TEMP	GROUND WATER TYPE	EXPOSURE TIME (MO)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
1020 WROUGHT STEEL	250	SYN. GRANDE RONDE	5-6	—	3.0-4.6	—	—	OXIC, CRUSHED BASALT	RHO-BW-SA-330P
1020 WROUGHT STEEL	250	GRANDE RONDE	2	—	7.6-10.7	—	—	3E5 RAD/HR.	RHO-BW-SA-330P
1025 CAST STEEL	250	GRANDE RONDE	6	8.1	—	—	—	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
1025 CAST STEEL	250	GRANDE RONDE	8	7.9	—	—	—	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
1025 CAST STEEL	250	GRANDE RONDE	3	—	—	5.2	0.1	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1025 CAST STEEL	150	GRANDE RONDE	3	—	—	6.6	0.4	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1025 CAST STEEL	250	GRANDE RONDE	5	—	2.5-3.0	2.8	0.3	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1025 CAST STEEL	150	GRANDE RONDE	5	—	—	10.3	1.0	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
1025 CAST STEEL	250	SYN. GRANDE RONDE	5-6	—	2.5-3.6	—	—	OXIC, CRUSHED BASALT	RHO-BW-SA-330P
1025 CAST STEEL	250	GRANDE RONDE	6	8.1	—	—	—	3E5 RAD/HR.	RHO-BW-SA-330P
2.5 Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	5	—	—	6.5	2.3	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	1	—	—	8.3	0.9	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	3	—	—	18.0	5.7	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	6	—	—	4.1	0	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	10	3.8	—	—	—	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10

WASTE PACKAGE SUBSYSTEM: CANISTER
PARAMETER: CORROSION RATE (micrometers/yr)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	TEMP	GROUND WATER TYPE	EXPOSURE TIME (MO)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	11	3.3	—	—	—	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	12	2.8	—	—	—	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	13	3.0	—	—	—	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	1	—	—	14.5	0.7	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
2.5% Cr, 1% Mo CAST STEEL	150	GRANDE RONDE	1	3.3	—	—	—	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	3	—	—	3.9	0.4	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
2.5% Cr, 1% Mo CAST STEEL	150	GRANDE RONDE	3	—	—	1.7	0.4	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	6	—	—	2.2	0.9	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
2.5% Cr, 1% Mo CAST STEEL	150	GRANDE RONDE	6	—	—	1.9	0.9	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	12	—	1.2-2.3	1.2	0.1	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
2.5% Cr, 1% Mo CAST STEEL	150	GRANDE RONDE	12	—	2.8-3.3	3.1	0.3	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	17	—	—	16.5	4.9	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
2.5% Cr, 1% Mo CAST STEEL	150	GRANDE RONDE	17	—	—	8.6	0	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
2.5% Cr, 1% Mo CAST STEEL	250	SYN. GRANDE RONDE	5-6	—	1.5-2.8	—	—	OXIC, CRUSHED BASALT	RHO-BW-SA-330P
2.5% Cr, 1% Mo CAST STEEL	250	GRANDE RONDE	6	—	4.1-4.6	—	—	3E5 RAD/HR.	RHO-BW-SA-330P
90-10 CUPRONICKEL	200	SYN. GRANDE RONDE	5	—	—	0.93	0.05	ANOXIC PH 9.75	RHO-BW-SA-330P

WASTE PACKAGE SUBSYSTEM: CANISTER
PARAMETER: CORROSION RATE (micrometers/yr)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	TEMP	GROUND WATER TYPE	EXPOSURE TIME (MO)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
AISI 1006	250	GRANDE RONDE	0.5	—	9.4-13.9	11.8	2.3	REFRESHED AUTOCLAVE	SD-BWI-TI-159 P.8
AISI 1006	150	GRANDE RONDE	0.5	—	11.1-13.9	12.6	1.4	REFRESHED AUTOCLAVE	SD-BWI-TI-159 P.8
AISI 1006	250	SYN. GRANDE RONDE	0.5-1	—	—	11.8	2.3	PACKED IN 75% CRUSHED BASALT, 25% LENTONITE, ANOXIC, PH 9.75	RHO-BW-SA-330P
AISI 1020	250	GRANDE RONDE	0.5	—	10.7-15	13.1	1.4	REFRESHED AUTOCLAVE	SD-BWI-TI-159 P.8
AISI 1020	200	GRANDE RONDE	0.5	—	10.2-11.9	11	0.9	REFRESHED AUTOCLAVE	SD-BWI-TI-159 P.8
AISI 1020	150	GRANDE RONDE	0.5	—	10.9-14	12.5	1.5	REFRESHED AUTOCLAVE	SD-BWI-TI-159 P.8
AISI 1020	250	GRANDE RONDE	1.0	—	6.9-9.6	8.1	0.8	REFRESHED AUTOCLAVE	SD-BWI-TI-159 P.8
AISI 1020	100	GRANDE RONDE	1.0	—	64.7-67.4	66.1	1.4	REFRESHED AUTOCLAVE	SA-BWI-TI-159 P.8
AISI 1020	250	GRANDE RONDE	1.5	—	5.5-6.4	6.0	0.5	REFRESHED AUTOCLAVE	SD-BWI-TI-159 P.8
AISI 1020	250	SYN. GRANDE RONDE	0.5-1	—	—	8.1	0.8	PACKED IN 75% CRUSHED BASALT, 25% LENTONITE, ANOXIC, PH 9.75	RHO-BW-SA-330P
AISI 1020 CAST STEEL	200	SYN. GRANDE RONDE	5	—	—	1.1	0.04	ANOXIC PH 9.75	RHO-BW-SA-330P
AISI 1020 WROUGHT STEEL	200	SYN. GRANDE RONDE	5	—	—	1.4	0.04	ANOXIC PH 9.75	RHO-BW-SA-330P
AISI 1025	250	GRANDE RONDE	0.5	—	10.8-15.3	13.3	2.3	REFRESHED AUTOCLAVE	SD-BWI-TI-159 P.8
AISI 1025	150	GRANDE RONDE	0.5	—	10.9-12.2	11.4	0.7	REFRESHED AUTOCLAVE	SD-BWI-TI-159 P.8

WASTE PACKAGE SUBSYSTEM: CANISTER
PARAMETER: CORROSION RATE (micrometers/yr)

CHECKED BY: SD DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	GROUND WATER TEMP	GROUND WATER TYPE	EXPOSURE TIME (MO)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
AISI 1025	250	SYN. GRANDE RONDE	0.5-1—		—	13.3	2.3	PACKED IN 75% CRUSHED BASALT, 25% LENTONITE, ANOXIC, PH	RHO-BW-SA-330P
CAST DUCTILE IRON	250	GRANDE RONDE	1	—	—	13.0	1.4	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
CAST DUCTILE IRON	250	GRANDE RONDE	3	—	—	19.8	14.4	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
CAST DUCTILE IRON	250	GRANDE RONDE	5	—	—	10.1	1.3	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
CAST DUCTILE IRON	250	GRANDE RONDE	6	—	—	9.4	0.4	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
CAST DUCTILE IRON	250	GRANDE RONDE	10	6.4	—	—	—	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
CAST DUCTILE IRON	250	GRANDE RONDE	11	9.1	—	—	—	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
CAST DUCTILE IRON	250	GRANDE RONDE	13	9.7	—	—	—	REFRESHED AUTOCLAVE, 3E5 RAD/HR.	SD-BWI-TI-140 P.10
CAST DUCTILE IRON	250	GRANDE RONDE	1	—	—	2.4	1.4	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
CAST DUCTILE IRON	150	GRANDE RONDE	1	—	—	8.0	1.3	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
CAST DUCTILE IRON	250	GRANDE RONDE	3	—	—	8.2	0.4	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
CAST DUCTILE IRON	150	GRANDE RONDE	3	—	3.6-43	—	—	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
CAST DUCTILE IRON	250	GRANDE RONDE	6	—	—	5.9	1.5	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10

WASTE PACKAGE SUBSYSTEM: CANISTER
PARAMETER: CORROSION RATE (micrometers/yr)

CHECKED BY: SP DATE: 09-29-84
QA BY: ZH DATE: 10-29-84

MATERIAL	TEMP	GROUND WATER TYPE	EXPOSURE TIME (MO)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
CAST DUCTILE IRON	150	GRANDE RONDE	6	—	—	3.6	0	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
CAST DUCTILE IRON	250	GRANDE RONDE	12	—	2.5-3.1	2.7	0.3	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
CAST DUCTILE IRON	150	GRANDE RONDE	12	—	3.6-3.8	3.7	0.1	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
CAST DUCTILE IRON	250	GRANDE RONDE	17	—	—	5.0	1.4	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
CAST DUCTILE IRON	150	GRANDE RONDE	17	—	—	7.4	6.5	REFRESHED AUTOCLAVE	SD-BWI-TI-151 P.10
CAST DUCTILE IRON	250	SYN. GRANDE RONDE	5-6	—	4.8-6.9	—	—	OXIC, CRUSHED BASALT	RHO-BW-SA-330P
CAST DUCTILE IRON	250	GRANDE RONDE	6	—	9.1-9.6	—	—	3E5 RAD/HR.	RHO-BW-SA-330P
EBRITE 26-1	250	1% NaCl DEOXYGENATED, 10MG/L H2S	—	15	—	—	—	AUTOCLAVE	RHO-BWI-ST-7
Fe9Cr1Mo	250	GRANDE RONDE	1.0	—	1.7-2.0	1.8	0.2	REFRESHED AUTOCLAVE	SD-BWI-TI-159 P.8
Fe9Cr1Mo	150	GRANDE RONDE	1.0	—	2.4-3.2	2.8	0.4	REFRESHED AUTOCLAVE	SD-BWI-TI-159 P.8
Fe9Cr1Mo	200	SYN. GRANDE RONDE	5	—	—	0.93	0.05	ANOXIC PH 9.75	RHO-BW-SA-330P
Fe9Cr1Mo	250	SYN. GRANDE RONDE	0.5-1	—	—	1.6	0.2	PACKED IN 75% CRUSHED BASALT, 25% LENTONITE, ANOXIC, PH 9.75	RHO-BW-SA-330P
HASTELLOY C-276	250	1% NaCl DEOXYGENATED, 10MG/L H2S	—	38	—	—	—	AUTOCLAVE	RHO-BWI-ST-7
INCOLOY 825	250	1% NaCl DEOXYGENATED, 10MG/L H2S	—	5	—	—	—	AUTOCLAVE	RHO-BWI-ST-7

WASTE PACKAGE SUBSYSTEM: CANISTER
PARAMETER: CORROSION RATE (micrometers/yr)

CHECKED BY: SP DATE: 09-29-84
QA BY: [illegible] DATE: 10-29-84

MATERIAL	TEMP	GROUND WATER TYPE	EXPOSURE TIME (MO)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
INCONEL 600	250	1% NaCl DEOXYGENATED, 10MG/L H2S	—	234	—	—	—	AUTOCLAVE	RHO-BWI-ST-7
INCONEL 625	250	1% NaCl DEOXYGENATED, 10MG/L H2S	—	5	—	—	—	AUTOCLAVE	RHO-BWI-ST-7
LOW-CARBON STEEL	250	1% NaCl DEOXYGENATED, 10MG/L H2S	—	178	—	—	—	AUTOCLAVE	RHO-BWI-ST-7
LOW-CARBON STEEL, 90-10 CUPRONICKEL	250	SYNTHETIC	1	6	—	—	—	ANOXIC	RHO-BW-SA-309AP
TITANIUM	250	1% NaCl DEOXYGENATED, 10MG/L H2S	—	5	—	—	—	AUTOCLAVE	RHO-BWI-ST-7
ZIRCALOY 2	250	1% NaCl DEOXYGENATED, 10MG/L H2S	—	2.5	—	—	—	AUTOCLAVE	RHO-BWI-ST-7

WASTE PACKAGE SUBSYSTEM: CANISTER
PARAMETER: CORROSION RATE (wt. change, mg/sq decimeter)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	TEMP	GROUND WATER TYPE	EXPOSURE TIME (MO)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
CUPRONICKEL 90/10	250	SYN. GRANDE RONDE	2	-14	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
FERALLIUM 25-5	250	SYN. GRANDE RONDE	2	-44	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
FERALLIUM 25-5	250	SYN. GRANDE RONDE	2	-43	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
HASTELLOY C-276	250	SYN. GRANDE RONDE	2	-1.3	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
HASTELLOY G	250	SYN. GRANDE RONDE	2	-3.8	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
HASTELLOY G	250	SYN. GRANDE RONDE	2	-4.0	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
INCANEL 825	250	SYN. GRANDE RONDE	2	-4.6	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
INCONEL 600	250	SYN. GRANDE RONDE	2	-2.1	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
INCONEL 625	250	SYN. GRANDE RONDE	2	-4.3	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
TITANIUM GRADE 12	250	SYN. GRANDE RONDE	2	-1.6	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
TITANIUM GRADE 12	250	SYN. GRANDE RONDE	2	-3.2	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
TITANIUM GRADE 2	250	SYN. GRANDE RONDE	2	+4.6	—	—	—	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15

WASTE PACKAGE SUBSYSTEM: CANISTER
PARAMETER: CORROSION RATE (wt. change, mg/sq decimeter)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	TEMP	GROUND WATER TYPE	EXPOSURE TIME (MO)	PARAMETER VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
TITANIUM GRADE 2	250	SYN. GRANDE RONDE	2	0.0	--	--	--	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15
ZIRCALOY 4	250	SYN. GRANDE RONDE	2	+4.3	--	--	--	AUTOCLAVE, OXYGEN-CONTROLLED	RHO-BWI-ST-15

WASTE PACKAGE SUBSYSTEM: CANISTER
PARAMETER: THERMAL CONDUCTIVITY (w/m deg. K)

CHECKED BY: SO DATE: 09-29-84
QA BY: LH DATE: 10-24-84

MATERIAL	TEMP (C)	VALUE	RANGE	MEAN	STD DEV	METHOD OR REFERENCE	SOURCE
ALUMINUM	20	229.0	--	--	--	--	RHO-BWI-ST-18
ALUMINUM	100	229.0	--	--	--	--	RHO-BWI-ST-18
ALUMINUM	300	229.0	--	--	--	--	RHO-BWI-ST-18
MILD STEEL	20	42.9	--	--	--	--	RHO-BWI-ST-18
MILD STEEL	100	42.9	--	--	--	--	RHO-BWI-ST-18
MILD STEEL	300	39.0	--	--	--	--	RHO-BWI-ST-18
STAINLESS STEEL 304	20	4.7	--	--	--	--	RHO-BWI-ST-18
STAINLESS STEEL 304	100	5.1	--	--	--	--	RHO-BWI-ST-18
STAINLESS STEEL 304	300	6.0	--	--	--	--	RHO-BWI-ST-18
TITANIUM	20	17.8	--	--	--	--	RHO-BWI-ST-18
TITANIUM	100	21.8	--	--	--	--	RHO-BWI-ST-18
TITANIUM	300	19.7	--	--	--	--	RHO-BWI-ST-18

WASTE PACKAGE SUBSYSTEM: CANISTER
PARAMETER: GEOMETRY & DIMENSIONS (m)

CHECKED BY: SP DATE: 09-29-84
QA BY: TH DATE: 10-29-84

MATERIAL	GEOMETRY	DIMENSIONS M	SOURCE	REMARKS
COMMERCIAL HIGH-LEVEL WASTE	CYLINDRICAL	0.305 INT DIA, 0.0095 WALL THICKNESS, 3.0 LONG	RHO-BW-SA-254P	—
COMMERCIAL HIGH-LEVEL WASTE IN GLASS OVERPACK	CYLINDRICAL	0.350 INT DIA, 0.053 WALL THICKNESS, 0.086 HEAD THICKNESS, 3.25 LONG	RHO-BW-SA-254P	3.45 M PITCH WITHIN BOREHOLE, LOADED WT. 2.68 T
DEFENSE HIGH-LEVEL WASTE	CYLINDRICAL	0.61 INT DIA, 0.0095 WALL THICKNESS, 3.0 LONG	RHO-BW-SA-254P	—
PWR SPENT FUEL OVERPACK	CYLINDRICAL	0.305 INT DIA, 0.056 WALL THICKNESS, 0.085 HEAD THICKNESS, 4.05 LONG	RHO-BW-SA-254P	4.25 M PITCH WITHIN BOREHOLE, LOADED WT. 4.17 T
SPENT FUEL ELEMENTS BWR	CYLINDRICAL	0.305 INT DIA, 0.0095 WALL THICKNESS, 4.62 LONG	RHO-BW-SA-254P	—
SPENT FUEL ELEMENTS PWR	CYLINDRICAL	0.305 INT DIA, 0.0095 WALL THICKNESS, 4.32 LONG.	RHO-BW-SA-254P	—

WASTE PACKAGE SUBSYSTEM: WASTE FORM
PARAMETER: DECAY HEAT (w)

CHECKED BY: 3P DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	DECAY HEAT FACTOR YEARS	DECAY HEAT FACTOR WATTS	SOURCE	REMARKS
CANISTER OF SPENT FUEL	10	600/CANISTER	RHO-BWI-ST-7	CONTAINING EITHER 1 PWR ASSEMBLY OR 3 BWR ASSEMBLIES
CANISTER OF SPENT FUEL	20	400/CANISTER	RHO-BWI-ST-7	CONTAINING EITHER 1 PWR ASSEMBLY OR 3 BWR ASSEMBLIES
CANISTER OF SPENT FUEL	50	200/CANISTER	RHO-BWI-ST-7	CONTAINING EITHER 1 PWR ASSEMBLY OR 3 BWR ASSEMBLIES
CANISTER PWR SPENT FUEL	1	1E4/CANISTER	RHO-BWI-ST-7 P.2-211	CONTAINING ONE PWR ASSEMBLY
CANISTER PWR SPENT FUEL	10	700/CANISTER	RHO-BWI-ST-7 P.2-211	CONTAINING ONE PWR ASSEMBLY
CANISTER PWR SPENT FUEL	100	200/CANISTER	RHO-BWI-ST-7 P.2-211	CONTAINING ONE PWR ASSEMBLY
CANISTER PWR SPENT FUEL	1000	30/CANISTER	RHO-BWI-ST-7 P.2-211	CONTAINING ONE PWR ASSEMBLY
CANISTER PWR SPENT FUEL	1	7E4/CANISTER	RHO-BWI-ST-7 P.2-211	HIGH-LEVEL WASTE CONTAINER CONTAINING 2.5 MTU
CANISTER PWR SPENT FUEL	10	4000/CANISTER	RHO-BWI-ST-7 P.2-211	HIGH-LEVEL WASTE CONTAINER CONTAINING 2.5 MTU
CANISTER PWR SPENT FUEL	100	300/CANISTER	RHO-BWI-ST-7 P.2-211	HIGH-LEVEL WASTE CONTAINER CONTAINING 2.5 MTU
CANISTER PWR SPENT FUEL	1000	9/CANISTER	RHO-BWI-ST-7 P.2-211	HIGH-LEVEL WASTE CONTAINER CONTAINING 2.5 MTU
COMMERCIAL HI-LEVEL WASTE	—	2210	RHO-BW-SA-254P	INITIAL HEAT LOAD OF ONE WASTE PACKAGE
HI-LEVEL WASTE PW-46 IN BOROSILICATE GLASS 72-68	0.4	280/LITER	RHO-BWI-ST-7	—

WASTE PACKAGE SUBSYSTEM: WASTE FORM
PARAMETER: DECAY HEAT (w)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	DECAY HEAT FACTOR YEARS	WATTS	SOURCE	REMARKS
HI-LEVEL WASTE PW-46 IN BOROSILICATE GLASS 72-68	1	150/LITER	RHO-BWI-ST-7	--
HI-LEVEL WASTE PW-46 IN BOROSILICATE GLASS 72-68	2	77/LITER	RHO-BWI-ST-7	--
HI-LEVEL WASTE PW-46 IN BOROSILICATE GLASS 72-68	3	48/LITER	RHO-BWI-ST-7	--
HI-LEVEL WASTE PW-46 IN BOROSILICATE GLASS 72-68	4	35/LITER	RHO-BWI-ST-7	--
HI-LEVEL WASTE PW-46 IN BOROSILICATE GLASS 72-68	5	26/LITER	RHO-BWI-ST-7	--
HI-LEVEL WASTE PW-46 IN BOROSILICATE GLASS 72-68	6	22/LITER	RHO-BWI-ST-7	--
HI-LEVEL WASTE PW-46 IN BOROSILICATE GLASS 72-68	7	18/LITER	RHO-BWI-ST-7	--

WASTE PACKAGE SUBSYSTEM: WASTE FORM
PARAMETER: DECAY HEAT (w)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	DECAY HEAT FACTOR YEARS	DECAY HEAT FACTOR WATTS	SOURCE	REMARKS
HI-LEVEL WASTE PW-46 IN BOROSILICATE GLASS 72-68	8	16/LITER	RHO-BWI-GT-7	—
HI-LEVEL WASTE PW-46 IN BOROSILICATE GLASS 72-68	9	15.3/LITER	RHO-BWI-GT-7	—
HI-LEVEL WASTE PW-46 IN BOROSILICATE GLASS 72-68	10	15.0/LITER	RHO-BWI-GT-7	—
PWR SPENT FUEL	—	1650	RHO-BW-GA-254P	INITIAL HEAT LOAD OF ONE WASTE PACKAGE

WASTE PACKAGE SUBSYSTEM: WASTE FORM
Radionuclide Solubility
Abbreviations

Materials

SF = Spent fuel
SSF = Simulated spent fuel

CHLW = Simulated commercial high-level waste in borosilicate glass
DHLW = Simulated defense high-level waste in borosilicate glass

HLW = High-level waste in borosilicate glass
SHLW = Simulated high-level waste in borosilicate glass

SC = Supercalcine
BG = Borosilicate glass

GRB = Grande Ronde basalt

Groundwater types

GR = Grande Ronde
DW = Distilled water
Sim. GR = Simulated Grande Ronde

Methods

PSU = Pennsylvania State University (water:rock 20:1)
PNL = Pacific Northwest Laboratories (water:rock 1:1)

Others

ND = Not determined

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Ac	--	--	--	--	--	--	--	E-8 - E-6	--	SD-BWI-DP-001
Al	BSF + GRB	300	--	--	--	SYNTHETIC	2.2E-4	--	--	RHO-BW-SA-253P
Al	BG + GRB	300	--	--	--	SYNTHETIC	1.8E-4	--	--	RHO-BW-SA-253P
Am	--	--	O	7	--	--	7.6E-12	--	--	RHO-BWI-SA-143
Am	--	--	--	--	--	--	--	2.2E-9 - 5.9E-7	--	SD-BWI-DP-001
Am	BASALT, BENTONITE, ZEOLITE	60	O	--	--	SIM. GR	--	1E-11 - 1E-9	BATCH EQUILIBRIUM	SD-BWI-TI-155 P.54
Am	BASALT, BENTONITE, ZEOLITE	60	R	--	--	SIM. GR	--	1E-11 - 1E-9	BATCH EQUILIBRIUM	SD-BWI-TI-155 P.54
Am	Am OXIDES	--	R	NEAR 7	--	--	1E-11	--	--	RHO-BWI-SA-125A
Am(OH)3	--	--	R	--	--	--	1E-10	--	--	RHO-BW-SA-192P
B	BSF + GRB	300	--	--	--	SYNTHETIC	ND	--	--	RHO-BW-SA-253P
B	BG + GRB	300	--	--	--	SYNTHETIC	0.15	--	--	RHO-BW-SA-253P
B	HLW	300	--	--	4	DW	0.11	--	--	RHO-BWI-ST-7
B	GLASS	300	--	--	1	DW	7.4E-3	--	SMITH ET AL. 1980 PSU	RHO-BWI-SA-100
B	GLASS + BASALT	300	R	--	1	DW	8.1E-3	--	SMITH ET AL. 1980 PSU	RHO-BWI-SA-100
B	GLASS	300	--	--	1	DW	9.2E-3	--	SMITH ET AL. 1980 PNL	RHO-BWI-SA-100
B	GLASS + BASALT	300	R	--	1	DW	5.4E-4	--	SMITH ET AL. 1980 PNL	RHO-BWI-SA-100
Ba	BSF	100	--	--	--	GR	1.3E-6	--	--	SD-BWI-TI-141, P. 143

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
QA BY: JH DATE: 10-29-84

SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Ba	BSF	200	--	--	--	GR	8.7E-7	--	--	SD-BWI-TI-141, P. 143
Ba	BSF	300	--	--	--	GR	2.2E-7	--	--	SD-BWI-TI-141, P. 143
Ba	BSF + BASALT	100	--	--	--	GR	7.3E-6	--	--	SD-BWI-TI-141, P. 143
Ba	BSF + BASALT	200	--	--	--	GR	<2.2E-7	--	--	SD-BWI-TI-141, P. 143
Ba	BSF + BASALT	300	--	--	--	GR	<2.2E-7	--	--	SD-BWI-TI-141, P. 143
Ba	CHLW	100	--	--	--	GR	9.2E-6	--	--	SD-BWI-TI-141, P. 143
Ba	CHLW	200	--	--	--	GR	2.2E-7	--	--	SD-BWI-TI-141, P. 143
Ba	CHLW	300	--	--	--	GR	1.3E-6	--	--	SD-BWI-TI-141, P. 143
Ba	CHLW + BASALT	100	--	--	--	GR	3.4E-6	--	--	SD-BWI-TI-141, P. 143
Ba	CHLW + BASALT	200	--	--	--	GR	5.1E-7	--	--	SD-BWI-TI-141, P. 143
Ba	CHLW + BASALT	300	--	--	--	GR	4.4E-7	--	--	SD-BWI-TI-141, P. 143
Ba	DHLW + BASALT	90	--	--	--	GR	2.7E-7	--	--	SD-BWI-TI-141, P. 143
Ba	DHLW + BASALT	150	--	--	--	GR	8.7E-8	--	--	SD-BWI-TI-141, P. 143
Ba	HLW	300	--	--	4	DW	7.3E-6	--	--	RHO-BWI-ST-7
Ba	BC	300	--	--	1.5	DW	4.4E-5	--	--	RHO-BWI-ST-7

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
C	--	--	--	--	--	--	--	E-6 - E-3	--	SD-BWI-DP-001
Ca	SSF + GRB	300	--	--	--	SYNTHETIC	4.7E-5	--	--	RHO-BW-SA-253P
Ca	SG + GRB	300	--	--	--	SYNTHETIC	4.2E-6	--	--	RHO-BW-SA-253P
Cd	--	--	--	--	--	--	--	E-9 - E-7	--	SD-BWI-DP-001
Cl	SSF + GRB	300	--	--	--	SYNTHETIC	6.5E-3	--	--	RHO-BW-SA-253P
Cl	SG + GRB	300	--	--	--	SYNTHETIC	5.7E-3	--	--	RHO-BW-SA-253P
Cm	--	--	--	--	--	--	--	E-8 - E-6	--	SD-BWI-DP-001
Cs	SF + GRB	200	--	7.5	1000 HRS	GR	2.3E-4	--	--	RHO-BW-SA-330P
Cs	SHLW	200	--	7.5	1000 HRS	GR	1.5E-4	--	--	RHO-BW-SA-330P
Cs	--	--	--	--	--	--	--	E-4 - E-2	--	SD-BWI-DP-001
Cs	SHLW + GRB	200	--	7.5	1000 HRS	GR	1.2E-4	--	--	RHO-BW-SA-330P
Cs	SSF	300	--	--	2	DW	2.1E-3	--	--	RHO-BWI-ST-7
Cs	HLW	300	--	--	4	DW	1.1E-3	--	--	RHO-BWI-ST-7
Cs	SC	300	--	--	1.5	DW	1.9E-4	--	--	RHO-BWI-ST-7
Cs	SC	300	--	--	4	DW	1.9E-4	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Cs	SC + BASALT	300	R	--	4	DW	6.6E-5	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Cs	SC	200	--	--	4	DW	7.5E-5	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Cs	SC + BASALT	200	R	--	4	DW	7.5E-5	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Cs	GLASS	300	--	--	1	DW	1.1E-4	--	SMITH ET AL. 1980 PSU	RHO-BWI-SA-100
Cs	GLASS + BASALT	300	R	--	1	DW	1.5E-4	--	SMITH ET AL. 1980 PSU	RHO-BWI-SA-100
Cs	GLASS	300	--	--	1	DW	4.5E-5	--	SMITH ET AL. 1980 PNL	RHO-BWI-SA-100

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Cs	GLASS + BASALT	300	R	--	1	DW	3.0E-7	--	SMITH ET AL. 1980 PNL	RHO-BWI-SA-100
Cs	SSF	300	--	--	--	DW	2.1E-3	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Cs	SSF + BASALT	300	R	--	--	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Cs	SSF	200	--	--	--	DW	2.7E-3	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Cs	SSF + BASALT	200	R	--	--	DW	2.3E-5	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Cs	SSF	100	--	--	--	GR	3.8E-7	--	--	SD-BWI-TI-141 P.143
Cs	SSF + BASALT	100	--	--	--	GR	3.8E-4	--	--	SD-BWI-TI-141 P.143
Cs	SSF + BASALT	200	--	--	--	GR	2.3E-4	--	--	SD-BWI-TI-141 P.143
Cs	SSF + BASALT	300	--	--	--	GR	3.5E-4	--	--	SD-BWI-TI-141 P.143
Cs	CHLW	200	--	--	--	GR	1.5E-4	--	--	SD-BWI-TI-141 P.143
Cs	CHLW + BASALT	100	--	--	--	GR	1.7E-5	--	--	SD-BWI-TI-141 P.143
Cs	CHLW + BASALT	200	--	--	--	GR	1.2E-4	--	--	SD-BWI-TI-141 P.143
Eu	--	--	--	--	--	--	--	9.4E-10 - 3.0E-8	--	SD-BWI-DP-001
F	SSF + GRB	300	--	--	--	SYNTHETIC	1.9E-3	--	--	RHO-BW-SA-253P
F	BG + GRB	300	--	--	--	SYNTHETIC	9.5E-4	--	--	RHO-BW-SA-253P

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SD DATE: 09-29-84
QA BY: TH DATE: 10-29-84

SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Fe	BSF + GRB	300	--	--	--	SYNTHETIC	5.4E-6	--	--	RHO-BW-SA-253P
Fe	BG + GRB	300	--	--	--	SYNTHETIC	1.3E-5	--	--	RHO-BW-SA-253P
Ho	--	--	--	--	--	--	--	E-9 - E-7	--	SD-BWI-DP-001
I	--	--	--	--	--	--	--	E-2 - 1	--	SD-BWI-DP-001
I	BSF + BASALT	100	--	--	--	GR	6.7E-5	--	--	SD-BWI-TI-141 P.143
I	BSF + BASALT	200	--	--	--	GR	3.1E-6	--	--	SD-BWI-TI-141 P.143
I	BSF + BASALT	300	--	--	--	GR	8.8E-5	--	--	SD-BWI-TI-141 P.143
K	BSF + GRB	300	--	--	--	SYNTHETIC	5.9E-4	--	--	RHO-BW-SA-253P
K	BG + GRB	300	--	--	--	SYNTHETIC	ND	--	--	RHO-BW-SA-253P
La	BC	300	--	--	4	DW	0	--	SMITH ET AL, 1980	RHO-BWI-SA-100
La	BC + BASALT	300	R	--	4	DW	0	--	SMITH ET AL, 1980	RHO-BWI-SA-100
La	BC	200	--	--	4	DW	0	--	SMITH ET AL, 1980	RHO-BWI-SA-100
La	BC + BASALT	200	R	--	4	DW	0	--	SMITH ET AL, 1980	RHO-BWI-SA-100
Mg	BSF + GRB	300	--	--	--	SYNTHETIC	6.2E-7	--	--	RHO-BW-SA-253P
Mg	BG + GRB	300	--	--	--	SYNTHETIC	4.1E-7	--	--	RHO-BW-SA-253P
Mo	BSF + GRB	300	--	--	--	SYNTHETIC	7.3E-5	--	--	RHO-BW-SA-253P
Mo	BG + GRB	300	--	--	--	SYNTHETIC	6.4E-3	--	--	RHO-BW-SA-253P
Mo	BSF	300	--	--	2	DW	2.0E-3	--	--	RHO-BWI-ST-7
Mo	HLW	300	--	--	4	DW	0.011	--	--	RHO-BWI-ST-7
Mo	BC	300	--	--	1.5	DW	3.9E-3	--	--	RHO-BWI-ST-7

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SD DATE: 09-29-84
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SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Mo	SSF	300	--	--	--	GR	1.6E-3	--	--	SD-BWI-TI-141 P.143
Mo	SSF + BASALT	100	--	--	--	GR	7.8E-4	--	--	SD-BWI-TI-141 P.143
Mo	SSF + BASALT	200	--	--	--	GR	7.9E-4	--	--	SD-BWI-TI-141 P.143
Mo	SSF + BASALT	300	--	--	--	GR	2.0E-4	--	--	SD-BWI-TI-141 P.143
Mo	CHLW	100	--	--	--	GR	2.0E-3	--	--	SD-BWI-TI-141 P.143
Mo	CHLW	200	--	--	--	GR	6.8E-3	--	--	SD-BWI-TI-141 P.143
Mo	CHLW	300	--	--	--	GR	0.014	--	--	SD-BWI-TI-141 P.143
Mo	CHLW + BASALT	100	--	--	--	GR	7.2E-4	--	--	SD-BWI-TI-141 P.143
Mo	CHLW + BASALT	200	--	--	--	GR	1.7E-3	--	--	SD-BWI-TI-141 P.143
Mo	CHLW + BASALT	300	--	--	--	GR	6.5E-3	--	--	SD-BWI-TI-141 P.143
Na	SSF + GRB	300	--	--	--	SYNTHETIC	0.11	--	--	RHO-BW-SA-253P
Na	BG + GRB	300	--	--	--	SYNTHETIC	0.089	--	--	RHO-BW-SA-253P
Na	HLW	300	--	--	4	DW	0.37	--	--	RHO-BWI-ST-7
Na	SC	300	--	--	1.5	DW	0.010	--	--	RHO-BWI-ST-7
Nd	SC	300	--	--	4	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Nd	SC + BASALT	300	R	--	4	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SD DATE: 09-29-84
QA BY: LH DATE: 10-29-84

SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Mo	SSF	300	--	--	--	GR	1.6E-3	--	--	SD-BWI-TI-141 P.143
Mo	SSF + BASALT	100	--	--	--	GR	7.8E-4	--	--	SD-BWI-TI-141 P.143
Mo	SSF + BASALT	200	--	--	--	GR	7.9E-4	--	--	SD-BWI-TI-141 P.143
Mo	SSF + BASALT	300	--	--	--	GR	2.0E-4	--	--	SD-BWI-TI-141 P.143
Mo	CHLW	100	--	--	--	GR	2.0E-3	--	--	SD-BWI-TI-141 P.143
Mo	CHLW	200	--	--	--	GR	6.8E-3	--	--	SD-BWI-TI-141 P.143
Mo	CHLW	300	--	--	--	GR	0.014	--	--	SD-BWI-TI-141 P.143
Mo	CHLW + BASALT	100	--	--	--	GR	7.2E-4	--	--	SD-BWI-TI-141 P.143
Mo	CHLW + BASALT	200	--	--	--	GR	1.7E-3	--	--	SD-BWI-TI-141 P.143
Mo	CHLW + BASALT	300	--	--	--	GR	6.5E-3	--	--	SD-BWI-TI-141 P.143
Na	SSF + GRB	300	--	--	--	SYNTHETIC	0.11	--	--	RHO-BW-SA-253P
Na	BG + GRB	300	--	--	--	SYNTHETIC	0.089	--	--	RHO-BW-SA-253P
Na	HLW	300	--	--	4	DW	0.37	--	--	RHO-BWI-ST-7
Na	SC	300	--	--	1.5	DW	0.010	--	--	RHO-BWI-ST-7
Nd	SC	300	--	--	4	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Nd	SC + BASALT	300	R	--	4	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
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SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Nd	SC	200	--	--	4	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Nd	SC + BASALT	200	R	--	4	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Ni	--	--	--	--	--	--	--	2.8E-5 - 2.5E-3	--	SD-BWI-DP-001
Ni	DHLW + BASALT	90	--	--	--	GR	<4.4E-7	--	--	SD-BWI-TI-141 P.143
Ni	DHLW + BASALT	150	--	--	--	GR	<4.4E-7	--	--	SD-BWI-TI-141 P.143
Np	SG	--	O	7	--	--	2E-7	--	--	RHO-BWI-SA-143
Np	--	--	--	--	--	--	--	1.3E-11 - 5.8E-10	--	SD-BWI-DP-001
Np	BASALT, BENTONITE, ZEOLITE	60	O	--	--	SIM. GR	>1E-6	--	BATCH EQUILIBRIUM	SD-BWI-TI-155 P.54
Np	BASALT, BENTONITE, ZEOLITE	60	R	--	--	SIM. GR	--	1E-12 - 1E-11	BATCH EQUILIBRIUM	SD-BWI-TI-155 P.54
Np	Np OXIDES	--	R	NEAR 7	--	--	1E-11	--	--	RHO-BWI-SA-125A
Np237	SG	200	--	--	2400 HRS	SYNTHETIC	4.2E-9	--	--	RHO-BW-SA-331P
NpO2	--	--	R	4-8	--	--	1E-15	--	--	RHO-BWI-SA-143
NpO2	--	--	R	7	--	--	1E-10	--	--	RHO-BWI-SA-143
NpO2	--	--	O	7	--	--	2E-7	--	--	RHO-BWI-SA-143
NpO2	--	--	R	--	--	--	1E-15	--	--	RHO-BW-SA-192P
OTHERS	SSF	300	--	--	2	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
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SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
OTHERS	SSF + BASALT	300	R	--	2	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
OTHERS	SSF	200	--	--	2	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
OTHERS	SSF + BASALT	200	R	--	2	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Pa	--	--	--	--	--	--	--	E-10 - E-8	--	SD-BWI-DP-001
Pb	--	--	--	--	--	--	--	5.4E-9 - 6.7E-7	--	SD-BWI-DP-001
Pb	SSF	100	--	--	--	GR	1.1E-6	--	--	SD-BWI-TI-141 P. 143
Pb	SSF	200	--	--	--	GR	1.7E-6	--	--	SD-BWI-TI-141 P. 143
Pb	DHLW + BASALT	90	--	--	--	GR	<7.5E-7	--	--	SD-BWI-TI-141 P. 143
Pb	DHLW + BASALT	150	--	--	--	GR	<7.5E-7	--	--	SD-BWI-TI-141 P. 143
Pd	SF + GRB	200	--	7.5	1000 HRS	GR	9.4E-7	--	--	RHO-BW-SA-330P
Pd	SHLW	200	--	7.5	1000 HRS	GR	<7.5E-8	--	--	RHO-BW-SA-330P
Pd	--	--	--	--	--	--	--	2.1E-12 - 4.0E-9	--	SD-BWI-DP-001
Pd	SHLW + GRB	200	--	7.5	1000 HRS	GR	<1.2E-5	--	--	RHO-BW-SA-330P
Pd	SSF	100	--	--	--	GR	3.4E-7	--	--	SD-BWI-TI-141 P. 143
Pd	SF + BASALT	100	--	--	--	GR	<9.4E-7	--	--	SD-BWI-TI-141 P. 143
Pd	SF + BASALT	200	--	--	--	GR	9.4E-7	--	--	SD-BWI-TI-141 P. 143

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Pd	SF + BASALT	300	--	--	--	GR	<9.4E-7	--	--	SD-BWI-TI-141 P.143
Pd	CHLW	200	--	--	--	GR	<7.5E-8	--	--	SD-BWI-TI-141 P.143
Pd	CHLW + BASALT	100	--	--	--	GR	<2.4E-6	--	--	SD-BWI-TI-141 P.143
Pd	CHLW + BASALT	200	--	--	--	GR	<1.2E-5	--	--	SD-BWI-TI-141 P.143
Pu	BG	--	O	7	--	--	1E-9	--	--	RHO-BWI-SA-143
Pu	--	--	R	7	--	--	4E-9	--	--	RHO-BWI-SA-143
Pu	--	--	--	--	--	--	--	3.3E-12 - 6.2E-7	--	SD-BWI-DP-001
Pu	Pu OXIDES	--	R	NEAR 7	--	--	1E-8	--	--	RHO-BWI-SA-125A
Pu239	BG	200	--	--	2400 HRS	SYNTHETIC	4.1E-10	--	--	RHO-BW-SA-331P
PuO2	--	--	R	--	--	--	1E-9	--	--	RHO-BW-SA-192P
Ra	--	--	--	--	--	--	<E-8	--	--	SD-BWI-DP-001
Rb	--	--	--	--	--	--	--	E-4 - E-2	--	SD-BWI-DP-001
Rb	SSF	300	--	--	2	DW	3.9E-4	--	--	RHO-BWI-ST-7
Rb	HLW	300	--	--	4	DW	3.5E-5	--	--	RHO-BWI-ST-7
Rb	SC	300	--	--	1.5	DW	2.9E-4	--	--	RHO-BWI-ST-7
Rb	SC	300	--	--	4	DW	2.9E-4	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Rb	SC + BASALT	300	R	--	4	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Rb	SC	200	--	--	4	DW	2.5E-4	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Rb	SC + BASALT	200	R	--	4	DW	2.5E-4	--	SMITH ET AL. 1980	RHO-BWI-SA-100

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
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SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Rb	GLASS	300	--	--	1	DW	1.4E-4	--	SMITH ET AL. 1980 PSU	RHO-BWI-SA-100
Rb	GLASS + BASALT	300	R	--	1	DW	2.0E-4	--	SMITH ET AL. 1980 PSU	RHO-BWI-SA-100
Rb	GLASS	300	--	--	1	DW	1.9E-4	--	SMITH ET AL. 1980 PNL	RHO-BWI-SA-100
Rb	GLASS + BASALT	300	R	--	1	DW	7.0E-7	--	SMITH ET AL, 1980 PNL	RHO-BWI-SA-100
Rb	SSF	300	--	--	--	DW	3.9E-4	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Rb	SSF + BASALT	300	R	--	--	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Rb	SSF	200	--	--	--	DW	5.1E-4	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Rb	SSF + BASALT	200	R	--	--	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Rb	CHLW	300	--	--	--	GR	7.0E-4	--	--	SD-BWI-TI-141 P. 143
Rb	CHLW + BASALT	200	--	--	--	GR	7.6E-5	--	--	SD-BWI-TI-141 P. 143
Rb	CHLW + BASALT	300	--	--	--	GR	1.2E-4	--	--	SD-BWI-TI-141 P. 143
Re	SSF + BASALT	200	--	--	--	GR	<1.1E-7	--	--	SD-BWI-TI-141 P. 143
Re	SSF + BASALT	300	--	--	--	GR	9.7E-6	--	--	SD-BWI-TI-141 P. 143
Sb	--	--	--	--	--	--	--	1.4E-7 - 1.5E-7	--	SD-BWI-DP-001

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
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SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Se	--	--	--	--	--	--	--	1.0E-8 - 4.9E-7	--	SD-BWI-DP-001
Se	BASALT, BENTONITE, ZEOLITE	60	O	--	--	SIM. GR	>0.01	--	BATCH EQUILIBRIUM	SD-BWI-TI-155 P.54
SeO	--	--	R	--	--	--	1E-15	--	--	RHO-BW-SA-192P
Si	SSF + GRB	300	--	--	--	SYNTHETIC	0.019	--	--	RHO-BW-SA-253P
Si	BG + GRB	300	--	--	--	SYNTHETIC	0.036	--	--	RHO-BW-SA-253P
Si	HLW	300	--	--	4	DW	0.022	--	--	RHO-BWI-ST-7
Si	SC	300	--	--	1.5	DW	0.012	--	--	RHO-BWI-ST-7
Si	GLASS	300	--	--	1	DW	8.2E-5	--	SMITH ET AL. 1980 PSU	RHO-BWI-SA-100
Si	GLASS + BASALT	300	R	--	1	DW	4.6E-5	--	SMITH ET AL. 1980 PSU	RHO-BWI-SA-100
Si	GLASS	300	--	--	1	DW	7.8E-5	--	SMITH ET AL. 1980 PNL	RHO-BWI-SA-100
Si	GLASS + BASALT	300	R	--	1	DW	2.5E-6	--	SMITH ET AL. 1980 PNL	RHO-BWI-SA-100
Sm	SHLW	200	--	7.5	1000 HRS	GR	3.3E-7	--	--	RHO-BW-SA-330P
Sm	--	--	--	--	--	--	--	7.6E-10 - 4.3E-8	--	SD-BWI-DP-001
Sm	SHLW + GRB	200	--	7.5	1000 HRS	GR	1.9E-6	--	--	RHO-BW-SA-330P
Sm	SSF + BASALT	300	--	--	--	GR	2.0E-7	--	--	SD-BWI-TI-141 P.143
Sm	CHLW	200	--	--	--	GR	3.3E-7	--	--	SD-BWI-TI-141 P.143
Sm	CHLW + BASALT	100	--	--	--	GR	1.2E-6	--	--	SD-BWI-TI-141 P.143

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
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SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Sm	CHLW + BASALT	200	--	--	--	GR	1.9E-6	--	--	SD-BWI-TI-141 P. 143
Sn	--	--	--	--	--	--	--	3.6E-19 - 2.1E-17	--	SD-BWI-DP-001
Sr	SSF	200	--	7.5	1000 HRS	GR	1.1E-7	--	--	RHO-BW-SA-330P
Sr	SF + CRB	200	--	7.5	1000 HRS	GR	4.1E-6	--	--	RHO-BW-SA-330P
Sr	SHLW	200	--	7.5	1000 HRS	GR	4.6E-8	--	--	RHO-BW-SA-330P
Sr	--	--	--	--	--	--	--	E-4 - E-2	--	SD-BWI-DP-001
Sr	SHLW + CRB	200	--	7.5	1000 HRS	GR	2.3E-7	--	--	RHO-BW-SA-330P
Sr	SSF	300	--	--	2	DW	0	--	--	RHO-BWI-ST-7
Sr	HLW	300	--	--	4	DW	0	--	--	RHO-BWI-ST-7
Sr	SC	300	--	--	1.5	DW	2.6E-5	--	--	RHO-BWI-ST-7
Sr	SC	300	--	--	4	DW	2.6E-5	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Sr	SC	200	--	--	4	DW	5.7E-6	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Sr	SC + BASALT	200	R	--	4	DW	1.1E-6	--	SMITH ET AL. 1980	RHO-BWI-SA-100
Sr	GLASS	300	--	--	1	DW	0	--	SMITH ET AL. 1980 PSU	RHO-BWI-SA-100
Sr	GLASS + BASALT	300	R	--	1	DW	4.6E-6	--	SMITH ET AL. 1980 PSU	RHO-BWI-SA-100
Sr	GLASS	300	--	--	1	DW	2.3E-6	--	SMITH ET AL. 1980 PNL	RHO-BWI-SA-100
Sr	GLASS + BASALT	300	R	--	1	DW	5.7E-7	--	SMITH ET AL. 1980 PNL	RHO-BWI-SA-100
Sr	SSF	300	--	--	--	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100

WASTE PACKAGE SUBSYSTEM
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SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Sr	SSF + BASALT	300	R	--	--	DW	0	--	SMITH ET AL, 1980	RHO-BWI-SA-100
Sr	SSF	200	--	--	--	DW	1.1E-5	--	SMITH ET AL, 1980	RHO-BWI-SA-100
Sr	SSF + BASALT	200	R	--	--	DW	0	--	SMITH ET AL, 1980	RHO-BWI-SA-100
Sr	SSF	100	--	--	--	GR	4.6E-7	--	--	SD-BWI-TI-141 P.143
Sr	SSF	200	--	--	--	GR	1.1E-7	--	--	SD-BWI-TI-141 P.143
Sr	SSF	300	--	--	--	GR	8.0E-8	--	--	SD-BWI-TI-141 P.143
Sr	SSF + BASALT	100	--	--	--	GR	2.0E-5	--	--	SD-BWI-TI-141 P.143
Sr	SSF + BASALT	200	--	--	--	GR	4.1E-6	--	--	SD-BWI-TI-141 P.143
Sr	SSF + BASALT	300	--	--	--	GR	2.4E-6	--	--	SD-BWI-TI-141 P.143
Sr	CHLW	100	--	--	--	GR	1.0E-5	--	--	SD-BWI-TI-141 P.143
Sr	CHLW	200	--	--	--	GR	4.6E-8	--	--	SD-BWI-TI-141 P.143
Sr	CHLW	300	--	--	--	GR	4.6E-7	--	--	SD-BWI-TI-141 P.143
Sr	CHLW + BASALT	100	--	--	--	GR	3.2E-6	--	--	SD-BWI-TI-141 P.143
Sr	CHLW + BASALT	200	--	--	--	GR	2.3E-7	--	--	SD-BWI-TI-141 P.143

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Sr	CHLW + BASALT	300	--	--	--	GR	2.3E-7	--	--	SD-BWI-TI-141 P.143
Sr	DHLW + BASALT	90	--	--	--	GR	4.8E-8	--	--	SD-BWI-TI-141 P.143
Sr	DHLW + BASALT	150	--	--	--	GR	2.1E-7	--	--	SD-BWI-TI-141 P.143
Tc	SHLW	200	--	7.5	1000 HRS	GR	5.3E-4	--	--	RHO-BW-SA-330P
Tc	--	--	--	--	--	--	<E-14	E-9 - E-5	--	SD-BWI-DP-001
Tc	SHLW + GRB	200	--	7.5	1000 HRS	GR	1.5E-8	--	--	RHO-BW-SA-330P
Tc	CHLW	200	--	--	--	GR	5.3E-4	--	--	SD-BWI-TI-141 P.143
Tc	CHLW + BASALT	200	--	--	--	GR	1.5E-8	--	--	SD-BWI-TI-141 P.143
Tc	BASALT, BENTONITE, ZEOLITE	60	0	--	--	SIM. GR	>1E-7	--	BATCH EQUILIBRIUM	SD-BWI-TI-155 P.54
Tc99	BG + BASALT	200	--	--	2400 HRS	SYNTHETIC	5.1E-8	--	--	RHO-BW-SA-331P
TcO2	--	--	R	--	--	--	1E-12	--	--	RHO-BW-SA-192P
Te	SSF	100	--	--	--	GR	1.5E-6	--	--	SD-BWI-TI-141 P.143
Te	SSF	200	--	--	--	GR	1.0E-6	--	--	SD-BWI-TI-141 P.143
Te	SSF	300	--	--	--	GR	7.8E-7	--	--	SD-BWI-TI-141 P.143
Te	SSF + BASALT	100	--	--	--	GR	<7.8E-7	--	--	SD-BWI-TI-141 P.143
Te	SSF + BASALT	200	--	--	--	GR	<7.8E-7	--	--	SD-BWI-TI-141 P.143

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
QA BY: JM DATE: 10-29-84

SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Te	SSF + BASALT	300	--	--	--	GR	<7.8E-7	--	--	SD-BWI-TI-141 P.143
Th	SF + GRB	200	--	7.5	1000 HRS	GR	8.6E-7	--	--	RHO-BW-SA-330P
Th	--	--	--	--	--	--	8.3E-15	--	--	SD-BWI-DP-001
Th	SSF + BASALT	100	--	--	--	GR	<8.6E-7	--	--	SD-BWI-TI-141 P.143
Th	SSF + BASALT	200	--	--	--	GR	<8.6E-7	--	--	SD-BWI-TI-141 P.143
Th	SSF + BASALT	300	--	--	--	GR	<8.6E-7	--	--	SD-BWI-TI-141 P.143
U	SF + GRB	200	--	7.5	1000 HRS	GR	4.2E-7	--	--	RHO-BW-SA-330P
U	--	--	--	--	--	--	--	1.3E-11 - 1.9E-9	--	SD-BWI-DP-001
U	SSF + GRB	300	--	--	--	SYNTHETIC	<2.1E-7	--	--	RHO-BW-SA-253P
U	BG + GRB	300	--	--	--	SYNTHETIC	ND	--	--	RHO-BW-SA-253P
U	SSF	300	--	--	2	DW	1.3E-5	--	--	RHO-BWI-ST-7
U	HLW	300	--	--	4	DW	1.1E-5	--	--	RHO-BWI-ST-7
U	GC	300	--	--	1.5	DW	--	--	--	RHO-BWI-ST-7
U	SSF	300	--	--	2	DW	1.3E-5	--	SMITH ET AL. 1980	RHO-BWI-SA-100
U	SSF + BASALT	300	R	--	2	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
U	SSF	200	--	--	2	DW	4.2E-6	--	SMITH ET AL. 1980	RHO-BWI-SA-100
U	SSF + BASALT	200	R	--	2	DW	0	--	SMITH ET AL. 1980	RHO-BWI-SA-100
U	GLASS	300	--	--	1	DW	4.2E-7	--	SMITH ET AL. 1980 PNL	RHO-BWI-SA-100

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
U	GLASS + BASALT	300	R	--	1	DW	8.4E-9	--	SMITH ET AL. 1980 PNL	RHO-BWI-SA-100
U	SSF + BASALT	100	--	--	--	GR	1.2E-6	--	--	SD-BWI-TI-141 P.143
U	SSF + BASALT	200	--	--	--	GR	4.2E-7	--	--	SD-BWI-TI-141 P.143
U	SSF + BASALT	300	--	--	--	GR	5.5E-7	--	--	SD-BWI-TI-141 P.143
U	BASALT, BENTONITE, ZEOLITE	60	O	--	--	SIM. GR	1E-5	--	BATCH EQUILIBRIUM	SD-BWI-TI-155 P.54
U	BASALT, BENTONITE, ZEOLITE	60	R	--	--	SIM. GR	<1E-10	--	BATCH EQUILIBRIUM	SD-BWI-TI-155 P.54
U	U OXIDES	--	R	NEAR 7	--	--	1E-8	--	--	RHO-BWI-SA-125A
UO2	--	100	R	11	--	--	8E-8	--	JOHNSON ET AL.	RHO-BWI-SA-143
UO2	--	100	R	7	--	--	1E-12	--	JOHNSON ET AL.	RHO-BWI-SA-143
UO2	--	--	R	--	--	--	1E-8	--	--	RHO-BW-SA-192P
UO2(OH2)-H2O	--	--	O	--	--	--	1E-4	--	--	RHO-BWI-SA-143
Zr	--	--	--	--	--	--	--	1.2E-10 - 1.8E-8	--	SD-BWI-DP-001
Zr	SSF	100	--	--	--	GR	2.2E-7	--	--	SD-BWI-TI-141 P.143
Zr	SSF	200	--	--	--	GR	1.3E-6	--	--	SD-BWI-TI-141 P.143

WASTE PACKAGE SUBSYSTEM
PARAMETER: RADIONUCLIDE SOLUBILITY (M)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

SPECIES	MATERIAL	TEMP	EH	pH	TEST DURATION (MO)	GROUND WATER TYPE	VALUE	RANGE	METHOD OR REFERENCE	SOURCE
Zr	SSF	300	--	--	--	GR	2.2E-7	--	--	SD-BWI-TI-141 P.143
Zr	DHLW + BASALT	90	--	--	--	GR	<1.5E-7	--	--	SD-BWI-TI-141 P.143
Zr	DHLW + BASALT	150	--	--	--	GR	<1.5E-7	--	--	SD-BWI-TI-141 P.143

WASTE PACKAGE SUBSYSTEM: WASTE FORM
PARAMETER: GEOMETRY & DIMENSIONS (m)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

MATERIAL	GEOMETRY	DIMENSIONS M	SOURCE	REMARKS
BWR SPENT FUEL	--	LENGTH 3.76 M, VOLUME 1.1 M3	RHO-BWI-ST-16	--
BWR SPENT FUEL ASSEMBLY	--	13.9 CM SQ X 4.470 M	RHO-BWI-ST-7	SOLID PELLETS, 214.1 KG
COMMERCIAL HI-LEVEL	--	LENGTH 2.32 M, VOLUME 0.68 M3	RHO-BWI-ST-16	--
COMMERCIAL HI-LEVEL WASTE IN GLASS	--	DIA. 305 CM, LENGTH 305 CM	RHO-BW-SA-254P	TOTAL WT. 845 KG, WASTE CONTENT 595 KG
DEFENSE HI-LEVEL	--	LENGTH 2.13 M, VOLUME 2.49 M3	RHO-BWI-ST-16	--
LWR FUEL ELEMENT	--	OVERALL LENGTH 3.651 M	RHO-BWI-ST-7	UO2 PELLETS
PWR SPENT FUEL	--	LENGTH 3.66 M, VOLUME 1.07 M3	RHO-BWI-ST-16	--
PWR SPENT FUEL ASSEMBLY	--	21.4 CM SQ X 4.059 M	RHO-BWI-ST-7	SOLID PELLETS, 523.4 KG
PWR SPENT FUEL RODS	--	DIA. 0.95 CM PER ROD, LENGTH 383 CM	RHO-BW-SA-254P	TOTAL WT. 1980 KG, URANIUM CONTENT 1380 KG

WASTE PACKAGE SUBSYSTEM: WASTE FORM
PARAMETER: HALF-LIFE (years)

CHECKED BY: SP DATE: 09-29-84
QA BY: LH DATE: 10-29-84

SPECIES	HALF-LIFE	REFERENCE
Ac227	22	NUREG/CR-3066
Ac227	2.16E1	RHO-BWI-ST-10
Am241	4.33E2	RHO-BWI-C-94 p.99
Am241	4.58E2	RHO-BWI-LD-48 p.7
Am241	438	NUREG/CR-H0912 UCRL-52719
Am241	4.3E2	NUREG/CR-3066
Am241	4.33E2	RHO-BWI-ST-5
Am241	4.58E2	RHO-BWI-ST-10
Am242	1.52E2	RHO-BWI-ST-5
Am242	1.825E-3	RHO-BWI-C-94 p.A19
Am242	1.52E2	RHO-BWI-ST-10
Am242m	1.52E2	RHO-BWI-C-94 p.A19
Am243	7.4E3	NUREG/CR-3066
Am243	7.37E3	RRHO-BWI-ST-5
Am243	7.37E3	RHO-BWI-C-94 p.99
Am243	7.95E3	RHO-BWI-ST-10
C14	5.73E3	RHO-BWI-C-94 p.99
C14	5.7E3	NUREG/CR-3066
C14	5.73E3	RHO-BWI-ST-5
C14	5.77E3	RHO-BWI-ST-10 p.16
Cd113m	1.4E1	RHO-BWI-ST-10 p.16
Cm242	4.5E-1	RHO-BWI-C-94 p.A19
Cm242	4.5E-1	RHO-BWI-ST-5
Cm243	2.8E1	RHO-BWI-ST-5
Cm243	3.5E1	RHO-BWI-ST-10
Cm244	17.6	NUREG/CR-0912 UCRL-52719
Cm244	1.76E1	RHO-BWI-ST-10
Cm245	8.50E3	RHO-BWI-C-94 p.99
Cm245	8.5E3	RHO-BWI-ST-5
Cm245	8.0E3	RHO-BWI-ST-10
Cm246	4.71E3	RHO-BWI-C-94 p.A19
Cm246	5.48E3	RHO-BWI-ST-10
Cs135	2.3E6	NUREG/CR-3066
Cs135	3.0E6	RHO-BWI-SA-192P
Cs135	2.0E6	RHO-BWI-ST-10 p.16
Cs137	3.00E1	RHO-BWI-LD-48 p.7
Cs137	30.23	NUREG/CR-0912 UCRL-52719
Cs137	30	NUREG/CR-3066
Cs137	3.0E1	RHO-BWI-ST-10 p.16
Eu154	15	NUREG/CR-0912 UCRL-52719
Eu154	8.8	NUREG/CR-3066
Eu154	1.6E1	RHO-BWI-ST-10
H3	1.23E1	RHO-BWI-ST-10 p.16
Ho166m	3.0E1	RHO-BWI-ST-10
I125	1.65E-1	RHO-BWI-LD-48 p.7
I129	1.7E7	RHO-BWI-C-94 p.57
I129	1.7E7	NUREG/CR-0912 UCRL-52719
I129	1.6E7	NUREG/CR-3066
I129	1.7E7	RHO-BWI-ST-5
I129	1.6E7	RHO-BWI-ST-10 p.16
Kr85	1.04E1	RHO-BWI-ST-10 p.16
Nb93m	15	NUREG/CR-3066
Ni59	7.5E4	NUREG/CR-3066
Np235	1.12	RHO-BWI-LD-48 p.7

Np237	2.14E6	RHO-BWI-LD-48 p.7
Np237	2.14E6	NUREG/CR-0912 UCRL-52719
Np237	2.1E6	NUREG/CR-3066
Np237	2.14E6	RHO-BWI-ST-5
Np237	2.14E6	RHO-BWI-C-94 p.57
Np237	2.2E6	RHO-BWI-ST-10
Pa231	3.3E4	NUREG/CR-3066
Pa231	3.25E4	RHO-BWI-ST-5
Pa231	3.25E4	RHO-BWI-C-94 p.99
Pa231	3.4E4	RHO-BWI-ST-10
Pa234m	2.22E-6	RHO-BWI-C-94 p.A19
Pa234m	7.7E-4	RHO-BWI-C-94 p.A19
Pb206	stable	RHO-BWI-C-94 p.A19
Pb210	22	NUREG/CR-3066
Pb210	21.0	RHO-BWI-C-94 p.A19
Pb210	2.23E1	RHO-BWI-ST-10
Pb214	5.1E-5	RHO-BWI-C-94 p.A19
Pd107	4.5E6	NUREG/CR-3066
Pd107	7.0E6	RHO-BWI-ST-10 p.16
Po210	0.38	NUREG/CR-3066
Pu233	2.44E4	RHO-BWI-ST-5
Pu237	1.25	RHO-BWI-LD-48 p.7
Pu238	86	NUREG/CR-0912 UCRL-52719
Pu238	88	NUREG/CR-3066
Pu238	8.9E1	RHO-BWI-C-94 p.A19
Pu238	8.64E1	RHO-BWI-SA-192P
Pu238	8.78E1	RHO-BWI-ST-5
Pu238	8.9E1	RHO-BWI-ST-10
Pu239	24400	NUREG/CR-0912 UCRL-52719
Pu239	2.2E4	NUREG/CR-3066
Pu239	2.44E4	RHO-BWI-C-94 p.99
Pu239	2.436E4	RHO-BWI-ST-10
Pu240	6580	NUREG/CR-0912 UCRL-52719
Pu240	6.6E3	NUREG/CR-3066
Pu240	6.58E3	RHO-BWI-ST-10
Pu241	1.32E1	RHO-BWI-LD-48 p.7
Pu241	13.2	NUREG/CR-0912 UCRL-52719
Pu241	1.5E1	RHO-BWI-ST-5
Pu241	1.3E1	RHO-BWI-ST-10
Pu242	3.87E5	RHO-BWI-C-94 P.99
Pu242	3.79E5	RHO-BWI-C-94 p.A19
Pu242	3.87E5	RHO-BWI-ST-5
Pu242	3.8E5	RHO-BWI-ST-10
Ra226	1.60E3	RHO-BWI-C-94 p.99
Ra226	1.60E3	RHO-BWI-LD-48 p.7
Ra226	1.6E3	NUREG/CR-3066
Ra226	1.6E3	RHO-BWI-ST-5
Ra226	1.622E3	RHO-BWI-ST-10
Ra228	5.8	NUREG/CR-3066
Rn222	0.010	RHO-BWI-C-94 p.A19
Sb	3.29E-2	RHO-BWI-SA-65
Se75	3.29E-1	RHO-BWI-LD-48 p.7
Se79	6.5E4	NUREG/CR-3066
Se79	7.0E4	RHO-BWI-ST-10 p.16
Sm151	93	NUREG/CR-0912 UCRL-51719
Sm151	90	NUREG/CR-3066
Sm151	9.3E1	RHO-BWI-ST-10 p.16
Sn126	1.0E5	NUREG/CR-3066
Sn126	1.0E5	RHO-BWI-SA-65
Sn126	1E5	RHO-BWI-ST-10 p.16
Sr85	1.75E-1	RHO-BWI-LD-48 p.7

Sr90	28.1	NUREG/CR-0912 UCRL-52719
Sr90	29	NUREG/CR-3066
Sr90	2.8E1	RHO-BWI-SA-192P
Sr90	2.86E2	RHO-BWI-ST-10 p.16
Tc95m	1.67E-1	RHO-BWI-LD-48 p.7
Tc99	2.1E5	RHO-BWI-C-94 p.99
Tc99	2.12E5	RHO-BWI-LD-48 p.7
Tc99	2.12E5	NUREG/CR-0912 UCRL-52719
Tc99	2.1E5	NUREG/CR-3066
Tc99	2.1E5	RHO-BWI-ST-5
Tc99	2.1E5	RHO-BWI-ST-10 p.16
Th229	7.3E3	NUREG/CR-3066
Th229	7.34E3	RHO-BWI-ST-5
Th229	7.34E2	RHO-BWI-C-94 p.99
Th229	7.34E3	RHO-BWI-ST-10
Th230	7.70E4	RHO-BWI-C-94 p.99
Th230	8.00E4	RHO-BWI-C-94 p.A19
Th230	7.7E6	NUREG/CR-3066
Th230	7.7E4	RHO-BWI-ST-5
Th230	8.0E1	RHO-BWI-ST-10
Th232	1.4E10	NUREG/CR-3066
Th234	6.6E-2	RHO-BWI-C-94 p.A19
U232	7.36E1	RHO-BWI-ST-10
U233	1.62E5	RHO-BWI-LD-48 p.7
U233	1.6E5	NUREG/CR-3066
U233	1.58E5	RHO-BWI-ST-5
U233	1.58E5	RHO-BWI-C-94 p.99
U233	1.6E5	RHO-BWI-ST-10
U234	2.44E5	RHO-BWI-C-94 p.99
U234	2.47E5	RHO-BWI-C-94 p.A19
U234	2.4E5	NUREG/CR-3066
U234	2.44E5	RHO-BWI-ST-5
U234	2.5E5	RHO-BWI-ST-10
U235	7.0E8	NUREG/CR-3066
U235	7.04E8	RHO-BWI-ST-5
U235	7.04E8	RHO-BWI-C-94 p.99
U235	7.1E8	RHO-BWI-ST-10
U236	2.4E7	RHO-BWI-ST-10
U238	4.47E9	RHO-BWI-C-94 p.99
U238	4.51E9	RHO-BWI-C-94 p.A19
U238	4.5E9	NUREG/CR-3066
U238	4.47E9	RHO-BWI-ST-5
U238	4.5E9	RHO-BWI-ST-10
Zr93	1.5E-6	NUREG/CR-3066
Zr93	9.5E5	RHO-BWI-ST-10 p.16

WASTE PACKAGE SUBSYSTEM: WASTE FORM
PARAMETER: SPECIFIC ACTIVITY (Ci/mole)

CHECKED BY: SP DATE: 09-29-84
QA BY: ZH DATE: 10-29-84

SPECIES	SPECIFIC ACTIVITY	REFERENCE
Am241	780	RHO-BWI-SA-143
Am241	834	RHO-BWI-ST-5
Am242m	2360	RHO-BWI-ST-5
Am243	45	RHO-BWI-SA-143
Am243	48.6	RHO-BWI-ST-5
C14	53.6	RHO-BWI-ST-5
Cm242	8.12E5	RHO-BWI-ST-5
Cm243	1.3E4	RHO-BWI-ST-5
Cm245	42	RHO-BWI-ST-5
Cs137	1E4	RHO-BWI-SA-143 p.29
Eu154	2E4	RHO-BWI-SA-143 p.29
I129	0.02	RHO-BWI-SA-143 p.29
I129	0.021	RHO-BWI-ST-5
Np237	0.2	RHO-BWI-SA-143
Np237	0.167	RHO-BWI-ST-5
Pa231	11	RHO-BWI-ST-5
Pu233	15	RHO-BWI-ST-5
Pu238	4180	RHO-BWI-ST-5
Pu239	15	RHO-BWI-SA-143
Pu240	54	RHO-WBI-SA-143
Pu241	2.42E4	RHO-BWI-ST-5
Pu242	0.9	RHO-BWI-SA-143
Pu242	9.32E-3	RHO-BWI-ST-5
Ra226	224	RHO-BWI-ST-5
Se79	5	RHO-BWI-SA-143 p.29
Sm151	4000	RHO-BWI-SA-143 p.29
Sr90	1.2E4	RHO-BWI-SA-143 p.29
Tc99	1.7	RHO-BWI-SA-143 p.29
Tc99	1.7	RHO-BWI-ST-5
Th229	48.7	RHO-BWI-ST-5
Th230	4.64	RHO-BWI-ST-5
U233	2.31	RHO-BWI-ST-5
U234	1.4	RHO-BWI-SA-143 p.29
U234	1.46	RHO-BWI-ST-5
U235	5.1E4	RHO-BWI-ST-5
U236	0.014	RHO-BWI-SA-143 p.29
U238	8E5	RHO-BWI-SA-143
U238	8.0E5	RHO-BWI-ST-5
Zr93	0.38	RHO-BWI-SA-143 p.29

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (wt. %)

Prepared by AB Date 6/18/84
Checked by RK Date 6/20/84
QA by JH Date 10/29/84

Waste Source	Species	Amount (wt.%)	Form	Reference
Spent Fuel-Aged 10 Yrs	UO_2	96.124	--	RHO-BWI-C-114
" "	NpO_2	0.044	--	"
" "	PuO_2	0.848	--	"
" "	AmO_2	0.055	--	"
" "	CmO_2	0.001	--	"
" "	Y_2O_3	0.051	--	"
" "	La_2O_3	0.126	--	"
" "	CeO_2	0.259	--	"
" "	Pr_6O_{11}	0.120	--	"
" "	Nd_2O_3	0.502	--	"
--	ZrO_2	0.434	--	"
--	MoO_2	0.393	--	"
--	SrO	0.081	--	"
--	BaO	0.171	--	"

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (wt. %)

Prepared by AB Date 6/18/84
Checked by SP Date 09-02-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (wt.%)	Form	Reference
--	Cs_2O	0.277	--	RHO-BWI-C-114
--	I	0.024	--	"
--	Te	0.051	--	"
--	Ru	0.193	--	"
--	Rh	0.042	--	"
--	Pd	0.121	--	"
--	Tc	0.070	--	"
Spent Fuel Aged 1000 Yrs	UO_2	96.166	--	"
"	NpO_2	0.138	--	"
"	PuO_2	0.728	--	"
"	AmO_2	0.033	--	"
"	CmO_2	<0.001	--	"
"	Y_2O_3	0.051	--	"
"	La_2O_3	0.126	--	"

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (wt. %)

Prepared by RK Date 6/20/84
Checked by JP Date 09-02-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (wt.%)	Form	Reference
Spent Fuel Aged 1000 Yrs	CeO_2	0.258	--	RHO-BWI-C-114
"	Pr_6O_{11}	0.120	--	"
"	Nd_2O_3	0.501	--	"
--	ZrO_2	0.484	--	"
--	MoO_2	0.393	--	"
--	SrO	0.037	--	"
--	BaO	0.265	--	"
--	Cs_2O	0.189	--	"
--	I	0.024	--	"
--	Te	0.051	--	"
--	Ru	0.193	--	"
--	Rh	0.042	--	"
--	Pd	0.121	--	"
--	Tc	0.070	--	"

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (wt. %)

Prepared by AB Date 6/19/84
Checked by SP Date 09-02-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (wt.%)	Form	Reference
--	SiO_2	39.8	76-68 Glass	RHO-BWI-LD-11, p. 7
--	Na_2O	12.5	"	"
--	Fe_2O_3	9.8	"	"
--	B_2O_3	9.5	"	"
--	ZnO	5.0	"	"
--	U_3O_8	4.6	"	"
--	RE_2O_3	3.4	"	"
--	TiO_2	3.0	"	"
--	MoO_3	2.3	"	"
--	CaO	2.0	"	"
--	ZrO_2	1.8	"	"
--	CeO_2	1.2	"	"
--	RuO_2	1.1	"	"
--	Cs_2O	1.0	"	"

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (wt. %)

Prepared by AB Date 6/19/84
Checked by SP Date 09-07-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (wt.%)	Form	Reference
--	BaO	0.6	76-68 Glass	RHO-BWI-LD-11, p. 7
--	PdO	0.5	"	"
--	P_2O_5	0.5	"	"
--	Cr_2O_3	0.4	"	"
--	SrO	0.4	"	"
--	TeO_2	0.3	"	"
--	NiO	0.2	"	"
--	Rh_2O_3	0.2	"	"
--	Rb_2O	0.1	"	"
--	Others	0.1	"	"
Simulated Spent Fuel	UO_2	96.09	"	SD-BWI-TS-004, p. 10
"	ThO_2	0.95	"	"
"	Y_2O_3	0.51	"	"
"	CeO_2	0.25	"	"

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (wt. %)

Prepared by RK Date 7/5/84
Checked by SP Date 09-02-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (wt.%)	Form	Reference
Simulated Spent Fuel	Mo	0.294	--	SD-BWI-TS-004, p. 10
"	Pd	0.357	--	"
"	Cs	0.202	--	"
"	I	0.024	--	"
"	Te	0.051	--	"
"	Sr	0.068	--	"
"	Ba	0.153	--	"
"	W	0.010	--	"
"	Re	0.129	--	"
"	Sm	0.565	--	"
High Level Waste in Borosilicate Glass	SiO_2	25-50	Cast Glass	RHO-BWI-ST-7
"	B_2O_3	9-22	"	"
"	P_2O_5	0-2	"	"
"	Alkali Metal Oxides	8-19	"	"

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (wt. %)

Prepared by CJ Date 7/6/84
Checked by SP Date 09-22-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (wt.%)	Form	Reference
High Level Waste in Borosilicate Glass	Alkali Earth Oxides	0-6	Cast Glass	RHO-BWI-ST-7
"	F_2O_3, Cr_2O_3, NiO	1-20	"	"
"	Al_2O_3	0-10	"	"
"	TiO_2	0-3	"	"
"	ZnO	0-22	"	"
"	CuO	0-3	"	"
"	PbO	0-50	"	"
"	Cd_2O_3	0-12	"	"
	Fission products	30	"	"
	Actinides	10	"	"

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (g)

Prepared by AB Date 6/18/84
Checked by SP Date 09-02-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (g)	Reference	Remarks
--	^{242}Pu	9.67 E8	RHO-BWI-C-94, p. 60	Projection to Year 2000
--	^{238}U	7.15 E10	"	"
--	^{234}U	6.44 E6	"	"
--	^{230}Th	1.52 E2	"	"
--	^{226}Ra	6.92 E-2	"	"
--	^{245}Cm	2.29 E4	"	"
--	^{241}Am	2.78 E7	"	"
--	^{237}Np	2.07 E7	"	"
--	^{233}U	2.06 E2	"	"
--	^{229}Th	4.21 E-2	"	"
--	^{243}Am	3.1 E6	"	"
--	^{239}Pu	1.21 E8	"	"
--	^{235}U	3.94 E8	"	"
--	^{231}Pa	1.42 E1	"	"

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (g)

Prepared by AB Date 6/18/84
Checked by SP Date 09-02-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (g)	Reference	Remarks
- -	^{14}C	4.67 E3	RHO-BWI-C-94, p. 60	Projections to Year 2000
- -	^{99}Tc	1.77 E7	"	"
- -	^{129}I	4.82 E7	"	"

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (g/tonne)

Prepared by CJ Date 7/5/84
Checked by SP Date 09-02-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (g/tonne)	Reference	Remarks
LWR Spent Fuel 10 Yrs After Discharge	He	0.634	RHO-BWI-ST-7	--
"	Ge	0.371	"	--
"	As	0.085	"	--
"	Se	52.1	"	--
"	Br	15.3	"	--
"	Kr	362	"	--
"	Rb	348	"	--
"	Sr	880	"	--
"	Y	467	"	--
"	Zr	3780	"	--
"	Nb	.0041	"	--
"	Mo	3470	"	--
"	Tc	841	"	--
"	Ru	2150	"	--

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (g/tonne)

Prepared by CJ Date 7/6/84
Checked by SP Date 09-02-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (g/tonne)	Reference	Remarks
LWR Spent Fuel 10 Yrs After Discharge	Rh	388	RHO-BWI-ST-7	--
"	Pd	1410	"	--
"	Ag	59.7	"	--
"	Cd	83.8	"	--
"	In	1.23	"	--
"	Sn	51.0	"	--
"	Sb	10.5	"	--
"	Te	570	"	--
"	I	270	"	--
"	Xe	5450	"	--
"	Cs	2310	"	--
"	Ba	1810	"	--
"	La	1270	"	--
"	Ce	2480	"	--

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (g/tonne)

Prepared by CJ Date 7/6/84
Checked by SP Date 09-02-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (g/tonne)	Reference	Remarks
LWR Spent Fuel 10 Yrs After Discharge	Pr	1200	RHO-BWI-ST-7	--
"	Nd	4110	"	--
"	Pm	7.49	"	--
"	Sm	899	"	--
"	Eu	162	"	--
"	Gd	123	"	--
"	Tb	1.78	"	--
"	Dy	1.12	"	--
"	U	955,000	"	--
"	Np	483	"	--
"	Pu	11,600	"	--
"	Am	137	"	--
"	Cm	23.3	"	--

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (Ci)

Prepared by CJ, AB Date 7/10, 22
Checked by SP Date 09-02-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (Ci) 10 yrs	100 yrs	1000 yrs	10,000 yrs	Reference	Remarks
LWR spent fuel after isolation from the reactor (solid pellets)	^{3}H	1.2E7	7.5E4	--	--	RHO-BWI-ST-10	Amounts listed are equal to half the estimated total inventory of spent fuel in the U.S. in the year 2010 (46,500 mt heavy metal). This reference also lists (pp. 31-36) inventory for all isotopes in terms of curies per metric ton of heavy metals for ten different decay periods. These values are also listed in RHO-BWI-SA-65.
	^{14}C	3.5E4	3.5E4	3.0E4	1.0E4	"	
	^{79}Se	1.6E4	1.6E4	1.6E4	1.5E4	"	
	^{85}Kr	2.3E8	7.5E5	--	--	"	
	^{90}Sr	2.4E9	2.7E8	6.0E-2	--	"	
	^{93}Zr	8.0E4	8.0E4	8.0E4	8.0E4	"	
	^{99}Tc	6.1E5	6.1E5	6.1E5	5.6E5	"	
	^{107}Pd	4.6E3	4.6E3	4.6E3	4.6E3	"	
	^{113m}Cd	3.3E5	3.8E3	--	--	"	
	^{126}Sn	2.2E4	2.2E4	2.2E4	2.1E4	"	
	^{129}I	1.5E3	1.5E3	1.5E3	1.5E3	"	
	^{135}Cs	1.3E4	1.3E4	1.3E4	1.3E4	"	
	^{137}Cs	3.5E9	4.4E8	4.0E-1	--	"	
	^{151}Sm	5.2E7	2.4E7	1.9E4	--	"	
	^{154}Eu	1.7E8	3.6E6	--	--	"	
	^{166m}Ho	2.5E1	2.4E1	1.4E1	8.0E2	"	
	^{210}Pb	3.3E-5	8.0E-2	4.7E1	2.3E3	"	
	^{226}Ra	3.5E-4	1.6E-1	4.7E1	2.3E3	"	
	^{227}Ac	5.2E-2	1.2E0	1.64E1	1.59E2	"	
	^{229}Th	1.3E-3	4.0E-2	5.6E0	7.03E2	"	

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY (Ci)

Prepared by CJ, AB Date 7/10, 22
Checked by SP Date 09-03-84
QA by LH Date 10-29-84

Waste Source	Species	Amount (Ci) 10 yrs	100 yrs	1000 yrs	10,000 yrs	Reference	Remarks
LWR spent fuel after isolation from the reactor (solid pellets)	^{230}Th	1.9E-1	1.03E-1	2.81E2	3.046E3	RHO-BWI-ST-10	Amounts listed are equal to half the estimated total inventory of spent fuel in the U.S. in the year 2010 (46,500 mt heavy metal). This reference also lists (pp. 31-36) inventory for all isotopes in terms of curies per metric ton of heavy metals for ten different decay periods. These values are also listed in RHO-BWI-SA-65.
	^{231}Pa	2.5E-1	1.7E0	1.64E1	1.6E2	"	
	^{232}U	6.56E2	2.9E2	5.0E2	--	"	
	^{233}U	1.8E0	8.4E0	1.4E2	2.1E3	"	
	^{234}U	3.5E3	2.1E4	3.7E4	3.7E4	"	
	^{235}U	7.5E2	7.5E2	8.0E2	8.9E2	"	
	^{236}U	1.0E4	1.0E4	1.1E4	1.5E4	"	
	^{238}U	1.5E4	1.5E4	1.5E4	1.5E4	"	
	^{237}Np	1.5E4	1.9E4	4.5E4	5.2E4	"	
	^{238}Pu	9.4E7	4.7E7	5.2E4	--	"	
	^{239}Pu	1.4E7	1.4E7	1.3E7	1.0E7	"	
	^{240}Pu	2.1E7	2.1E7	1.9E7	7.5E6	"	
	^{241}Pu	3.2E9	4.7E7	7.8E3	3.6E3	"	
	^{242}Pu	7.5E4	7.5E4	7.5E4	7.5E4	"	
	^{241}Am	7.5E7	1.6E8	3.9E7	3.7E3	"	
	^{242}Am	4.7E5	3.2E5	5.2E3	--	"	
	^{243}Am	6.6E5	6.6E5	6.1E5	2.7E5	"	
	^{243}Cm	1.5E5	2.2E4	--	--	"	
	^{244}Cm	4.2E7	1.4E6	--	--	"	
	^{245}Cm	8.4E3	8.4E3	8.0E3	3.7E3	"	
	^{245}Cm	1.6E3	1.6E3	1.4E3	3.7E2	"	

WASTE PACKAGE SUBSYSTEM: WASTE FORM

PARAMETER: RADIONUCLIDE INVENTORY

Prepared by CJ Date 7/6/84
Checked by SP Date 09-02-84
QA by LH Date 10-29-84

Waste Source	Ion	Molarity	Oxide	g/l*	Form	Reference	Remarks
Hi-level PW-7 waste in supercalcine SPC-4	RE	0.204	RE_2O_3	34.07	Pellets	RHO-BWI-ST-7	RE=Nd+Pr+Sm+Gd+Y
"	Gd	0.153	Gd_2O_3	27.69	"	"	--
"	Zr	0.106	ZrO_2	13.04	"	"	--
"	Fe	0.100	Fe_2O_3	8.0	"	"	--
"	PO_4	0.100	P_2O_5	7.10	"	"	--
Hi-level waste PW-7 in supercalcine SPC-2	Mo	0.095	MoO_3	13.68	"	"	
"	Cs	0.054	Cs_2O	7.61	"	"	--
"	Ba	0.027	BaO	4.13	"	"	--
"	Sr	0.027	SrO	2.81	"	"	--
"	Cr	0.012	Cr_2O_3	0.91	"	"	--
"	Rb	0.010	Rb_2O	0.94	"	"	--
"	Na	0.010	N_2O	0.31	"	"	--
"	Ru	0.059	RuO_2	7.90	"	"	--
"	Ni	0.005	NiO	0.38	"	"	--

* grams of oxide per liter of calcine

APPENDIX C REFERENCES
WASTE PACKAGE SUBSYSTEM DATA TABLES

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APPENDIX D

DESCRIPTION OF THE CAPABILITIES OF BWIP PERFORMANCE ASSESSMENT COMPUTER CODES

BWIP PERFORMANCE ASSESSMENT MODELS

1.0 INTRODUCTION

The purpose of Appendix D is to describe the performance assessment models being used by the BWIP and to discuss how performance assessment models interface with other BWIP modeling activities. The need to address performance activities is fundamental to the basic program mission of the U.S. Department of Energy's geologic repository program; that is, "to develop mined geologic repositories for the permanent disposal of high-level radioactive waste and spent fuel in a manner that fully protects the health and safety of the public." Performance Assessment Activities relate data collected during the Site Characterization activities to both the near-term and long-term safety issues associated with the safe handling and disposal of high-level nuclear waste. During Site Characterization, the performance assessment models will be used by the BWIP to prioritize data needs. Data needs are defined in the context of providing the necessary "reasonable assurance" that the NWRB complies with specified regulatory performance criteria.

The scope of performance assessment activities includes both; preclosure occupational and public safety considerations, and post-closure long-term waste isolation safety considerations. Although preclosure occupational safety will be the responsibility of the design agent, appropriate reviews will be the responsibility of the BWIP. Safety considerations will be examined under both anticipated or normal operating conditions and abnormal accident or disruptive conditions. Generally speaking, performance-assessment model activities focus on the development of a capability that will be used to assess subsystem and overall system performance as specified in the regulatory criteria, Nuclear Regulatory Commission (NRC, 1983) and Environmental Protection Agency (EPA, 1982).

2.0 PRECLOSURE PERFORMANCE ASSESSMENT MODELS

The preclosure performance assessment activity address the safety of the NWRB during repository construction and operation until permanent closure of the facility. The scope of preclosure performance assessment activities include optional retrieval of emplaced waste. The emphasis of the preclosure performance assessment activities is on ensuring safety of the engineered system (waste package and repository) through support of design and licensing of the NWRB. Preclosure safety analysis will include evaluations of the following:

- Normal and accident conditions
- Internal and external events that impact safety
- Radiological and nonradiological occurrences
- Onsite and offsite consequences.

Assessment of preclosure performance will involve an iterative process. A Safety Analyses will be completed during each repository and waste package design phase. The level of detail and the techniques used in the safety analyses will be governed by the complexity and detail in the system design description. Formal documented safety analyses will be conducted following the completion of each major design phase conceptual, upgraded conceptual, Repository Preliminary Design (Title I), and Final Design (Title II) designs. Such safety analyses will provide input to design criteria and will include recommendations for ensuring that the design will comply with applicable safety criteria. The initial safety analysis review is contained in a draft Preliminary Hazards Analysis, which is presently under review by the BWIP. Results from the Preliminary Hazards Analysis along with the appropriate regulatory criteria will be translated into more specific design safety criteria and will form the basis for upgrading the repository functional design criteria prior to initiating the upgraded conceptual design.

Numerical models will be used to examine aspects of occupational and public safety related to radiological exposure and mine safety. As a general rule, these analyses will be performed by the design agent or an outside consultant under contract.

Heat Transfer Analysis. Heat transfer analysis is required to ensure that the temperature during the periods of repository operation and performance confirmation can be controlled to first allow the placement of the waste, and secondly to allow retrieval of the waste for up to 50 years if required. Subsequent to closure, limitations on maximum temperatures will be required to limit degradation, physical or chemical changes to the host rock, waste package, container, and other engineered barriers. Nonlinear codes are used to model materials with temperature-dependent specific heats or thermal conductivities. Results from the thermal analyses in the form of temperature changes will be used to evaluate compliance with thermal design in limits and will be used as input to the stress analysis codes. Models that will be used for detailed thermal analyses include HEATING5, ANSYS, and ADINAT. These codes will be used to benchmark the very near field MAGNUM 2-D and near-field PORFLO performance

assessment computer codes. If benchmarking is not possible, results from HEATING5, ANSYS, and ADINAT will be used to calibrate MAGNUM 2-D and CHAINT.

Geomechanical Analyses. Geomechanical analyses are required to determine the stresses around the repository, the deformation associated with the stresses, and the overall stability of the openings. Stresses computed from the geomechanical analysis may be due to the initial stresses, excavation geometry, thermal loads, blast damage, and/or earthquake loads. The results of these analysis will be used for repository design.

Three computer codes will be used to evaluate geochemical stress and deformation considerations in support of engineering design activities. The include ABAQUS, ANSYS, and ADINA/ADINAT.

From a performance assessment long term waste isolation point of view, results from the geochemical stress and deformation analysis will be used to estimate the changes in hydraulic conductivity and porosity of the backfill and host rock. The time- or temperature-dependent variation in hydraulic properties of the host rock could be determined outside the flow and tranport codes. These results could then be input directly into the groundwater flow and solute transport codes. Another approach would be to use the results from the detailed design codes, i.e., ABAQUS, ANSYS, ADINA/ADINAT to calibrate simplified thermomechanical computer codes such as BETA or DAMSWEL. The BETA or DAMSWEL computer codes could be used to calculate stress and deformation. The results from the BETA or DAMSWEL computer codes could be used to calculate changes in hydraulic properties that would be input into the groundwater flow and transport codes. In terms of software model development, the coupling of these analyses could be accomplished implicitly using appropriate pre and post processors. A description of BETA and DAMSWEL is provided in Section 4.0.

The consequences of selected hazardous repository operations under normal and accident conditions will be evaluated and compared to applicable criteria. Consideration will be given to radiological, industrial, and mine safety hazards to the public and to repository personnel. This task will lead to the documentation of quantitative estimates of consequences and a measurement of risk (probability times consequence). Safety hazards will then be classified and ranked in terms of relative risk.

Mine accidents will be analyzed for their impact on occupational safety and relationships to radiological hazards will be identified. For

accidents that involve the relese of radioactivity, the consequence analysis will calculate both occupational and public exposure. To this end, the consequence analysis will include evaluation of:

- Contaminant source terms
- Occupational radiation exposure
- Release mechanisms
- Transport pathways
- Radiological dose consequences.

Source terms will be quantified through detailed analysis of previously described accident scenarios. Release characteristics will depend on the type of initiating event (e.g., fire, explosion) and the fraction of waste inventory involved. Within the facility, transport pathways will be determined by ventilation system performance, radioactive waste system capabilities, and the anticipated response of monitoring systems and personnel to accident conditions. Radiological dose via environmental pathways, i.e. air and water, will be evaluated with appropriate models. Radiological dose to the public and to repository personnel will be calculated considering the population exposed and dose mechanism or process, i.e. direct exposure, inhalation, ingestion, or immersion. Assessments of radiological dose will be made using standardized environmental pathway computer codes, i.e., KRONIC, DACTIN, PABLM. These computer codes have been widely used in the nuclear industry and have been documented and verified for use in support of licensing nuclear facilities. In accordance with DOE-RL guidance, dose calulations will be made by the PNL Environmental Evaluations Section.

3.0 POST-CLOSURE PERFORMANCE ASSESSMENT MODELS

To model the characteristics and performance of a mined geologic repository, mathematical models must be developed that will predict the potential release of radionuclides to the accessible environment and the path of transport of these radionuclides. These models must account for the potential consequences associated with releases over extended periods of time, i.e., 10,000 yr and greater, and over varying space scales, i.e., meters to tens of kilometers. As conceptualized, the primary pathway for the migration of radionuclides from the waste package to the accessible environment is via groundwater transport. Construction of conceptual models is a necessary precursor to the development of more detailed mathematical models.

A suite of computer codes has been assembled to model the release and transport of radionuclides. These computer codes are both deterministic and stochastic in nature. In deterministic analysis input data are specified as single, discrete values for each parameter. In stochastic analysis each of the parameters is assigned a distribution, i.e., normal, lognormal, etc., from which discrete values are selected randomly for each computational cycle, and the process is repeated.

In the following, the performance assessment models that will be used to assess post-closure waste isolation performance related to regulating criteria will be reviewed. The interface of performance assessment activities is also discussed. The discussion is divided into a presentation of codes use for analysis at the various subsystems.

The critical processes that effect radionuclide migration can be different at different spatial scales. As a result, the models used for overall long-term waste isolation performance analysis have been divided into a discussion of needs at differing space scales; very near field, near field, and far field. These space scales are correlated with the various repository subsystems to underscore the importance of the multibarrier approach, i.e., very near field synonymous with Waste Package Subsystem, near field synonymous with repository seal subsystem, and far field synonymous with site subsystem.

Waste Package Subsystem Model. A waste package for a NWRB can control release of radionuclides either by containing them for a predetermined period or by controlling release from the waste form and packing. At the waste package scale of analysis, the primary factors affecting mass transport are the solubility of the radionuclide under review, the sorptive characteristics of the radionuclide once the radionuclide under review, the sorptive characteristics of the radionuclide once the radionuclide begins to migrate away from the waste package, the diffusivity of the packing material and host rock surrounding the packing, the dispersivity and advection of the groundwater and radioactive decay. The release rate from the waste package is assumed to be controlled by the solubility limit and diffusive transport through the packing material.

Performance Assessment will use the results from this model as a source term for MAGNUM 2-D and CHAINT. To the extent possible, the MAGNUM 2-D and CHAINT computer codes will be calibrated against the waste package process specific modules. The BWIP allocation stragegy assumes that each of the subsystems can satisfy the EPA integrated flux criterion with pre-

specified level of confidence. This redundancy in design seems prudent in light of present uncertainties.

Repository Seals Subsystem Model. Performance allocation strategy is based upon the principles of redundancy in assigning performance goals for each of the subsystems. Using this approach, the repository seals subsystem acting in concert with the site subsystem is assigned a performance goal of achieving compliance with EPA independent of the performance of the waste package subsystem.

As conceptualized, the migration of radionuclides from the waste package to the accessible environment can be through either the vertical shafts or through the host rock. In terms of groundwater flow split preliminary calculations have shown that the percentage of flow past the repository seals system is 100% of the total flow intercepted by the repository.

At the repository seals subsystem scale of analysis, the primary factors affecting mass transport are the concentration of radionuclides in the groundwater, the sorptive characteristics of the radionuclides in the tunnel and shaft backfill, blast damage and plastic stress induced zone surrounding the backfill, and the host rock, molecular, diffusivity in each of these zones, dispersivity and advection of the groundwater, and radioactive decay. Performance Assessment plans to use the PORFLOW, MAGNUM 2-D and CHAINT computer codes to simulate the repository seals subsystem. The performance assessment computer codes will be calibrated and/or benchmarked against the Engineered Barriers repository seals subsystem model.

Site Subsystem Model. Preliminary analysis indicates that more than 90% of the radionuclides that migrate from the waste package subsystem will be transported into the site subsystem. The stratigraphy of the basalts beneath the Hanford Reservation support the conceptualization of a flow geometry using a layered horizontal mode. Each of these layers is characterized by two zones, a dense interior and a brecciated flow top. Radionuclides that migrate from the waste package subsystem into the site subsystem will be transported into the dense interior of the basalt. It is assumed that the radionuclides will tend to move in a vertical direction under the influence of the stronger vertical hydraulic gradient. The radionuclides intercept a flow zone with a higher hydraulic conductivity (assume isotropic). If the radionuclides migrate into a zone of rock that has a higher conductivity than the rock immediately above and below, the

radionuclides will tend to move in a horizontal direction consistent with the layered geometry. The radionuclides will continue to flow in this horizontal plan until a discontinuity or change is encountered. Different conceptual models of the groundwater flow system within the deep Hanford basalts are presently under consideration.

At the site subsystem scale of analysis, the primary factors affecting mass transport are the concentration of radionuclides in the groundwater, the sorptive characteristics of the radionuclides in the flow interiors and flow tops of the basalt, molecular diffusivity, the dispersivity and advection of the groundwater. The TRESCOTT computer code will be used to simulate the groundwater flow system during hydrologic characterization. The MAGNUM 3-D computer code is presently being documented, verified and benchmarked and will be used during licensing for simulating groundwater flow in the far field. MAGNUM 3-D will be benchmarked against the TRESCOTT computer code prior to the start of Title I design.

4.0 DESCRIPTION AND STATUS OF PERFORMANCE ASSESSMENT MODELS

4.1 DETERMINISTIC MODELS

4.1.1 BETA Computer Code

Summary: The finite-element code BETA is a modified version of a computer code developed by the University of Minnesota. The BETA code is designed to simulate the thermomechanical response of a continuous rock mass in two dimensions (i.e., cartesian or cylindrical coordinate systems). Stresses and strains in the rock mass surrounding the repository are computed as functions of stress boundary conditions, gravity loads, and transient thermal conditions. Heat transport through the rock mass is assumed to occur by conduction only; advection of the groundwater and convection boundary conditions are not considered. BETA solves linear steady state and transient problems. Material properties may be spatially varied.

The specific governing equations are based on elastic behavior and can be found in most stress analyses (Timoshenko and Goodier, 1970) and finite-element texts (Cook, 1981). Some of the basic features of the BETA code include:

- Representation of the rock mass as a continuum represented by quadrilateral isoparametric elements

- Plane stress and plane strain relationship
- Isothermal stress and coupled stress and temperature relationship
- Transient heat transfer term
- Arbitrary heat source term.

Status: The BETA computer code was developed at the University of Minnesota for the BWIP. A users guide has been prepared (Santich, 1980). A preliminary verification of the computer code has been completed (Santich, 1980). Additional testing of the code is planned and calibration of the code against the engineered design models is anticipated.

4.1.2 DAMSWEL Computer Code

Summary: The computer code DAMSWEL is a finite-element model used for thermal stress analysis in two dimensions. The DAMSWEL computer code solves steady-state and transient, linear and nonlinear, isotropic and anisotropic heat conduction problems in cartesian and cylindrical coordinates. Material properties may be nonlinear functions involving dependence on temperature. Thermal conductivity may be anisotropic. Results from the thermal analysis are used as input to the calculation of geomechanical stresses.

Status: A users guide for the DAMSWEL computer code has been completed (Boonlualohr et al., 1980). A preliminary verification for the computer code has been completed. Preliminary validation of the DAMSWEL computer model was performed using data from the full-scale heater tests conducted at the Near Surface Test Facility. Additional testing of the DAMSWEL computer code is planned.

4.1.3 MAGNUM 2-D Computer Code

Summary: MAGNUM 2-D is a two dimensional (2D) finite-element code designed to simulate transient groundwater flow and heat transport in fractured-porous rock systems. The theorectcial framework of the code is based on concepts for a pourous continuum and for discrete conduits. In particular, a dual-porosity approach is used to represent the continuous rock mass, where flowthrough-planar conduits are described by flow between parallel plates, i.e. Poiseuille's equation. The governing equations and finite-element solution techniques are presented by (Baca et al., 1981a). The principal features of the MAGNUM 2-D code are as follows:

- Representation of the rock mass as a continuum using isoparametric finite elements; line elements embedded along the sides of two-dimensional elements to represent discrete fractures
- Stratigraphic features that include variable media properties
- Coupled or uncoupled solutions of heat and flow equations
- Flow-field calculations that input to pathline and transport models.

Status: A users manual for the MAGNUM 2-D computer code has been prepared (England et al., 1984). Preliminary verification and benchmark testing of the computer code has been completed (Budden et al., 1984). Additional testing and documentation of the computer code will be performed during FY 1985 and 1986.

4.1.4 CHAINT Computer Code

Summary: The CHAINT code simulates multicomponent radionuclide transport in a fractured-pouous medium. The processes modeled include advection, dispersion/diffusion, sorption, chain-decay coupling, and mass release. The computational method is based on a finite-element solution of the system equations. Continuum portions of the medium are modeled as a single-porosity system, using two-dimensional isoparametric elements. Discrete features are modeled using isoparametric line elements that are embedded along the sides of the two-dimensional elements. Principal inputs to this code are the groundwater-flow calculations obtained with the MAGNUM 2-D code (or a comparable nonisothermal flow model). The CHAINT code has the following major features:

- A generalized routine that treats combinations of nuclides (actinides, fission, or activation products) with different half-lives
- Subzone calculations in which the region of active nodes, within the finite-element mesh, is varied with time as the problem progresses
- Second-order accuracy and fully implicit.

Status: A users manual for the CHAINT computer code has been prepared (England et al., 1984). Preliminary verification and benchmark testing of the CHAINT computer code has been completed (Budden et al., 1984). Additional testing and documentation of the computer code will be performed during FY 1985 and 1986.

4.1.5 PATH 2-D Computer Code

Summary: Using the numerical results from a two-dimensional (2D) groundwater model, PATH computes the pathlines or streamlines for an arbitrary set of starting points in the study region. In addition to computing the particle trajectories, the code computes the cumulative time of travel along each trajectory (i.e., travel times). The program solves

the pathline equations on a finite-element grid network, thereby tracing the particle trajectory from element to element. Major features of the PATH code are as follows:

- Solution to the pathline equation using a predictor-corrector algorithm and finite-element shape functions
- Two-dimensional isoparametric elements with one-dimensional line elements
- Graphic output with options for superimposing the finite-element mesh, rock-type boundaries, and plots for subzone grids.

The PATH computer code is designed for interactive use on a standard graphics terminal. Versions of this program are currently interfaced with the MAGNUM and PORFLO computer codes.

Status: A users manual for the PATH 2-D computer code will be prepared during FY 1985. Verification of the PATH 2-D computer code is planned for FY 1985.

4.1.6 PROFLO Computer Code

Summary: PORFLO is a finite-difference code with options for modeling the coupled processes of groundwater flow, heat transfer, and radionuclide transport. The code is applicable to purous media or highly jointed rock systems that may be represented as an equivalent porous continuum. The finite-difference method is bsed on a nodal-point integration technique used in conjuction with an alternating- direction implicit method. Additional description of this code is contained in Baca et al. (1981b). Major features of the PORFLO computer code are as follows:

- Inexpensive and simple to use
- Conserves energy and mass at the grid-block level
- Calculates total activity crossing specified boundaries over a specified period of time.

Status: A users manual for the PORFLO computer code has been prepared (Kline, 1983). Preliminary verification and benchmark testing of the PORFLO computer code has been completed (Budden et al., 1984). The computer code was submitted to the NRC for testing. To date results from these tests have not been made available. Additional documentation and testing of the PORFLO computer code are planned.

4.1.7 MAGNUM 3-D Computer Code

Summary: The MAGNUM 3-D code was developed to solve the three-dimensional (3D) form the groundwater flow equation, using the same fundamental numerical procedures as the MAGNUM 2-D code. MAGNUM 3-D is limited to isothermal conditions; future versions will consider three-dimensional nonisothermal effects as needed. The code is used on the continuum theory of porous media and is designed for analysis of flow patterns in large-scale groundwater basins. Some of the important features of MAGNUM 3-D are as follows:

- Simulation of a complex three-dimensional geometry through the use of various three-dimensional isoparametric finite elements (e.g., tetrahedrons and paralleoepipeds)
- Treatment of different types of boundary conditions (e.g., specified heads and/or fluxes)
- Calculation of a three-dimensional flow field for input to pathline and transport codes.

Status: A users manual for the MAGNUM 3-D computer code has been prepared (Arnett et al., 1984). Preliminary verification and benchmark testing of the computer code has been completed (Arnett, 1984). Additional testing and documentation of the computer code is planned during FY 1985.

4.1.8 PATH 3-D Computer Code

Summary: The PATH 3-D is similar to PATH except that it calculates three-dimensional pathlines or streamlines. It is interfaced with the MAGNUM 3-D code.

Status: A users manual for the PATH 3-D computer code is planned for FY 1985.

4.1.9 FECTRA Computer Code

Summary: The FECTRA code analyzes radionuclide transport in porous media. This code is based on the dual approach that considers the interaction of the mobile and immobile radionuclide components. The theoretical framework includes advection, dispersion/diffusion, sorption, decay, and mass release of a single species. The code was originally developed for application to the partially saturated flow regime. Basic features of FECTRA are as follows:

- Two versions available (two-dimensional and three-dimensional), using various isoparametric finite elements
- Second-order accuracy and fully implicit numerical techniques
- Stratigraphic features that include variable media properties
- Coupled or uncoupled solutions of heat and flow equations
- Flow-field calculations that input to pathline and transport models.

The FECTRA code is designed to be interfaced with a three-dimensional fluid-flow code such as MAGNUM 3-D, as well as for controlled area/accessible environment radionuclide transport.

Status: Documentation and testing of the FECTRA computer code is scheduled for FY 1986.

4.2 PROBABILISTIC MODELS

The U.S. Environmental Protection Agency (EPA) has defined performance assessment as "An analysis that: (1) identifies the processes and events that might affect the disposal system, (2) examines the effects of these processes and events on the performance of the disposal system, and (3) estimates the cumulative releases of radionuclides, considering the associated uncertainties, caused by all significant processes and events. These estimates should be incorporated into an overall probability distribution of cumulative release to the extent practicable" (EPA, 1984).

In response to the need to address these uncertainties, the BWIP has and continues to develop stochastic or probabilistic models. Both Monte Carlo and finite order stochastic models have been developed for uncertainty analysis.

Summaries of the performance assessment probabilistic type models follow: The PACSTAT computer code is a specialized version of the CHAINT computer code. The MAGNUM-MC computer code is a specialized version of the MAGNUM 2-D computer code. Testing and documentation of these two computer codes beyond what is planned for the two parent codes, i.e., CHAINT, MAGNUM 2-D, is not anticipated. Testing and documentation will be addressed as the specific needs arise. PORSTAT is a finite-order stochastic model. A technical description of PORSTAT has been provided by (Sagar and Clifton, 1983).

EPASTAT AND REPSTAT are simplified system simulation models that use input data from process specific models. Formal documentation and verification testing of these models is not anticipated.

4.2.1 PACSTAT

PACSTAT is a Monte Carlo two-dimensional mass transport computer code that is used to calculate probability density functions for fractional release rates (flux) and integrated release (integrated flux) at or past a specified boundary. Computer code input parameters are specified as distributed variables. A Monte Carlo sampling technique is used to select a set of input variables for analysis. The CHAINT radionuclide transport model is used to simulate mass transport. The PACSTAT computer code is currently the BWIP Performance Assessment Model used to simulate mass transport of radionuclides in the very-near field, i.e., waste package, backfill, and disturbed zone.

4.2.2 MAGNUM-MC

MAGNUM-MC is a two-dimensional Monte Carlo groundwater flow code. The code is used to simulate groundwater flow in a heterogeneous medium. The simulation model was developed to investigate the effect of spatial variability in hydraulic transmisivity on resulting groundwater travel-times. A Monte Carlo sampling technique is used to select transmissivity data that are spatially correlated. The transmissivity data are input to the MAGNUM 2-D finite-element computer code. The MAGNUM 2-D computer code is used to simulate groundwater flow. The PATH 2-D computer code is used to compute pathlines and calculate cumulative time of travel.

4.2.3 PORSTAT

PORSTAT is based on finite-order statistical techniques. The code is used to compute the expected values and covariances in hydraulic heads and

covariances in hydraulic heads and Darcian velocities. Sensitivity coefficients for the hydraulic heads with respect to conductivity, storativity, boundary and initial conditions are obtained as intermediate output. A technical description of PORSTAT and a discussion of two preliminary test cases have been provided by (Sagan and Clifton, 1983).

4.2.4 EPASTAT

EPASTAT is a systems simulation model used to assess system isolation potential. EPASTAT is presently structured to calculate the integrated flux at the accessible environment and to compare the results with the system performance criterion as defined in 40 CFR 191 (EPA, 1982). EPASTAT models one-dimensional advective transport through a homogeneous medium. Computer code input data are specified as distributed parameters. A Monte Carlo sampling technique is used to evaluate the effects of parameter uncertainty on waste isolation potential.

4.2.5 REPSTAT

REPSTAT is a system simulation model used to model the transport of radionuclides via different potential groundwater flow pathways from the waste package to the accessible environment. REPSTAT simulates the release of radionuclides from the waste package using a diffusional release model. Transport of radionuclides at the repository scale is assumed to be governed by advection. Variations in the flow properties of the potential transport medias are included in REPSTAT. REPSTAT will be used to investigate the waste isolation potential of different designs. Computer code input data are specified as distributed parameters. A Monte Carlo sampling technique is used to select input data. REPSTAT is presently structured to calculate the integrated flux of the accessible environment and to compare the results with the system performance criteria as defined by EPA (1982).

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APPENDIX E

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APPENDIX F

PEER REVIEWERS' CREDENTIALS AND QUALIFICATIONS

CURRICULUM VITAE - JAMES I. DREVER

BORN: [redacted]

EDUCATION:

B.A. Cambridge University (England), 1964, majoring in chemistry
(M.A. Cambridge University, 1968)

Ph.D. Princeton University, 1968, geochemistry
Dissertation: Electrophoresis and the study of clay minerals in Recent sediments. Adviser: H.D. Holland.

Fellowships:

1966-68 Harold W. Dodds Fellowship, Princeton University: "among the most distinguished available to students who have completed the General Examination, without regard to department or field of study."

PROFESSIONAL APPOINTMENTS:

1968-69 Postgraduate Research Oceanographer, Scripps Institution of Oceanography, University of California, San Diego.

1969-71 Assistant Research Oceanographer, Scripps Institution of Oceanography.

1971-74 Assistant Professor, Geology Department, University of Wyoming, Laramie.

1974-77 Associate Professor, Geology Department, University of Wyoming.

1977- Professor of Geology, University of Wyoming.

1979-80 Visiting Professor, Swiss Federal Institute of Technology, Zürich (Sabbatical year).

PUBLICATIONS:

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(Plus numerous reports, abstracts, and book reviews)

GRANTS

NSF (Submarine Geology & Geophysics): Research on diagenetic reactions of silicates in cores taken by the Deep Sea Drilling Project. $36,900 for 1972-1974.

Above grant renewed for 1974-76, $30,000.

NSF (Geochemistry): Controls on the chemical composition of surface waters in the Absaroka Mountains, Wyoming, and Teels Marsh, Nevada. $ 35,700 for 1973-75.

Wyoming Environmental Institute: Impact of proposed strip mining on water quality, Thunder Basin, Wyoming. $22,800 for one year, 1973-74.

Environmental Protection Agency: A cooperative project to evaluate surface and ground water problems associated with potential strip mine sites. Wyoming geochemistry sub-project, $147,727 for 1975-78.

NSF (Submarine Geology & Geophysics): Alteration of igneous rocks sampled on Leg 45 of the DSDP. $17,100 for 1977-78.

NSF (Geochemistry): Research on the chemistry of weathering of volcanic rocks. $44,300 for 1978-80.

NSF (Submarine Geology & Geophysics): Isotopic, chemical and mineralogical studies of sediments, pore waters, and altered igneous rocks sampled by the Deep Sea Drilling Project: III. Chemical and mineralogical studies of sediments and altered basalts. $44,400 for 1978-80.

Office of Water Policy: Processes controlling the composition of infiltrating water in forested mountain watersheds. $13,662 for 1983-84.

NSF (Environmental Geosciences): Rock weathering: geochemical and biological controls. $135,615 for 1983-86.

MISCELLANEOUS

Associate Editor, Geochimica et Cosmochimica Acta (the journal of the Geochemical Society)

Editorial Board, Chemical Geology; Editorial Board, Geology

Past member of NSF panel (International Decade of Ocean Exploration)

Technical reviews for 15 (that I can remember) different journals.

Mail rewiewer for 6 different NSF programs.

Director of NATO Advanced Research Workshop on the chemistry of weathering, to be held in France, July 2-6, 1984. Supported by a grant of $20,000.

COURSES TAUGHT (University of Wyoming)

Geochemistry of Natural Waters (graduate)
Clay Mineralogy (graduate)
Geochemical Analytical Methods (graduate, shared)
Geochemistry (senior/graduate)
Introduction to Oceanography (undergraduate)
Physical Geology (Freshman, shared)
(Plus various seminars)

FAMILY STATUS

Married, two children

CHARLES FAIRHURST

EDUCATION

B.Eng. (Mining Engineering, with First-Class Honors), 1952
Sheffield University, England

Ph.D. (Mining Engineering), 1955
Sheffield University, England

EXPERTISE

Rock Mechanics
Mining Engineering

PROFESSIONAL EXPERIENCE

Present	E. P. Pfleider Professorof Mining Engineering & Rock Mechanics
	Head Department of Civil and Mineral Engineering University of Minnesota
	Chairman of the Board Itasca Consulting Group, Inc. Minneapolis, Minnesota
1983 - Present	Member, U.S. Environmental Protection Agency Advisory Sub-Committee on Radioactive Waste Isolation
	Chairman, Engineering Review Group, Crystalline Rock Disposal Program, Office of Nuclear Waste Isolation, Battelle Laboratory, Columbus, Ohio
1983	Program Chairman, Subspace 83 Conference, Minneapolis
1982	Session Chairman, Subsurface 82 (U. N. Workshop on Utilization of Underground Space), Stockholm
1982 - Present	Chairman, National Science Foundation Advisory Sub-Committee on Civil and Environmental Engineering
1981	Program Chairman, Underground Space Conference and Exposition, American Underground Space Association, Kansas City
1980	Session Chairman, Sub-Surface Space Symposium, Sweden

Professional Experience (continued)

1978 - 1980	Member, National Science Foundation Review Panel, Division of Applied Research
	Chairman, Committee on Rock Mechanics, American Society of Civil Engineers
1978 - 1979	Member, National Science Foundation Review Panel, Division of Policy and Analysis
1978	Member, Office of Science and Technology Policy Panel on U.S. Radioactive Waste Management Program
	Member, National Academy of Sciences/National Research Council Panel on Savannah River (Nuclear) Plant
1977 - 1978	Member, National Science Foundation, U.S. Centrifuge Facility Selection Panel
	Member, National Academy of Sciences/National Research Council, Panel on Implementation Requirements of Environmental Standards
1977	Member, U.S. Delegation to the Soviet Union (NSF/AIME)
1976 - 1977	President, American Underground Space Association
1976 - Present	Senior Editor, Underground Space, published by Pergamon Press, Oxford
1976	Member, National Science Foundation Advisory Panel on Engineering Mechanics
1975 - 1978	Member, National Academy of Sciences Board on Mineral and Energy Resources
1975	Chairman, National Science Foundation Workshop on Research Opportunities in Mining
1974 - 1975	Chairman, Underground Construction Research Council, American Society of Civil Engineers/American Institute of Mining Engineers
1974	Program Chairman, 3rd International Congress on Rock Mechanics (Denver)
	Member, Commission on Research, International Congress on Rock Mechanics (Denver)

Professional Experience (continued)

1973 - 1974	Chairman, National Academy of Science/National Research Council Committee on Feasibility of Returning Coal Mine Wastes to Underground
1973 - 1977	Member, U.S. Geological Survey Advisory Panel on Earthquake Research
1973	Member, Commission on Publications, International Society of Rock Mechanics
1972 - 1974	Chairman, U.S. National Committee on Rock Mechanics (National Academy of Sciences)
1971	Member, AEC (Oak Ridge National Laboratory) Advisory Panel on Radioactive Waste Disposal in Lyons Salt Mine, Kansas
	Member, National Academy of Sciences/National Research Council Advisory Panel on "Bedrock Disposal" (Underground Disposal of Radioactive Wastes)
1969 - 1973	Chairman, American Institute of Mining Engineers (AIME) Committee on Rock Mechanics
1969	Member, National Academy of Sciences/National Research Council Committee on Rock Mechanics
1966 - 1969	Member, American Society for Testing and Materials (ASTM) Subcommittee on Rock Mechanics
1965 - 1966	Publications Chairman, Rock Mechanics Section, AIME (SME) Transactions
1963 - 1970	Corresponding Member, International Buro of Rock Mechanics (Berlin)
1962 - 1966	Director (one of two from U.S.), International Society of Rock Mechanics (Salzburg)
1956 - 1964	Co-Chairman, Symposia on Drilling and Blasting, Rock Mechanics
1948 - 1956	Mining Engineer National Coal Board England

PROJECT EXPERIENCE

U.S. Army Corps of Engineers, Niagara Falls Preservation Project (1968-1974)

U.S. Army Corps of Engineers, R. D. Bailey Dam (1977-1981)

Rock drilling research--at various times for Holman Brothers (Cornwall, England), Atlas Copco AB (Stockholm, Sweden), Tamrock (Tampere, Finland)

Tunnel lining problems--at various times for Al Johnson Construction Company

Lunar drilling and rock blasting programs, Martin Marietta Corporation (1973-1975)

Hydraulic fracturing, geothermal energy, and rock blasting studies, Los Alamos Scientific Laboratory, Los Alamos, New Mexico (1975-Present)

Potash mine design, Petrobras Mineracao Corporation, Brazil (1975-present), Mines Dominiale de Potasse d'Alsace, Thailand, (1981-present), and Mines Dominiale de Potasse d'Alsace, Ethiopia (1982-present).

Official Critic of Swedish Radioactive Waste Disposal Program, Ministry of Defense, Sweden (1978)

Geotechnical advising, Lawrence-Berkeley Laboratories, Berkeley (1978)

PROFESSIONAL AFFILIATIONS AND AWARDS

American Institute of Mining Engineers (AIME)
American Society of Civil Engineers (ASCE)
American Underground Space Association (AUA)
International Society of Rock Mechanics
Sigma XI
South African Institute of Mines and Metallurgy
U.S. National Committee on Rock Mechanics

Professional Affiliations and Awards (continued)

Inter-Society Committee on Rock Mechanics
Medal for Best Mechanics Research Paper Published in 1970
(with B. Haimson)

AIME Outstanding Achievement Award in Rock Mechanics, 1972

Foreign Member, Royal Swedish Academy of Engineering Sciences, 1979

Pergamon Medal, American Underground Space Association, 1981

Distinguished Professor of Mining Engineering and Rock Mechanics
University of Minnesota, 1982.

E. P. Pfeider Professor of Mining Engineering and Rock Mechanics, 1983

U.S. National Committee on Rock Mechanics Special Award
for "25 Years of Distinguished Achievements," 1983

Charles Fairhurst

SELECTED RECENT PUBLICATIONS

"Rock Mechanics of Underground Excavations, General Report," to be published in Proceedings of the 5th International Congress of Rock Mechanics (Melbourne, 1983).

"Generalization of the Ground Reaction Curve Concept" (with E. Detournay), Proceedings of the 23rd U.S. Symposium on Rock Mechanics (Berkeley, August 1982), pp. 924-934. Littleton, Colorado: American Institute of Mining Engineers, 1982.

"Rock Fracture and Fragmentation, General Report" (with F. Cornet), Rock Mechanics From Research to Applications (Proceedings of the 22nd U. S. Symposium on Rock Mechanics, MIT, June 1981), pp. 21-46. Cambridge, Mass.: MIT, 1981.

"Analysis of Tunnel Support Loads Using the Distinct Block Model" (with M. Voegele and P. A. Cundall), Storage in Excavated Rock Caverns - Rockstore 77 (Proceedings of the First International Symposium, Stockholm, September 1977), Vol. 2, pp. 247-252. Oxford: Pergamon Press, 1978.

"The Application of Mechanics to Rock Engineering (in French)," Revue Francaise de Geotechnique (Paris), No. 1 - 45F TTC, 18-36 (July 1977).

"Going Under to Stay on Top," Underground Space, Vol. 1, 71-86 (July-August 1976).

(Dr. Fairhust has some 70 additional publications).

Biographical and Professional Record

LYNN W. GELHAR

Professor of Civil Engineering, Room 48-331
Massachusetts Institute of Technology
Cambridge, Massachuetts 02139
(617) 253-7121

Date of Birth: [redacted]

Professional Specialization

Groundwater Hydrology
Stochastic Subsuface Hydrology
Groundwater Contaminant Transport

Education

University of Wisconsin, B. S. in Civil Engineering, January 1959
University of Wisconsin, M. S. in Civil Engineering, June 1960
University of Wisconsin, Ph.D. in Civil Engineering, August 1964

Professional Employment

Massachusetts Institute of Technology (MIT), Cambridge, Massachusetts,
  Professor of Civil Engineering, 7/82—
Sabbatical leave, University of Karlsruhe and Ecole des Mines de Paris
  (Fontainebleau), 1/78-7/78
New Mexico Institute of Mining and Technology, Socorro, New Mexico
  Professor of Hydrology and Program Coordinator for Hydrology, 9/76-6/82
  Associate Professor of Hydrology, 9/73-8/76
Sabbatical leave at Stanford University, Stanford, California, 1/71-7/71
Massachusette Institute of Technology; Cambridge, Massachusetts
  Associate Professor of Civil Engineering, 7/69-8/73
  Assistant Professor of Civil Engineering, 7/64-7/69
University of Wisconsin (UW), Madison, Wisconsin, Research Assistant and
  Instructor, 9/61-6/64
Fairbanks Morse & Co., Beloit, Wisconsin, Junior Engineer, 6/60-9/61
Soil Conservation Service, USDA, Madison, Wisconsin, Civil Engineer,
  1/59-5/60

Honors and Awards

Fellow, American Geophysical Union, 1983
Robert E. Horton Award, American Geophysical Union, 1982
Ford Postdoctoral Fellow, MIT, 1964-1966
National Science Foundation Graduate Fellow, 1964
Tau Beta Pi, Chi Epsilon, Sigma Xi

LYNN W. GELHAR

Academic Experience

Teaching:
- Advanced Subsurface Hydrology (MIT)
- Groundwater Hyrology (MIT)
- Stochastic Methods in Subsurface Hydrology (NMT)
- Flow through Porous Media (NMT)
- Water Quality Modeling (MIT, NMT)
- Groundwater Modeling (NMT)
- Advanced Hydromechanics (MIT)
- Engineering Analysis (MIT)
- Hydrologic Design (UW)

Thesis Supervision: 19 M. S. Thesis, 17 Ph.D. Thesis

Professional Membership and Service

American Society of Civil Engineers
- Groundwater Hydrology Committee, 1972-1976
- Fluid Dynamics Committee, 1974-1976
- Task Committee on Calibration and Verification in Groundwater Modeling, 1974-1977
- Hydraulics Division Awards Committee 1980-

American Geophysical Union
- Associate Editor, Water Resources Research, 1981-
- Hydrology Section Nominations Committee, 1983

International Association for Hydraulic Research
- Porous Media Committee, 1972-1977

International Association of Hydrological Sciences
- U. S. National Committee, 1980-
- Association Editor, Hydrological Sciences Bullentin, 1981-

Interational Groundwater Modeling Center, Butler University, Indiana,
- Technical Advisory Committee, 1983-

State of New Mexico
- Governor's Advisory Committee on WIPP (radioactive waste disposal site), 1975-1980
- Water Resources Research Institute Review Board, 1975-1982

U. S. Department of Energy
- Review Panel for Office of Health and Environmental Research, 1983

PUBLICATION LIST

Lynn W. Gelhar

Drinker, P. A., Gelhar, L. W., and Schriek, W., "The Development of a Rotating Endless Channel for Hydraulic and Sedimentary Studies," M.I.T. Hydrodynamics Laboratory Technical Report. No. 83, September, 1965.

Gelhar, L. W., and Mascolo, D. M., "Non-Diffusive Characteristics of Slow Viscous Stratified Flow Towards a Line Sink," M.I.T. Hydrodynamics Laboratory Technical Report No. 88, February, 1966.

Gelhar, L. W., Schriek, W., and Benham, F., "Secondary Motion and Turbulence in Circular Couette Flow," M.I.T. Hydrodynamics Laboratory Report No. 97, July, 1966.

Gelhar, L. W., and Monkmeyer, P. L., "Turbulent Helical Flow in an Annulus," Journal of the Engineering Mechanics Division, Proc. ASCE, EMI, pp. 295-316, February, 1968.

Munoz-Goma, R. J., and Gelhar, L. W., "Turbulent Pipe Flow with Rough Porous Walls," M.I.T. Hydrodynamics Laboratory Technical Report No. 109, April, 1968.

Collins, M. A., and Gelhar, L. W., "Ground Water Hydrology of the Long Island Aquifer System," M.I.T. Hydrodynamics Laboratory Technical Report No. 122, May, 1970.

Ruff, J., and Gelhar, L. W., "Porous Boundary Effects in Turbulent Shear Flow," M.I.T. Water Resources and Hydrodynamics Laboratory Technical Report No. 126, July, 1970.

Wang, A. K., and Gelhar, L. W., "Turbulent Flow Between Concentric Rotating Cylinders," M.I.T. Hydrodynamics Laboratory Technical Report 132, Ocotober, 1970.

Collins, M. A., and Gelhar, L. W., "Sea Water Intrusion in Layered Aquifers," Water Resources Research, Vol. 7, No. 4, pp. 971-979, August, 1971.

Gelhar, L. W. and Collins, M. A., "A General Analysis of Longitudinal Dispersion in Nonuniform Flow," Water Resources Research, Vol. 7, No. 6, pp. 1511-1521, December, 1971.

Gelhar, L. W., Wilson, J. L., Miller, J. S., and Hamrick, J. M., "Density Induced Mixing in Confined Aquifers," M.I.T. Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics, Report No. 145, March, 1972.

Gelhar, L. W., "The Aqueous Underground," Technology Review, pp. 45-53, April, 1972.

Chu, Yen-hsi, and Gelhar, L. W., "Turbulent Pipe Flow with Granular Permeable Boundaries," M.I.T. Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics, Report No. 148, May, 1972.

Ruff, J. F., and Gelhar, L. W., "Turbulent Shear Flow in a Porous Boundary," J. Engineering Mechanics Division, ASCE, Vol. 98, No. EM4, Proc. Paper 9144, pp. 975-991, August, 1972.

Gelhar, L. W., "The Viscous Analog in Ground Water Modelling," paper presented at 20th Annual Specialty Conference of the Hydraulics Division, ASCE, Ithaca, New York, August, 1972.

Collins, M. A., Gelhar, L. W., and Wilson, J. L., "Hele-Shaw Model of the Long Island Aquifer System," J. Hydraulics Division, ASCE, Vol. 98, No. HY9, Proc. Paper 9215, pp. 1701-1714, September, 1972.

Gelhar, L. W., Wilson, J. L. and Miller, J. S., "Gravitational and Dispersive Mixing in Aquifers," J. Hydraulics Division, ASCE, Vol. 98, No. HY12, Proc. Paper 9439, pp. 2135-2153, December, 1972.

Ho, R. T., and Gelhar, L. W., "Turbulent Flow with Wavy Permeable Boundaries," Journal of Fluid Mechanics, Vol. 58, Part 2, pp. 403-414, 1973.

Wang, A. K., and Gelhar, L. W., "Turbulent Couette Flow," Journal of Fluids Engineering, Vol. 96, No. 3, pp. 265-271, 1974.

Gelhar, L. W. and Wilson, J. L., "Groundwater Quality Modeling," paper presented at the Second National Ground Water Quality Symposium, Denver, September 25-27, 1974; published in Ground Water, Vol. 12, No. 6, pp. 399-408, 1974.

Ho, R. T., and Gelhar, L. W., "Interaction Between Turbulent Flow and Undular Permeable Boundaries," M.I.T. Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics, Report No. 180, February, 1974.

Bakr, A. A., and Gelhar, L. W., "Groundwater Quality Simulation for the Socorro Region of the Rio Grande in New Mexico," Technical Report prepared under NMWRRI Project 3109-145, Hydrology Section, Department of Geoscience, NMIMT, May, 1974.

Gelhar, L. W., "Stochastic Analysis of Phreatic Aquifers," Water Resources Research, Vol. 10, No. 3, pp. 539-545, June, 1974.

Gelhar, L. W., Ko, P. Y., Kwai, H. H., and Wilson, J. L., "Stochastic Modeling of Groundwater Systems," M.I.T. Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics, Report No. 189, September, 1974.

Wilson, J. L., and Gelhar, L. W., "Dispersive Mixing in a Partially Saturated Porous Medium," M.I.T. Ralph M. Parsons Laboratory, Report No. 191, September, 1974.

Gelhar, L. W., Wilson, J. L. and Collins, M. A., Discussion of "Radial Dispersion in Ground-Water Flow," J. Engineering Mechanics Division, ASCE, Vol. 101, No. EM5, pp. 718-720, October, 1975.

Lansford, R. R., Gelhar, L. W., + 12 others, "A Preliminary Economic Feasibility Study for the Establishment of an Energy-Water Complex in the Tularosa Basin," NMWRRI Report 068, pp. 231, February, 1976.

Lansford, R. R., Wierenga, P. J., Gelhar, L. W., + 7 others, "Demonstration of Irrigation Return Flow Salinity Control in the Upper Rio Grande — Annual Report, Year 1," NMWRRI Report 070, pp. 121, March, 1976.

Flores, W., Adan, E. Z. and Gelhar, L. W., "A Stochastic Management Model for the Operation of a Stream-Aquifer System," NMWRRI Report No. 075, pp. 209, May, 1976.

McLin, S. G., and Gelhar, L. W., "Hydrosalinity Modeling of Irrigation Return Flow in the Mesilla Valley, New Mexico," paper presented at International Conference on Managing Saline Water for Irrigation, Texas Tech University, pp. 28-48, August, 1976.

Gelhar, L. W., "Stochastic Analysis of Flow in Aquifers," Proceedings AWRA Symposium on Advances in Groundwater Hydrology, Chicago, IL, pp. 57-71, September, 1976.

MacMillan, J. R., Naff, R. L. and Gelhar, L. W., "Prediction and Numerical Simulation of Subsidence Associated with Proposed Groundwater Withdrawal in the Tularosa Basin, New Mexico," Proceeding of the Second International Symposium on Land Subsidence, Anaheim, California, pp. 600-608, December 1976.

Gelhar, L. W., "Effects of Hydraulic Conductivity Variations on Groundwater Flows," Proceeding Second International Symposium on Stochastic Hydraulics, Lund, Sweden, Hydraulic Problems Solved by Stochastic Methods, August 2-4, 1976, Water Resources Publications, Fort Collins, CO, pp. 409-431, 1977.

Gelhar, L. W., "A Comparison of Groundwater Quality Modeling Techniques," Proceedings of the Water Research Center Conference on Groundwater Quality, Water Research Centre, Medmanham, England, pp. 384-405, 1977.

Lansford, R. R., Wierenga, P. J., Gelhar, L. W., + 8 others, "Demonstration of Irrigation Return Flow Salinity Control in the Upper Rio Grande — Annual Report, Year 2," NMWRRI Report No. 086, pp. 94, March, 1977.

MacMillan, J. R., Naff, R. L., and Gelhar, L. W., "Use of Brackish Ground Water Resources for Regional Energy Center Development, Tularosa Basin, New Mexico: Preliminary Evaluation," Report prepared for Los Alamos Scientific Laboratory, No. FEA/G-77/101, Chapters on Geology and Hydrology, pp. 39-59 and pp. 201267, March, 1977.

Gelhar, L. W., Bakr, A. A., Gutjahr, A. L., and MacMillan, J. R., Comments on "A Stochastic-Conceptual Analysis of One-Dimensional Groundwater Flow in Nonuniform Homogeneous Media" by R. A. Freeze, Water Resources Research, Vol. 13, No. 2, pp. 477-479, April, 1977.

Collins, M. A. and Gelhar, L. W., Comments on "The Shape of the Interface in Steady Flow in a Stratified Aquifer" by Y. Mualem and J. Bear, Water Resources Research, Vol. 13, No. 2, pp. 486-488, April, 1977.

Lansford, R. R., Gelhar, L. W., and Creel, B. J., "Economics of Controlling Irrigation Return Flow in the Mesilla Valley, New Mexico," Proceedings of the National Conference on Irrigation Return Flow Quality Management, Fort Collins, CO, pp. 277-282, May, 1977.

Gelhar, L. W., "Subsurface Water Quality," a general report presented at the Third Fort Collins International Hydrology Symposium, June, 1977.

Flores, E. Z., Gutjahr, A. L., and Gelhar, L. W., "A Stochastic Model of the Operation of a Stream-Aquifer System," Water Resources Research , Vol. 14, No. 1, pp. 30-38, 1978.

Phillips, K. J. and Gelhar, L. W., "Contaminant Transport to Deep Wells," J. Hydraulics Division, ASCE, Vol. 104, No. HY4, pp. 807-819, 1978.

Gutjahr, A. L., Gelhar, L. W. Bakr, A. A., and MacMillan, J. R., "Stochastic Analysis of Spatial Variability in Subsurface Flow, Part II: Evaluation and Applications," Water Resources Research, Vol. 14, No. 5, pp. 953-959, 1978.

Gelhar, L. W., "Stochastic Analysis of Macrodispersion in Aquifers," Technical Report, Sonderforschungsbereich 80, Universitat Karlsruhe, pp. 21, 1978.

Bakr, A. A., Gelhar, L. W., Gutjahr, A. L., and MacMillan, J. R., "Stochastic Analysis of Spatial Variability in Subsurface Flow, Part I. Comparison of One and Three Dimensional Flows," Water Resources Research, Vol. 14, No. 2, April, 1978.

Freeze, P. A., Gelhar, L. W., and Maddock, R., "Geostatistical Concepts and Stochastic Methods in Hydrogeology: Penrose Conference Report," Geology, pp. 297-298, May, 1978.

Updegraff, C. D. and Gelhar, L. W., "Parameter Estimation for a Lumped-Parameter Ground-Water Model of the Mesilla Valley, New Mexico," NMWRRI Report No. 097, pp. 69, September, 1978.

Duffy, C. J., Gelhar, L. W., and Gross, G. W., "Recharge and Groundwater Conditions in the Western Region of the Roswell Basin," NMWRRI Report No. 100, pp. 111, December, 1978.

Wilson, J. L. and Gelhar, L. W., "Analysis of Longitudinal Dispersion in Unsaturated Flow, Part I. The Analytical Method," Water Resources Research, Vol. 17, No. 1, pp. 122-130, 1981.

Gelhar, L. W., Gutjahr, A. L., and Naff, R. L., "Stochastic Analysis of Macrodispersion in a Stratified Aquifer," Water Resources Research, Vol. 15, No. 6, pp. 1387-1397, 1979.

Lansford, R. R., Ben-David, S., Roach, F, Creel, B. J., Stevens, T. H., Supalla, R., Gelhar, L., Gorman, W. D., Mead, R. W., and Wilson, D. B., "The Economic Feasibility of Dual Purpose Nuclear Desalination of Ground Water," Water Resources Bulletin, 15, No. 6, pp. 1589-1601, 1979.

Gelhar, L. W., Wilson, J. L., and Gutjahr, A. L., "Comments on 'Simulation of Groundwater Flow and Mass Transport Under Uncertainity,' by D. H. Tang and G. F. Pinder," Advances in Water Resources, Vol. 2, p. 101, June, 1979.

Gelhar, L. W. and McLin, S. G., "Evaluation of a Hydrosalinity Model of Irrigation Return Flow Water Quality in the Mesilla Valley, New Mexico," Research and Development Report, U. S. Environmental Protection Agency," EPA Grant No. S803565, pp. 200, EPA-600/2-79-173, August, 1979.

Gelhar, L. W., Duffy, C. J., and Gross, G. W., "Stochastic Methods of Analyzing Groundwater Recharge," Proceedings IAHR Symposium on Hydrology of Areas of Low Precipitation, Canberra, IAHS-AISH Publ. No. 128, pp. 313-321, December, 1979.

McLin, S. G. and Gelhar, L. W., "A Field Comparison Between the USBR-EPA Hydrosalinity and Generalized Lumped Parameter Models," Proceeding IAHR Symposium on Hydrology of Areas of Low Precipitation, Canberra, IAHS-AISH Publ. No. 128, pp. 339-348, December, 1979.

Gelhar, L. W., Wierenga, P. J., Duffy, C. J., Rehfeldt, K. R., Senn, R.-B., Simonett, M., Yeh, T. C., Gutjahr, A. J., Strong, W. R., and Bustamante, A., "Irrigation Return Flow Studies at San Acacia, New Mexico: Monitoring, Modeling, and Variability," Hydrology Research Report No. H-3, New Mexico Institute of Mining and Technology, July, 1980.

Mizell, S. A. Gelhar, L. W., and Gutjahr, A. L., "Stochastic Analysis of Variability in Two-Dimensional Groundwater Flow with Implications for Observation-Well Network Design," Hydrology Research Report No. H-6, New Mexico Institute of Mining and Technology, December, 1980.

Huyakorn, P., and Gelhar, L. W., "Development and Application of a Computer Simulation Model for Simulating a Geothermal System in New Mexico," New Mexico Energy Research and Development Program, Report EMD 2-66-2314, April, 1981.

Gutjahr, A. L. and Gelhar, L. W., "Stochastic Models of Subsurface Flow: Infinite Versus Finite Domains and Stationarity," Water Resources Research, Vol. 17, No. 2, pp. 337-350, April, 1981.

Gelhar, L. W. and Axness, C. L., "Stochastic Analysis of Macrodispersion in Three-Dimensionally Heterogeneous Aquifers," New Mexico Institute of Mining and Technology, Hydrology Report H-8, August, 1981.

Mizell, S. A., Gutjahr, A. L., and Gelhar, L. W., "Stochastic Analysis of Spatial Variability in Two-Dimensional Steady Groundwater Flow Assuming Stationary and Nonstationary Heads," Water Resources Research, 1982, Vol. 18, No. 4, pp. 1053-1067.

Wierenga, P. J., Duffy, C., Senn, R., and Gelhar, L. W., "Impacts of Irrigated Agriculture on Water Quality in the Rio Grande Below Albuquerque," Technical Report, Enginering Experiment Station, New Mexico State University, Las Cruces, NM, 1981.

Gelhar, L. W., Gutjahr, A. L., and Naff, R. L., Reply to comments on "Stochastic Analysis of Macrodispersion in a Stratified Aquifer," Water Resources Research, Vol. 17, No. 6, pp. 1739-1740, December, 1981.

Yeh, T. C., and Gelhar, L. W., "Unsaturated Flow in Heterogeneous Soils," Proc. AGU Symposium, Role of the Unsaturated Zone in Radioactive and Hazardous Waste Disposal, Ann Arbor Science, 1982 (in press).

Gelhar, L. W., Stochastic Analysis of Flow in Heterogeneous Porous Media, Chapter in Selected Topics in Mechanics of Fluids in Porous Media, ed. J. Bear and M. Y. Corapcioglu, Martinus Nijhoff, 1982 (in press).

Leonhart, L. S., Jackson, R. L., Graham, D. L., Thompson, G. M., and Gelhar, L. W., "Groundwater Flow and Transport Characteristics of Flood Basalts as Determined from Tracer Experiments," Rockwell International Report RHO-BW-SA-220P, preprint of a paper presented at Pacific Northwest AGU Meeting, Fairbanks, Alaska, September, 1982.

Yeh, T.-C., Gelhar, L. W., and Gutjahr, A. L., "Stochastic Analysis of Effects of Spatial Variability on Unsaturated Flow," Report No. H-12, Hydrology Research Program, New Mexico Institute of Mining and Technology, Socorro, NM, July, 1982.

Gelhar, L. W., and Axness, C. L., "Three-Dimensional Stochastic Analysis of Macrodispersion in Aquifers," Water Resources Research, Vol. 19, No. 1, pp. 161-181, February 1983.

Ho, R.-T., and Gelhar, L. W., "Turbulent Flow in Pipes with Undular Permeable Boundaries," J. Hydraulics Engineering, ASCE, Vol. 109, No. 5, pp. 741-756, 1983.

Gelhar, L. W., and Gutjahr, A. L., "Stochastic Solutions of the One-Dimensional Convective Dispersion Equation," New Mexico Institute of Mining and Technology, Hydrology Research Report No. 11, September, 1982.

Gelhar, L. W., "Analysis of Two-Well Tracer Tests with a Pulse Input," Report RHO-BW-CR-131 P, Rockwell Hanford Operations Group, Richland, Washington, 1982.

Gelhar, L. W., "Field-Scale Dispersion Phenomena: Porous versus Fractured Media, preprint of a paper presented at the Basalt Waste Isolation Project Workshop on Field Methods for the Assessment of Radionuclide Sorption, Richland, Washington, September 1983.

Gelhar, L. W., Wierenga, P. J., Rehfeldt, K. R., Duffy, C. J., Simonett, M. J., Yeh, T- C., and Strong, W. R., Irrigation Return Flow Water Quality Monitoring, Modeling and Variability in the Midde Rio Grande Valley, New Mexico, U. S. Environmental Protection Agency, Project Summary, EPA-600/S2-83-072 (Project report available from NTIS, No. PB83-261719), 1983.

Gelhar, L. W. and Axness, C. L., Reply to comments on Three-Dimensional Stochastic Analysis of Macrodispersion in Aquifers," Water Resources Research, Vol. 19, No. 6, pp. 1641-1642, 1983.

Gelhar, L. W., "Analysis of Two-Well Tracer Tests with a Pulse Input" RHO-BW-CR-131 P. Preapred for Rockwell Hanford Operations, a Prime contractor to the United States Department of Energy Under Contract DE-AC06-77RL01030, April 1982.

Biographical Update
November, 1983

JAY H. LEHR, Ph.D.

National Water Well Association
500 West Wilson Bridge Road
Worthington, OH 43085
614/846-9355

Professional Profile:

A widely known and dedicated water scientist, Dr. Jay Lehr, 47, is the most frequently quoted authority on ground water hydrology and hydrogeology in America. As Executive Director of the National Water Well Association, he is in his 16th year as principal spokesman for the nation's water systems industry. Under his direction, NWWA has grown from a trade association to a major non-profit research and education institute with more than 60 full-time employees and over 8,000 members. Dr. Lehr has served as a consultant to government agencies and the United Nations, been a member of and chaired federal committees, and been called on to provide expert testimony to numerous committees and subcommittees of the U.S. Senate and House of Representatives. He has authored six books for both the public and private sectors and contributed over 150 articles to scientific and technical journals. A tireless campaigner for the development of ground water as an alternate energy source for heating and cooling, he is often invited to lecture on this and other water-related topics. Throughout his entire career, Dr. Lehr has been an outspoken proponent of realistic ground-water management and protection programs.

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Education

Graduated June, 1957 from Princeton University with a degree in Geological Engineering and received the nation's first Ph.D. in Ground Water Hydrology from the University of Arizona, 1962.

Positions

1962-1964	Professor of Ground Water Hydrology, University of Arizona
1964-1967	Professor of Ground Water Hydrology, Ohio State University
1967-Present	Executive Director of the National Water Well Association, which represents virtually all U.S. ground water hydrologists and geologists, manufacturers, and suppliers of water well equipment, as well as most leading water well drilling contractors.
1978-Present	Adjunct Full Professor of Hydrogeology, Ohio State University.

Books:

WATER WELL TECHNOLOGY - McGraw-Hill - 1973
RURAL WATER SYSTEMS PLANNING AND ENGINEERING GUIDE - The Commission on Rural Water - 1974
MANUAL OF WATER WELL CONSTRUCTION PRACTICES - U.S. Environmental Protection Agency - 1976
MANUAL OF LAWS, REGULATIONS, AND INSTITUTIONS FOR THE CONTROL OF GROUND WATER POLLUTION - U.S. Environmental Protection Agency - 1976
AN INTRODUCTION TO THE TECHNOLOGY OF SUBSURFACE WASTEWATER INJECTION - Premier Press - 1980
DOMESTIC WATER TREATMENT - McGraw-Hill - 1980

Articles:

Dr. Lehr has published over 150 scientific articles in such journals as SCIENCE, JOURNAL OF SOIL & WATER CONSERVATION; JOURNAL OF GEOLOGICAL EDUCATION, JOURNAL: WATER POLLUTION CONTROL FEDERATION, JOURNAL: AMERICAN WATER WORKS ASSOCIATION, JOURNAL OF ENVIRONMENTAL HEALTH, WATER & SEWAGE WORKS, JOURNAL OF GROUND WATER, E S & T and GROUND WATER MONITORING REVIEW. A complete bibliography is available on request.

Editor/Publisher:

GROUND WATER - the world's primary refereed scientific research journal devoted to ground water hydrology, in its 21st year. Dr. Lehr has been editor for the past 17 years.

GROUND WATER MONITORING REVIEW - a new refereed research journal devoted to describing the nature of ground water pollution problems, defining the extent and developing potential solutions.

WATER WELL JOURNAL - the nation's leading trade publication for the water well industry.

Special Committees/Testimony:

Served as chairman of the Special Advisory Committee to the Office of Water Research and Technology, U.S. Department of the Interior.

Served two 3-year terms on EPA's National Drinking Water Advisory Council, chairing the Underground Source Subgroup.

Participated in EPA hearings on the development of a national ground water protection strategy.

Testified before House and Senate committees on water supply and pollution legislation on 22 occasions and is frequently quoted in Congressional Record.

Chairman, National Center for Ground Water Research Advisory Committee, U.S. EPA.

Special Committees/Testimony: (continued)

Member, American Institute of Professional Geologists -- Ad Hock Task Force on Ground Water.

Member, Gulf Universities Research Consortium's Water Task Force.

Research:

Dr. Lehr pioneered much of the research currently being done throughout the world on ground water related topics. His promotion of the need for increased data regarding underground resources has fostered the development of significant work in both public and private sectors. In recent years he has personally directed and participated in over $3,000,000 worth of research projects involved with such topics as Law, Regulations and Institutions for the Control of Ground Water Pollution, Impact of Abandoned Wells on Ground Water, Technology of Subsurface Wastewater Injection, Domestic Water Conditioning and Treatment, Well Maintenance and Rehabilitation, Ground Water Geothermal Heat Pump Applications and Ground Water Rehabilitation and Aquifer Restoration Techniques.

International Consulting:

Australia - 1971-Present - Assisted Australian government in establishing ground water management programs and water well construction regulations. Helped estabish the Australian Water Well Association and a government school to teach ground water science. Continues to consult on Australia's outstanding progress in this area.

Canada - 1973-Present - Serves in various consulting roles to various provincial governments on projects relating to ground water management and geothermal energy.

West Germany - 1974 - Served as United Nations consultant in the establishment of sound mineral resources development programs.

Mexico - 1976-present - Served as adjunct professor, University of Mexico, periodically teaching short courses in ground water hydraulics and consultant to Mexican officials on ground water management and artificial recharge.

Sri Lanka - 1980-1983 - Assist on joint U.S. AID-U.N. project to assist the Sri Lankian government in developing a decade water plan aimed at bringing adequate drinking water to all the people of Sri Lanka by 1990. Dr. Lehr authored the ground water development portion of this well received Sri Lankian plan.

Liberia - 1981-1983 - Working for UNDP, Dr. Lehr completed plans for comprehensive training programs in ground water development and water well technology for Liberian and eventually neighboring nations of West Africa.

Republic of South Africa - 1983 - Served as consultant in the development of a national plan to expand the nation's ground water dependence from 6 percent to over 20 percent during the present decade in order to reduce the current impact of drought related to reduced surface water flows.

Peoples Republic of China - 1983 - Served as a consultant to the Ministry of Water, thereby assisting China in the improvement of its well construction practices, irrigation technology, grond water management and geothermal energy utilization.

Personal:

Two years active duty in the U.S. Navy and 17 years service in the Civil Engineering Corps Reserve. Held the rank of Lt. Commander.

Dr. Lehr is married and resides in Worthington, Ohio.

A physical fitness enthusiast, Dr. Lehr participates in a variety of sports including lacrosse and ice hockey, set National AAU swimming records for senior men, he is an avid and accomplished sky diver, has completed the Boston Marathon, and has successfully completed the Ironman Triathlon World Championship in Hawaii each of the past 3 years.

S. S. PAPADOPULOS & ASSOCIATES, INC.
CONSULTING GROUND-WATER HYDROLOGISTS

STAVROS S. PAPADOPULOS
Ground-Water Hydrologist

Date and Place of Birth: [redacted]

Citizenship: U.S.A. (Naturalized November 1969; first name corrected to "Stavros" from "Istavros".)

Education:
Doctor of Philosophy in Civil Engineering, 1964
Princeton University, Princeton, New Jersey.
Master of Arts in Civil Engineering, 1963
Princeton University, Princeton, New Jersey.
Master of Science in Ground-Water Hydrology, 1962
New Mexico Institute of Mining and Technology, Socorro, New Mexico.
Bachelor of Science in Civil Engineering, 1959
Robert College, Istanbul, Turkey.

Languages: English, French, Greek, Turkish, knowledge of Spanish.

Professional Registration: District of Columbia.

Professional Societies:
American Society of Civil Engineers (Hydraulic Division, Committee on Ground-Water Hydrology, Member 1975-79; Corresponding Member 1980-81)
American Geophysical Union
National Water Well Association
International Association of Hydrogeologists (Member U.S. National Committee, 1981-84)
Sigma Xi

Awards & Honors:
U.S. Department of Interior Meritorious Service Award, May 1977.
U.S. Geological Survey Special Achievement Award, September 1977.
Medal of the City of Montpellier, presented at the International Symposium on the Implications of Hydrogeology on other Earth Sciences, Montpellier, France, September 11-16, 1978.

Publications: List of "Publications" attached.

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STAVROS S. PAPADOPULOS
Ground-Water Hydrologist

Professional Experience:

October 1979 to Present

S. S. Papadopulos & Associates, Inc., Consulting Ground-Water Hydrologists, Rockville, Maryland. President. As the senior executive officer of the company, manages the business affairs of the company, and provides quality control for technical services. Directs and conducts studies on all aspects of quantitative ground-water hydrology. Areas of expertise include formulation of ground-water projects, evaluation of ground-water resources through use of mathematical and digital models, design and analysis of aquifer tests, salt-water intrusion in coastal aquifers, movement of contaminants and storage of heat in aquifers, and other problems involving ground-water flow and transport of solutes and of thermal energy in hydrogeologic systems.

September 1970 to October 1979

U. S. Geological Survey, Water Resources Division, Northeastern Region, Reston, Virginia, Research Hydrologist GS-14 (9/70-11/74), Hydrologist GS-15 (11/74-9/79). Originated, planned and conducted, or directed, particularly complex research projects in the analysis of ground-water systems. Developed new, and improved existing methods for aquifer test analyses and for the evaluation of ground-water resources. Served as Research Advisor - Ground-Water Physics to the Assistant Division Chief for Research and Technical Coordination and to his Deputy for Research, and assisted in periodically evaluating the Division's research program. Frequently acted for the Deputy Assistant Chief Hydrologist for Research, and for the Regional Research Hydrologist. Made field trips to District offices to provide technical assistance to project chiefs engaged in ground-water investigations, and informed the Regional Hydrologist on progress and problems in the project. Participated and represented the U. S. Geological Survey in national and international conferences. Lectured in training schools and in advanced seminars held for Survey and developing country agency personnel. Conducted ground-water studies of national and regional interest, and undertook overseas assignments on detail to other U. S. agencies and to UNESCO. Several examples of such studies are listed below:

(a) On detail to UNESCO, conducted a preliminary study to assess the hydrologic effects of present and future ground-water developments in Setúbal Peninsula, Portugal.

STAVROS S. PAPADOPULOS
Ground-Water Hydrologist

September 1970 to October 1979 (continued)

(b) Evaluated the results of a field experiment, jointly funded by the U. S. Geological Survey and the U. S. Department of Energy, designed to determine the technical feasibility of thermal energy storage in aquifers as a means of meeting seasonally variable energy demands.

(c) Under the auspices of the United States-Saudi Arabian Joint Commission on Economic Cooperation, served as the leader of a team of seven professional experts in a study of alternative sources of additional water supply for Riyadh, Saudi Arabia. Conducted all geohydrologic work related to the study, directed the project, and prepared the final report for submission to the Ministry of Agriculture and Water of the Kingdom of Saudi Arabia.

(d) Assessed the energy potential of geopressured zones in the Tertiary sediments of the Northern Gulf of Mexico Basin. The assessment included estimates of the fluid resource base and of the recoverable thermal, mechanical, and methane energy under several alternative development plans.

(e) Under an interagency agreement between the U.S. Geological Survey and the U.S. Environmental Protection Agency, conducted a study to establish criteria and hydrogeologic and hydrochemical data needs for the evaluation of shallow land burial sites for low-level radioactive wastes.

(f) In response to a request to the U. S. Geological Survey by the Washington Area Interstate Water Resource Program Task Force, evaluated the ground-water resource potential and the feasibility of obtaining an emergency supply of 100 million gallons per day from the Coastal Plain aquifers in the Washington, D. C. Metropolitan Area.

September 1969 to September 1970

University of Illinois at Chicago Circle, Department of Geological Sciences, Chicago, Illinois, Associate Professor. Taught courses in ground-water hydrology, engineering and structural geology, and advised graduate students majoring in ground-water hydrology. Conducted research on the application of digital computer techniques to well hydraulics and aquifer evaluation studies. Served on the Executive Committee of the department and on various other departmental and university committees.

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Ground-Water Hydrologist

September 1969 to September 1970 (continued)	Harza Engineering Company, Chicago, Illinois, Chief Ground-Water Hydrologist. On the staff of the company as consultant on ground-water studies for water and land resources development projects. In this capacity, participated in ground-water studies for the Lake Minnetonka Project, initiated reconnaissance studies of the potential of ground water in Northern Guatemala, and served as leader of a Harza team of experts in Indonesia for the formulation of a ground-water exploration program designed to assess the technical feasibility of developing ground-water for irrigation in several areas in Java and to identify pilot irrigation projects within these areas which will provide data for subsequent large scale development of irrigation projects making conjunctive use of surface and ground-water supplies.
June 1967 to September 1969	Harza Engineering Company, Chicago, Illinois, Ground-Water Specialist, Planning Division (6/67-10/67), Head of Hydrology Department, Water Resources Division (10/67-9/69). Supervised engineers engaged in hydrologic and ground-water investigations and in preparation of planning reports. Conducted continuous broad review and direction of all aspects of planning involving ground-water resources, including preliminary and detailed exploration programs, pumping tests, resource evaluation, aquifer projection studies and definite project formulation. Responsible for development of standards and procedures for all ground-water related activities. Major assignments included ground-water studies for the Chicago Deep Tunnel Project, the Irrigation Rehabilitation Project in Indonesia, and the Ullum Project in Argentina.
	University of Illinois at Chicago Circle, Department of Geology, Visiting Associate Professor. Taught evening courses in ground-water hydrology.
September 1966 to June 1967	University of Minnesota, Department of Geology and Geophysics, Minneapolis, Minnesota, Associate Professor. Conducted research in well hydraulics and aquifer evaluation methods and taught courses in ground-water hydrology. Served on the Graduate Admissions Committee of the department.
September 1963 to September 1966	U. S. Geological Survey, Water Resources Division, Arlington, Virginia, Hydraulic Engineer GS-9 (9/63-2/64) Research Engineer GS-11 (2/64-3/65), and Research Hydrologist GS-12 (3/65-9/66). Conducted basic and applied research in the mechanics of ground-water flow.

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Ground-Water Hydrologist

September 1963 to September 1966 (continued)	Served as consultant to District offices on special problems, such as seepage estimates for Cedar Lake in Washington, analyses of limited pumping test data in Puerto Rico, Virgin Islands, North Carolina, and Florida, and tracer studies in Colorado. Lectured on aquifer test methods in training conferences for Survey personnel. Prepared and reviewed technical papers. The George Washington University, School of Engineering and Applied Science, Washington, D. C., part-time Associate Professorial Lecturer (9/65-5/66). Taught evening courses in hydrology, hydraulic engineering, and soil mechanics.
September 1961 to September 1963	Princeton University, Department of Geological Engineering, Princeton, N.J., Graduate Assistant (9/61-6/62 and 9/62-6/63). Conducted research in flow through porous media and taught a course in the theory of ground-water motion. U. S. Geological Survey, Water Resources Division, Ground-Water Branch, Denver, Colorado, Hydraulic Engineer GS-9 (6/62-9/62). Prepared type-curves for the evaluation of wedge-shaped aquifers in the Little Plover Basin, Wisconsin. New Mexico Institute of Mining and Technology, Socorro, N. M., Research Assistant (6/63-9/63), and U. S. Geological Survey, Water Resources Division, Ground-water Branch, Trenton, N. J., Hydraulic Engineer GS-9 (3/63-9/63). Conducted research on the nonsteady flow to multiaquifer wells (project was supported by the Survey and used as a Ph.D. thesis).
September 1959 to September 1961	New Mexico Institute of Mining and Technology, Socorro, N. M., Graduate Research Assistant. Conducted research in problems related to ground-water flow.
June 1958 to September 1959	The U.S. Army Corps of Engineers (TUSEC), Trabzon (6/58-9/58) and Sinop (6/59-9/59), Turkey, Assistant Engineer LGS-7. Inspected general construction work, and assisted in preparing revisions to design and specifications to fit local field conditions.

STAVROS S. PAPADOPULOS
Ground-Water Hydrologist

PUBLICATIONS

1. HANTUSH, M. S. and I. S. PAPADOPULOS, 1962, Flow of ground water to collector wells: Proc. ASCE, Jour. Hydr. Div., HY5, p. 221-244.

2. HANTUSH, M. S. and I. S. PAPADOPULOS, 1963, Flow of ground water to collector wells (closure): Proc. ASCE, Jour. Hydr. Div., HY4, p. 225-227.

3. PAPADOPULOS, I. S., 1963, Preparation of type curves for calculating T/S of a wedge-shaped aquifer: U. S. Geol. Survey Prof. Paper 475-B, art. 54, p. B196-B198.

4. BREDEHOEFT, J. D. and I. S. PAPADOPULOS, 1965, Rates of vertical groundwater movement estimated from earth's thermal profile: Water Resources Research, vol. 1, no. 2, p. 325-328.

5. BREDEHOEFT, J. D., H. H. COOPER Jr., I. S. PAPADOPULOS and R. R. BENNNETT, 1965, Seismic fluctuations in an open artesian water well: U. S. Geol. Survey Prof. Paper 525-C, p. C51-C57.

6. COOPER, H. H., Jr., J. D. BREDEHOEFT, I. S. PAPADOPULOS and R. R. BENNETT, 1965, The response of well-aquifer systems to seismic waves: Jour. Geophys. Res., vol. 70, no. 16, p. 3915-3926.

   Also reprinted in: The Great Alaska Earthquake of 1964, Part A, Publication 1603, National Academy of Sciences, 1968, p. 122-132.

7. BREDEHOEFT, J. D., I. S. PAPADOPULOS and J. W. STEWART, 1965, Hydrologic effects of ground-water pumping in northwest Hillsborough County, Florida: U. S. Geol. Survey Open-file report, 23 p.

8. PAPADOPULOS, I. S., 1965, Nonsteady flow to a well in an infinite anisotropic aquifer: Proc. Internat. Symp. on Hydrology of Fractured Rocks, Dubrovnik, Yugoslavia, October 1965, IASH, v. 1, p. 21-31.

9. BREDEHOEFT, J. D., H. H. COOPER Jr. and I. S. PAPADOPULOS, 1965, Inertial effects in well-aquifer systems: An analog study (abstract): Program 1965 annual meetings, The Geol. Soc. of Am., November 4-6, 1965, Kansas City, Missouri, p. 16-17.

10. STALLMAN, R. W. and I. S. PAPADOPULOS, 1966, Measurement of hydraulic diffusivity of wedge-shaped aquifers drained by streams: U. S. Geol. Survey Prof. Paper 514, 50 p.

11. PAPADOPULOS, I. S., 1966, Nonsteady flow to multiaquifer wells: Jour. Geophys. Res., vol. 71, no. 20, p. 4791-4797.

12. BREDEHOEFT J. D., and H. H. COOPER JR., and I. S. PAPADOPULOS, 1966, Inertial and storage effects in well-aquifer systems: An analog investigation: Water Resources Research, vol. 2, no. 4, p. 697-707.

13. PAPADOPULOS, I. S. and H. H., COOPER Jr., 1967, Drawdown in a well of large diameter: Water Resources Research, vol. 3, no. 1 p. 241-244.

14. COOPER, H. H., Jr., J. D. BREDEHOEFT and I. S. PAPADOPULOS, 1967, Response of a finite-diameter well to an instantaneous charge of water: Water Resources Research, vol. 3, no. 1, p. 263-269.

15. PAPADOPULOS, I. S., 1967, Drawdown distribution around a large-diameter well: Proc. Nat. Symposium on Ground-water Hydrology, San Francisco, Cal., November 6-8, 1967, p. 157-168.

16. PAPADOPULOS, I. S. and H. H. COOPER JR., 1968, Reply to T. N. Narasimhan's discussion of paper entitled "Drawdown in a well of large diameter" by I. S. Papadopulos and H. H. Cooper Jr.: Water Resources Research, vol. 4, no. 2, p. 461.

17. PAPADOPULOS, I. S. and R. E. ATEN, 1968, Investigation program for aquifer protection requirements, Chicagoland Deep Tunnel Plan: Ground Water, vol. 6, no. 3, p. 4-9.

18. PAPADOPULOS, I. S., W. R. LARSEN and F. C. NEIL, 1969, Ground-water studies - Chicagoland Deep Tunnel System: Ground Water, vol. 7, no. 5, p. 2-15.

19. WOLFF, R. G. and S. S. PAPADOPULOS, 1972, Determination of the hydraulic diffusivity of a heterogeneous confining bed: Water Resources Research, vol. 8, no. 4, p. 1051-1058.

20. PINDER, G. F., E. O. FRIND and S. S. PAPADOPULOS, 1973, Functional coefficients in the analysis of ground-water flow: Water Resources Research, vol. 9, no. 1, p. 222-226.

21. PAPADOPULOS, S. S., J. D. BREDEHOEFT, and H. H. COOPER Jr., 1973, On the analysis of 'slug test' data: Water Resources Research, vol. 9, no. 4, p. 1087-1089.

22. WOLFF, R. G. and S. S. PAPADOPULOS, 1973, Reply to T. L. Holzer's comments on "Determination of the hydraulic diffusivity of a heterogeneous confining bed" by R. G. Wolff and S. S. Papadopulos: Water Resources Research, v. 9, no. 4, p. 1106.

STAVROS S. PAPADOPULOS
Ground-Water Hydrologist

23. PAPADOPULOS, S. S., R. R. BENNETT, F. K. MACK and P. C. TRESCOTT, 1974, Water from the Coastal Plain aquifers in the Washington, D.C. metropolitan area: U. S. Geol. Survey Circular 697, 11 p.

24. PAPADOPULOS, S. S. and I. J. WINOGRAD, 1974, Storage of low-level radioactive wastes in the ground: Hydrogeologic and hydrochemical factors, with an appendix on The Maxey Flats, Kentucky, radioactive waste storage site: Current knowledge and data needs for a quantitative hydrogeologic evaluation: U. S. Environmental Protection Agency rept. EPA 520/3-74-009, 49 p.

25. PAPADOPULOS, S. S., R. H. WALLACE Jr., J. B. WESSELMAN and R. E. TAYLOR, 1975, Assessment of onshore geopressured-geothermal resources in the northern Gulf of Mexico basin: in Assessment of geothermal resources of the United States - 1975, edited by D. E. White and D. L. Williams, U. S. Geol. Survey Circular 726, p. 125-146.

26. PAPADOPULOS, S. S., 1975, The energy potential of geopressured reservoirs: Hydrogeologic factors: Proc. First Geopressured Geothermal Energy Conf., edited by M. H. Dorfman and R. W. Deller, University of Texas, Austin, Texas, June 2-4, 1975, p. 173-192.

27. PAPADOPULOS, S. S., 1976, Flow to water-table wells deriving their discharge from capture (abstract): in Advances in groundwater hydrology, edited by Z. A. Saleem, American Water Resources Association, Minneapolis, Minnesota, p. 329.

28. LARSON, S. P., T. MADDOCK III and S. S. PAPADOPULOS, 1977, Optimization techniques applied to ground-water development: Memoires XIIIth Congress of the Internat. Assoc. of Hydrogeologists, Birmingham, England, 24-30 July 1977, v. XIII, part I, p. E57-E66.

29. LARSON, S. P., S. S. PAPADOPULOS, H. H. COOPER Jr., and W. L. BURNHAM, 1977, Simulation of Wastewater injection into a coastal aquifer system near Kahului, Maui, Hawaii, Proc. ASCE 25th Annual Hydraulic Division Specialty Conference on the "Hydraulics in the Coastal Zone", Texas A&M University, College Station, Texas, August 10-12, 1977, p. 107-116.

30. PAPADOPULOS, S. S., 1977, Predictive modeling in hydrogeology - A brief review (abstract): Abstracts with programs, 1977 annual meetings, The Geol. Soc. of Am., vol. 9, no. 7, p. 1124.

31. PAPADOPULOS, S. S. and S. P. LARSON, 1978, Aquifer storage of heated water: Part II - Numerical simulation of field results: Ground Water, vol. 16, no. 4, p. 242-248.

STAVROS S. PAPADOPULOS
Ground-Water Hydrologist

32. BREDEHOEFT, J. D. and S. S. PAPADOPULOS, 1980, A method for determining the hydraulic properties of tight formations: Water Resources Research, vol. 16, no. 1. p. 233-238.

33. KELLY, J. E., S. S. PAPADOPULOS, W. L. BURNHAM, and K. E. ANDERSON, 1981, The evolution of a double-transmissivity concept for the Madison aquifer system (abstract): Proc. 10th. Annual Rocky Mountain Ground-Water Conf., April 30 - May 2, 1981, Laramie, Wyoming, p. 74-75.

34. LARSON, S. P., S. S. PAPADOPULOS, and J. E. KELLY, 1981, Simulation analysis of a double-transmissivity concept for the Madison aquifer system (abstract): Proc. 10th. Annual Rocky Mountain Ground-Water Conf., April 30 - May 2, 1981, Laramie, Wyoming, p. 76.

35. BREDEHOEFT, J. D., S. S. PAPADOPULOS and H. H. COOPER, Jr., 1982, Groundwater: The water-budget myth: Scientific Basis of Water-Resource Management, p. 51.