APPENDIX A
COMPLETION REPORTS

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 35 T: 42 N, R: 75 W, Well #: MW-1
Coordinates: 1057971 N 320102 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-15-2006 Driller: Brad Crawford Company: Tyler Exploration
T.D.: 280' Logged By: Shasta Data LU#: _____
Mud Type: plugger Drift: _____ Hole Size: 5 1/4" # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Brad Crawford Date: 11-22-2006
Company: Tyler Exploration
Casing Pt. (CP): 180' Ream Dia.: 7 7/8"
Casing Size (ID): 4 1/2" # Joints: 9
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	9	180'
Top Joint:	0		-
# Centralizers:	5		
Depths:			180'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 7.8 Type: 1/11
Sx Lb. Gel: 2.7 Sacks: 23
Other: _____ Lb. ~~Lb. CaCl2:~~ _____
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 3 ☒ Water ☐ Mud
Returns (Y / N): Y Est. Vol. (bbls): 1/2
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
11-27-06	1/2 BBL

Operator: _____

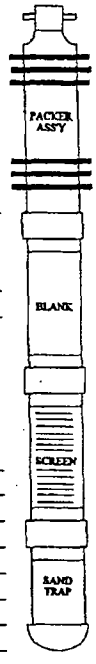
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 182 -
Bottom: 250

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 180
Comments: _____



174 feet
3
feet
5
feet
68
feet
0

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 35 T: 42 N, R: 75 W, Well #: PW-1
Coordinates: 1057997 N 320194 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-15-2006 Driller: Kenny Moore Company: Tyler Exploration
T.D.: 280' Logged By: Steve Data LU#: _____
Mud Type: Plugger Drift: _____ Hole Size: 5 1/4 # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Kenny Moore Date: 11-27-2006
Company: Tyler Exploration
Casing Pt. (CP): 174 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 8
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20'	8	160
~~Stm Top~~ Joint:	14'	1	14
# Centralizers:	5		
Depths:			174'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 7.5 Type: 1/11
Sacks: 22
~~Lb.~~ Gal: 2.4 Lb. CaCl2: –
Other: _____ Lb.
Cement Weight: 13.0 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 2.9 ☒ Water ☐ Mud
Returns (Y / N): Y Est. Vol. (bbls): 1
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
11-30-06	1/8 BBL

Operator: _____

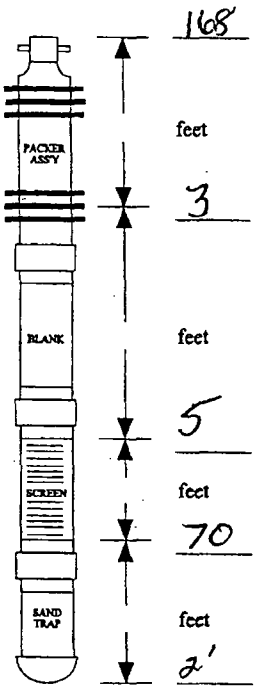
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☒ Yes ☐ No
Gravel Size: 10/20

Underream Zone:
Top: 176
Bottom: 246

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: _____
Comments: _____



Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 35 T: 42 N, R: 75 W, Well #: MW-2
Coordinates: 1057719 N 322637 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-15-2006 Driller: James Stamper Company: B + B Drilling
T.D.: 200 Logged By: Strata Data LU#: _____
Mud Type: Plugger Drift: _____ Hole Size: 9 1/4" # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: ~~[illegible]~~ Kim Date: 12-4-2006
Company: ~~[illegible]~~ Drilling Tyler Exploration
Casing Pt. (CP): 128 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 6
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	6	120'
Btm ~~Top~~ Joint:	8'	'	8'
# Centralizers:	3		
Depths:			128'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 5.7 Type: 1/11
SS ~~Lb.~~ Gel: 1.8 Sacks: 16
Other: _____ ~~Lb. CaCl2:~~ _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 2.0 ☒ Water ☐ Mud
Returns (Y / N): Y Est. Vol. (bbls): 1/2
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
12-6-2006	1/2 BBL

Operator: _____

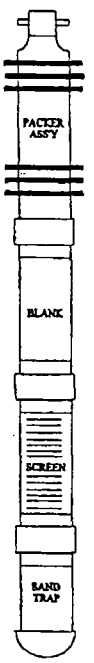
Liner Data
Packer Type: Fiak
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 130
Bottom: 195

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 128
Comments: _____



122	feet
3	
	feet
5	
	feet
65	
	feet
0	

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 34 T: 42 N, R: 75 W, Well #: MW-3
Coordinates: 1060552 N 317949 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-8-2006 Driller: Kenny Mock Company: Tyler Exploration
T.D.: 320 Logged By: Strata Data LU#: _____
Mud Type: Plugge Drift: _____ Hole Size: 5 1/4" # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Kenny Mock Date: 11-20-2006
Company: Tyler Expl.
Casing Pt. (CP): 267 Ream Dia.: 7 7/8"
Casing Size (ID): 4 1/2" # Joints: 13
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	13	260'
Btm ~~Top~~ Joint:	7'	1	7'
# Centralizers:	7		
Depths:			267'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 11.3 Type: 1/11
Sacks: 34
5x5 ~~Lb.~~ Gel: 4 ~~Lb. CaCl2~~: _____
Other: _____ Lb.
Cement Weight: 13.0 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 4.6 ☒ Water ☐ Mud
Returns (Y / N): N Est. Vol. (bbls): _____
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
11-21-06	1/2 bbl.

Operator: _____

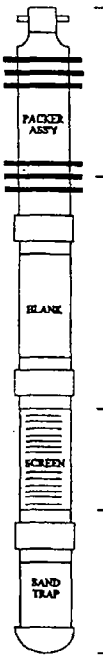
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 269
Bottom: 317

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 267
Comments: _____



259	
feet	
3	
feet	
7	
feet	
48	
feet	
0	

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 34 T: 42 N, R: 75 W, Well #: MW-4
Coordinates: 1056282 N 318699 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-13-2006 Driller: Kenny Moore Company: Tyler Exploration
T.D.: 220 Logged By: Strata Data LU#: _____
Mud Type: Plugge Drift: _____ Hole Size: 5 1/4" # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: James Stamper Date: 12-1-2006
Company: B+B Drilling
Casing Pt. (CP): 120 Ream Dia.: 7 7/8"
Casing Size (ID): 4 1/2" # Joints: 6
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	6	120'
~~Top~~ Joint:	0	0	
# Centralizers:	3		
Depths:			120'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 5.3 Type: 1/11
Sacks: 16
~~Lb. Gel~~: 1 ~~Lb. CaCl2~~: _____
Other: _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 1.8 ☒ Water ☐ Mud
Returns (Y / N): N Est. Vol. (bbls): _____
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
12-5-2006	1/2 BBL

Operator: _____

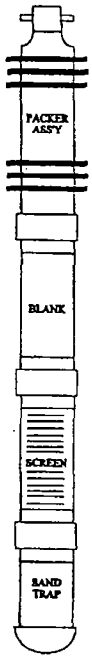
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 126
Bottom: 164

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 120
Comments: _____



	114	feet
	3	feet
	9	feet
	38	feet
	0	feet

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 35 T: 42 N, R: 75 W, Well #: MW-5
Coordinates: 1056691 N 321453 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-16-2006 Driller: Kenny Moor Company: Tyler Exploration
T.D.: 220 Logged By: Strata Data LU#: _____
Mud Type: Aluggell Drift: _____ Hole Size: 5 1/4" # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Kenny Moor Date: 11-30-2006
Company: Tyler Exp
Casing Pt. (CP): 126 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 6
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	6	120'
Top Joint:	6'	1	6'
# Centralizers:	4		
Depths:			126'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 5.6 Type: 1/11
Sacks: 17
5x5 Lb. Gel: 2 ~~Lb. CaCl2~~: _____
Other: _____ Lb.
Cement Weight: 13.0 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 2.1 ☒ Water ☐ Mud
Returns (Y / N): N Est. Vol. (bbls): _____
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
12-1-06	1/2 BB

Operator: _____

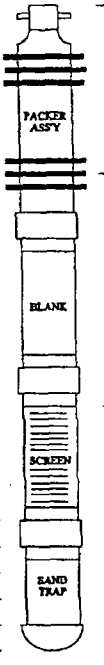
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 128
Bottom: 198

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 126
Comments: _____



120	feet
3	
	feet
5	
	feet
70	
	feet
Ø	

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 35 T: 42 N, R: 75 W, Well #: MW-6
Coordinates: 1058288 N 323791 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-16-2006 Driller: James Stamper Company: B+B Drilling
T.D.: 280 Logged By: Strata Data LU#: _____
Mud Type: Bluggell Drift: _____ Hole Size: 5 1/4 # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Kenny Moore Date: 12-1-2006
Company: Tyler Expl.
Casing Pt. (CP): 175 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 8
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	8	160'
~~Blm~~ Top Joint:	15'	1	15'
# Centralizers:	5		
Depths:			175'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 7.5 Type: 1/11
~~Lb.~~ Gel: 2 Sacks: 23
Other: _____ ~~Lb. CaCl2~~: _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 3.0 ☒ Water ☐ Mud
Returns (Y / N): N Est. Vol. (bbls): _____
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
12-4-2006	1/2 bbl

Operator: _____

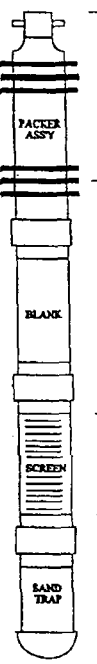
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 177
Bottom: 257

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 175
Comments: _____



169	feet
3	
	feet
5	
	feet
80	
	feet
Ø	

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 35 T: 42 N, R: 75 W, Well #: MW-7
Coordinates: 1056311 N 322537 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-16-2006 Driller: Kenny Moor Company: Moor Exploration
T.D.: 200 Logged By: Strata Data LU#: _____
Mud Type: Plugged Drift: _____ Hole Size: 5 1/4 # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Kenny Moor Date: 11-30-06
Company: Moor Exp.
Casing Pt. (CP): 88' Ream Dia.: 7 7/8'
Casing Size (ID): 4 1/2" # Joints: 4
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	4	80'
Blank Top Joint:	8'	1	8'
# Centralizers:	3		
Depths:			88'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 4.0 Type: 1/11
Sacks: 12
5x5 Lb. Gel: 1 ~~Lb. CaCl2~~: _____
Other: _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 1.4 ☒ Water ☐ Mud
Returns (Y / N): Y Est. Vol. (bbls): 1/2
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
12-1-06	10 gallons

Operator: _____

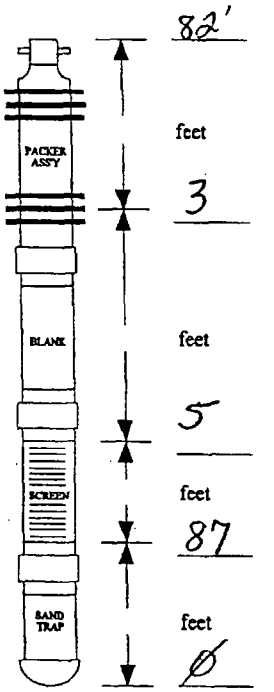
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 90
Bottom: 177

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 88
Comments: _____



82' feet
3 feet
5 feet
87 feet
Ø feet

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 34 T: 42 N, R: 75 W, Well #: MW-8
Coordinates: 1057973 N 317925 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-8-2006 Driller: Kenny Moor Company: Tyler Exploration
T.D.: 320 Logged By: Strata Data LU#: _____
Mud Type: Pluggell Drift: _____ Hole Size: 5 1/4 # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Kenny Moor Date: 11-21-06
Company: Tyler Expl.
Casing Pt. (CP): 150 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 7
Casing Mat'l: Pvc Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	7	140'
Btm ~~Top~~ Joint:	10'	1	10'
# Centralizers:	4		
Depths:			150'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 6.6 Type: 1/1
Sacks: 19
5x5 ~~Lb.~~ Gel: 2 ~~Lb. CaCl2~~: _____
Other: _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 2.4 ☒ Water ☐ Mud
Returns (Y / N): Y Est. Vol. (bbls): 1/2
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
11-27-06	20 gallons

Operator: _____

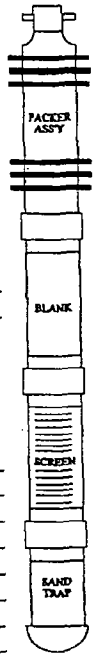
Liner Data
Packer Type: FIGK
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Rev
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 152
Bottom: 205

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 150
Comments: _____



144	feet
3	
	feet
5	
	feet
53	
	feet
0	

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 34 T: 42 N, R: 75 W, Well #: MW-9
Coordinates: 1059208 N 317102 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-8-2006 Driller: Kenny Moore Company: Tyler Exploration
T.D.: 280 Logged By: Sheila Data LU#: _____
Mud Type: Duragell Drift: _____ Hole Size: 5 1/4 # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Kenny Moore Date: 11-21-06
Company: Tyler Expl.
Casing Pt. (CP): 190 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 9
Casing Mat'l: pvc Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	9	180
BTM ~~Top~~ Joint:	10'	1	10'
# Centralizers:	5		
Depths:			190'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 8.2 Type: 1/11
Sacks: 24
SKS ~~Lb.~~ Gel: 2.7 ~~Lb. CaCl2~~: _____
Other: _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 3 ☒ Water ☐ Mud
Returns (Y / N): X Est. Vol. (bbls): 1/2
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
11-27-06	15 gallons

Operator: _____

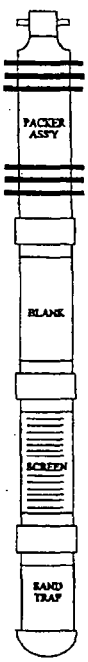
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 192
Bottom: 252

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 190
Comments: _____



184	feet
3	feet
5	feet
60	feet
Ø	feet

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 35 T: 42 N, R: 75 W, Well #: MW-10
Coordinates: 1059390 N 320118 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-15-2006 Driller: James Stampell Company: B+B Drilling
T.D.: 280 Logged By: State Data LU#: _____
Mud Type: Nuggell Drift: _____ Hole Size: 5 1/4" # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: James Stampell Date: 11-21-06
Company: B+B Drilling
Casing Pt. (CP): 180 Ream Dia.: 7 7/8"
Casing Size (ID): 4 1/2" # Joints: 9
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	9	180'
~~Shr~~ Top Joint:	0	0	
# Centralizers:	4		
Depths:			180'

Elevations
Surface: _____ Casing Top: _____

Cement Type: 1/11
Bbl Cmt: 7.8 Sacks: 23
~~5x5 Lb.~~ Gel: 2 ~~Lb. CaCl2~~: _____
Other: _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 3.0 ☒ Water ☐ Mud
Returns (Y / N): X Est. Vol. (bbls): _____
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
11-27-06	1/2 BBL

Operator: _____

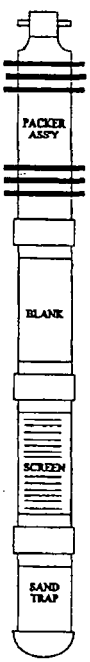
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 182
Bottom: 250

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 180
Comments: _____



	174 feet
	3 feet
	5 feet
	68 feet
	Ø feet

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 27 T: 42 N, R: 75 W, Well #: MW-11
Coordinates: 1061878 N 317691 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-16-2006 Driller: Brad Crawford Company: Tyler Expl.
T.D.: 340 Logged By: Skafa Data LU#: _____
Mud Type: Pluggell Drift: _____ Hole Size: 5 1/4 # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: James Stampa Date: 12-4-2006
Company: B+B Drilling
Casing Pt. (CP): 280 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 14
Casing Mat'l: pvc Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	14	280'
BTM ~~Top~~ Joint:	0	0	
# Centralizers:	7		
Depths:			280'

Elevations
Surface: _____ Casing Top: _____

Cement
Type: 1/11
Bbl Cmt: 11.7 Sacks: 35
5x5 ~~Lb.~~ Gel: 3.6 ~~Lb. CaCl2~~: _____
Other: _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 4.9 ☒ Water ☐ Mud
Returns (Y / N): N Est. Vol. (bbls): _____
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
12-5-06	1 BBL

Operator: _____

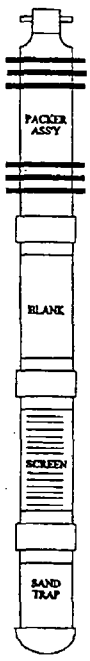
Liner Data
Packer Type: FigK
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 281
Bottom: 331

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 280
Comments: _____



273	feet
3	
	feet
5	
	feet
50	
	feet
Ø	

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 35 T: 42 N, R: 75 W, Well #: OMW-1
Coordinates: 1057972 N 320092 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-15-2006 Driller: Kenny Moore Company: Tyler Expl.
T.D.: 180 Logged By: Strata Data LU#: _____
Mud Type: Polygell Drift: _____ Hole Size: 5 1/4" # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Kenny Moore Date: 11-22-06
Company: Tyler Expl.
Casing Pt. (CP): 146 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 7
Casing Mat'l: pvc Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	7	140
BTM ~~Top~~ Joint:	6'	1	6
# Centralizers:	4		
Depths:			146'

Elevations
Surface: _____ Casing Top: _____

Cement Type: 1/11
Bbl Cmt: 6.4 Sacks: 19
5x5 ~~Lb.~~ Gel: 2 ~~Lb. CaCl2~~: _____
Other: _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 2.3 ☒ Water ☐ Mud
Returns (Y / N): N Est. Vol. (bbls): _____
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
11-27-06	1/2 BBL.

Operator: _____

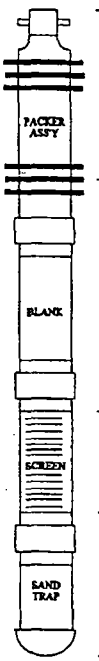
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 148
Bottom: 168

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 146
Comments: _____



140	feet
3	
5	feet
20	feet
Ø	feet

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 35 T: 42 N, R: 75 W, Well #: OMW-2
Coordinates: 1057719 N 3226626 E County: Campbell State: wy

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-15-06 Driller: James Stampel Company: B+B Drilling
T.D.: 100 Logged By: Steve Kasa LU#: _____
Mud Type: plugsel Drift: _____ Hole Size: 5 1/4 # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kasa
Driller: Kenny Moore Date: 12-4-2006
Company: Tyler Exp.
Casing Pt. (CP): 60 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 3
Casing Mat'l: pvc Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	3	60'
Btm Top Joint:	0	0	
# Centralizers:	2		
Depths:			

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 2.9 Type: 1/1
3.5 Lb. Gel: .9 Sacks: 9
Other: _____ ~~Lb. CaCl2~~: _____ Lb.
Cement Weight: 13.0 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: .8 ☒ Water ☐ Mud
Returns (Y / N): Y Est. Vol. (bbls): 1/2
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
12-5-06	1/2 bbl

Operator: _____

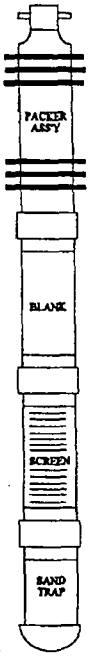
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☒ Yes ☐ No
Gravel Size: 10/20

Underream Zone:
Top: 60
Bottom: 78

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 60'
Comments: _____



52 feet
3
feet
5
feet
18
feet
2

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 34 T: 42 N, R: 75 W, Well #: OMW-3
Coordinates: 1060553 N 317939 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-7-2006 Driller: Kenny Mack Company: Tyler Exploration
T.D.: 150 Logged By: Strata Data LU#: _____
Mud Type: Pugger Drift: _____ Hole Size: 5 1/4 # Bits: 1
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Kenny Mack Date: 11-17-06
Company: Tyler Exploration
Casing Pt. (CP): 200' Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 10"
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20		200
BTM Top Joint:	6		
# Centralizers:	5		
Depths:	~~[illegible]~~		200

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 3.7 Type: 1/11
SKS Lb. Gel: 2 Sacks: 26
Other: _____ Lb. Lb. CaCl2: 0
Cement Weight: 13.0 Lb./Gal
Surface Returns: 1 1/2 Bbl

Displacement
Bbl. Fluid: 3.4 ☒ Water ☐ Mud
Returns (Y / N): Y Est. Vol. (bbls): 1
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
11-22-06	1/2 BBL

Operator: _____

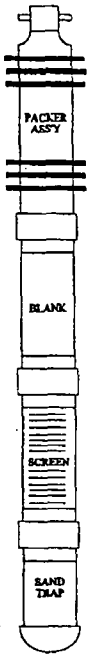
Liner Data
Packer Type: FigK
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 205
Bottom: 245

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 200
Comments: _____



194	feet
3	
	feet
8	
	feet
40	
	feet
Ø	

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 34 T: 42 N, R: 75 W, Well #: OMW-4
Coordinates: 1056283 N 318689 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-13-2006 Driller: Kenny Mock Company: Tyler Exp.
T.D.: 120 Logged By: Steve Data LU#: _____
Mud Type: Quaggell Drift: _____ Hole Size: 5 1/4 # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Karn
Driller: James Stamper Date: 12-1-2006
Company: B+B Drilling
Casing Pt. (CP): 74 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 3
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	3	60
Bottom Joint:	14'	1	14'
# Centralizers:	2		
Depths:			74'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 3.5 Type: 1/11
Lb. Gel: 1/2 Sacks: 10
Other: _____ Lb. CaCl2: _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 1.0 ☒ Water ☐ Mud
Returns (Y / N): Y Est. Vol. (bbls): 1/2
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
12-1-06	1/2 BBL

Operator: _____

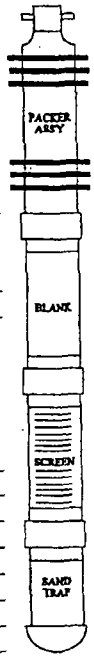
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 76
Bottom: 91

☐ Cone _____ inches
☒ Blade 10" inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 74
Comments: _____



68 feet
3
feet
5
feet
15
feet
0

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 35 T: 42 N, R: 75 W, Well #: UMW-1
Coordinates: 1057971 N 320112 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-15-06 Driller: Kenny Mock Company: Tyler Expl.
T.D.: 340 Logged By: Strata Data LU#: _____
Mud Type: plugged Drift: _____ Hole Size: 5 1/4" # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Kenny Mock Date: 11-29-06
Company: Tyler Expl.
Casing Pt. (CP): 280 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 14
Casing Mat'l: PVC Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	14	280'
B ~~Top~~ Joint:	0	0	
# Centralizers:	7		
Depths:			280'

Elevations
Surface: _____ Casing Top: _____

Cement
Type: 1/11
Bbl Cmt: 11.8 Sacks: 316
5x5 ~~Lb.~~ Gel: 4 ~~Lb. CaCl2~~: _____
Other: _____ Lb.
Cement Weight: 13.0 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 4.8 ☒ Water ☐ Mud
Returns (Y / N): N Est. Vol. (bbls): _____
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
11-30-06	1 bbl

Operator: _____

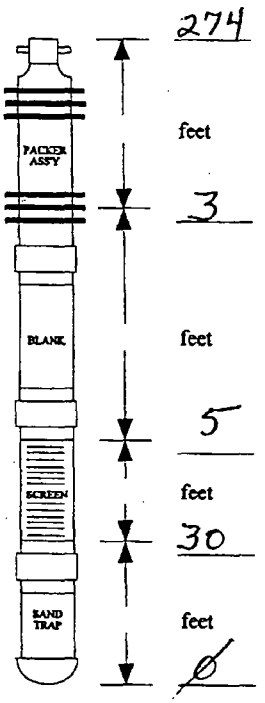
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 282
Bottom: 312

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 280
Comments: _____



Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 35 T: 42 N, R: 75 W, Well #: UMW-2
Coordinates: 1057720 N 322646 E County: Campbell State: wy

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-15-2006 Driller: James Stamper Company: B+B Drilling
T.D.: 280 Logged By: Strata Data LU#: _____
Mud Type: plugger Drift: _____ Hole Size: 5 1/4 # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Lenny moe Date: 12-1-06
Company: Tyler Exp.
Casing Pt. (CP): 228 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 11
Casing Mat'l: pvc Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	11	220
~~Top~~ Btm Joint:	8'	1	8'
# Centralizers:	6		
Depths:			228'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 9.8 Type: 1/11
Sacks: 28
~~Lb. Gel~~ Sxs: 3 ~~Lb. CaCl2~~: _____
Other: _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 3.9 ☒ Water ☐ Mud
Returns (Y / N): Y Est. Vol. (bbls): 1/2
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
12-5-06	1/2 BBL

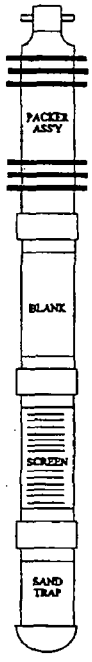
Operator: _____

Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030
Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 230
Bottom: 250

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 228
Comments: _____



222	feet
3	
	feet
5	
	feet
20	
	feet
Ø	

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 34 T: 42 N, R: 75 W, Well #: UMW-3
Coordinates: 1060551 N 3179660 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-8-2006 Driller: Kenny Moore Company: Tyler Expl.
T.D.: 380 Logged By: Strata Data LU#: _____
Mud Type: Bluggel Drift: _____ Hole Size: 5 1/4 # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: Kenny Moore Date: 11/20/2006
Company: Tyler Expl.
Casing Pt. (CP): 352 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 17
Casing Mat'l: pvc Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	17	340
BTM ~~Top~~ Joint:	12'	1	12'
# Centralizers:	9		
Depths:			352'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 14.8 Type: 1/11
5x ~~Lb.~~ Gel: 5.1 Sacks: 44
Other: _____ ~~Lb. CaCl2~~: _____ Lb.
Cement Weight: 13.1 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 6.2 ☒ Water ☐ Mud
Returns (Y / N): N Est. Vol. (bbls): _____
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
11-21-06	1 BBL

Operator: _____

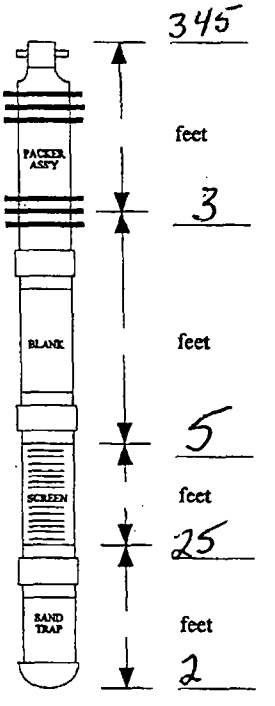
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☒ Yes ☐ No
Gravel Size: 10/20

Underream Zone:
Top: 353
Bottom: 378

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 352
Comments: _____



345 feet
3
feet
5
feet
25
feet
2

Mechanical Integrity Test
Date: _____

Type Test: ☐ Packer ☐ Wellhead

	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

Energy Metals Corp.
Moore Ranch Project
Well Completion Report

General
Area: _____ Sec: 34 T: 42 N, R: 75 W, Well #: UMW-4
Coordinates: 1056283 N 318709 E County: Campbell State: WY

Well Type: ☐ Production / Injection ☒ Monitor ☐ Water Supply

Pilot Hole Drill Data
Date: 11-8-2006 Driller: Kenny Mock Company: Tyler Expl.
T.D.: 300 Logged By: Strata Data LU#: _____
Mud Type: Polymer Drift: _____ Hole Size: 5 1/4 # Bits: _____
Remarks (Lost Circulation / Hard Zones): _____

Casing Information
Supervisor: Steve Kain
Driller: James Stamper Date: 11-30-06
Company: B+B Drilling
Casing Pt. (CP): 220 Ream Dia.: 7 7/8
Casing Size (ID): 4 1/2" # Joints: 11
Casing Mat'l: pvc Mnfctr: _____

	Length	Cumulative	Actual
Joints:	20	11	220'
BTM Top Joint:	0	0	
# Centralizers:	6		
Depths:			220'

Elevations
Surface: _____ Casing Top: _____

Cement
Bbl Cmt: 9.4 Type: 1/11
Sacks: 28
Sx Lb. Gel: 2 Lb. CaCl2: _____
Other: _____ Lb.
Cement Weight: 13.0 Lb./Gal
Surface Returns: _____ Bbl

Displacement
Bbl. Fluid: 3.7 ☒ Water ☐ Mud
Returns (Y / N): N Est. Vol. (bbls): _____
Cementer: _____

Top of Cement
Calculated: _____ Actual: _____

Cement Tagged by Logger
Logger: _____
LU#: _____ Date: _____
Tag Depth: _____

Cement Top Off

Date	Volume Cmt.
12-4-06	1/2 BBL

Operator: _____

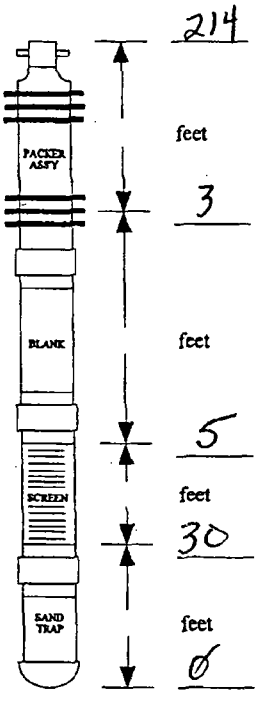
Liner Data
Packer Type: Fig K
Number: _____
Liner Dia.: 3"
Screen Type: (reg / rev) Reg
Slot: .030

Gravel: ☐ Yes ☒ No
Gravel Size: _____

Underream Zone:
Top: 222
Bottom: 252

☐ Cone _____ inches
☒ Blade 10 inches

Rat Hole T.D.: _____
Liner Top: _____
Liner Bottom: _____
Bottom of Casing: 220
Comments: _____



	214	feet
	3	
		feet
	5	
		feet
	30	
		feet
	0	

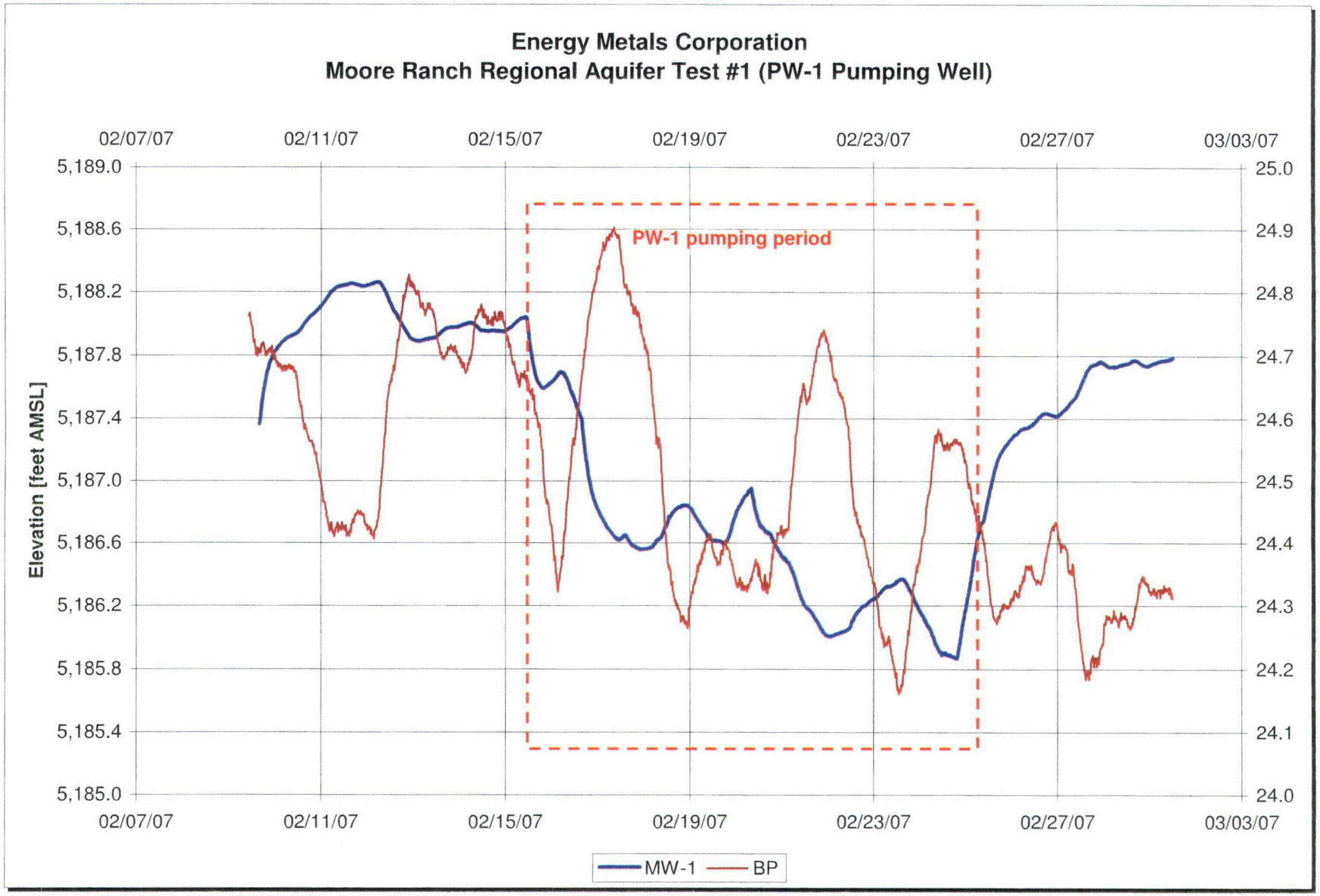
Mechanical Integrity Test
Date: _____

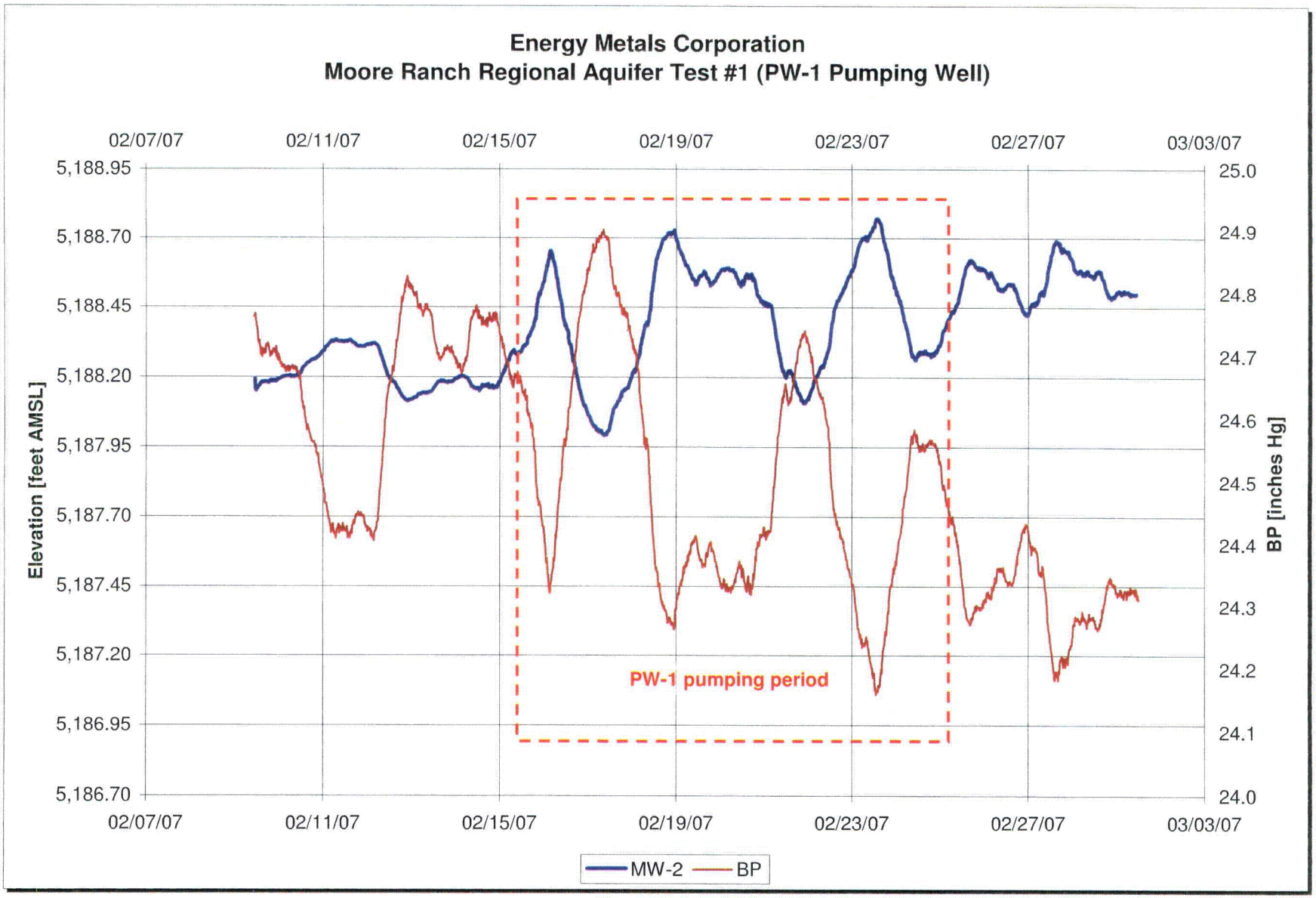
Type Test: ☐ Packer ☐ Wellhead

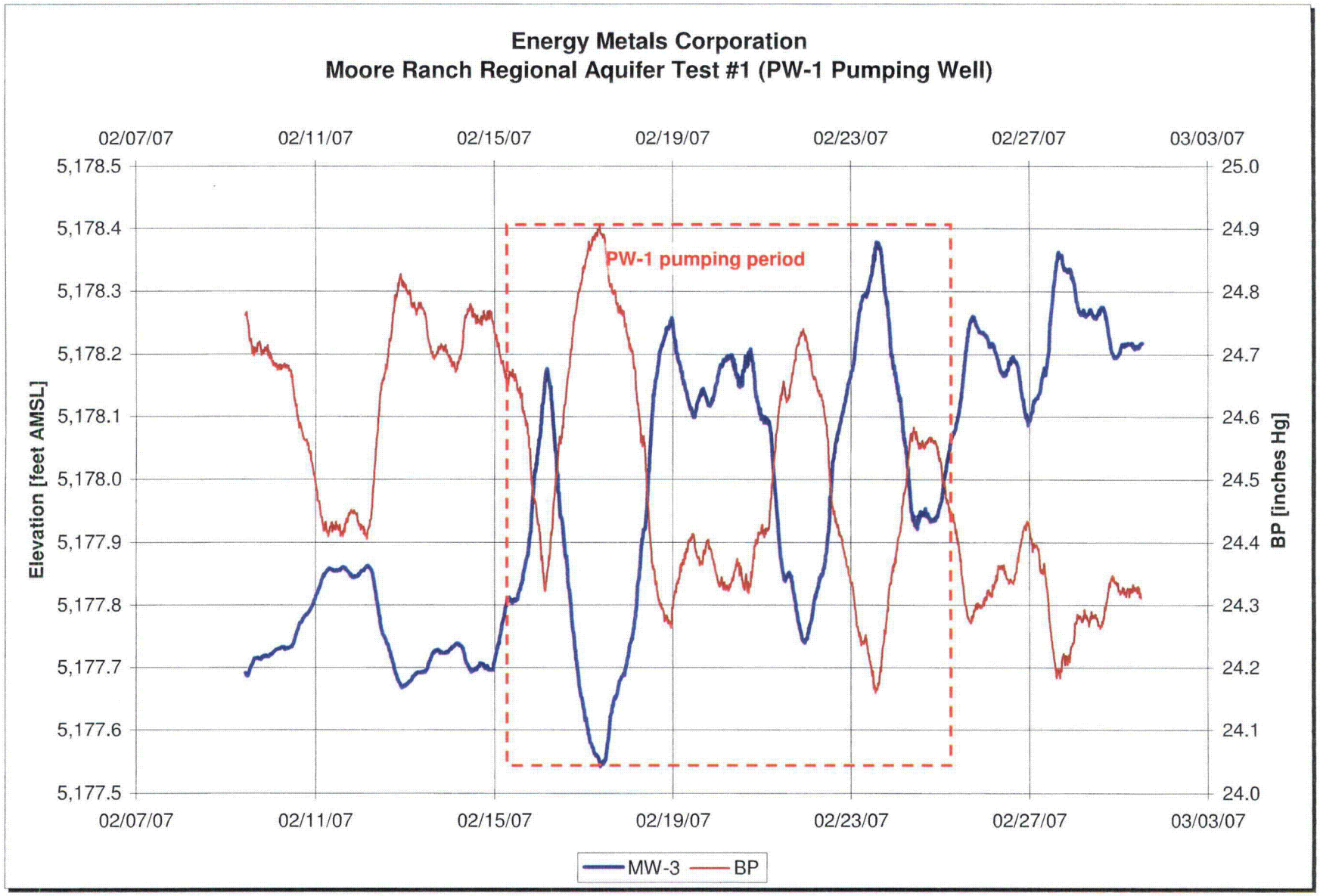
	Time	Pressure	dP	%
0				
2				
4				
6				
8				
10				

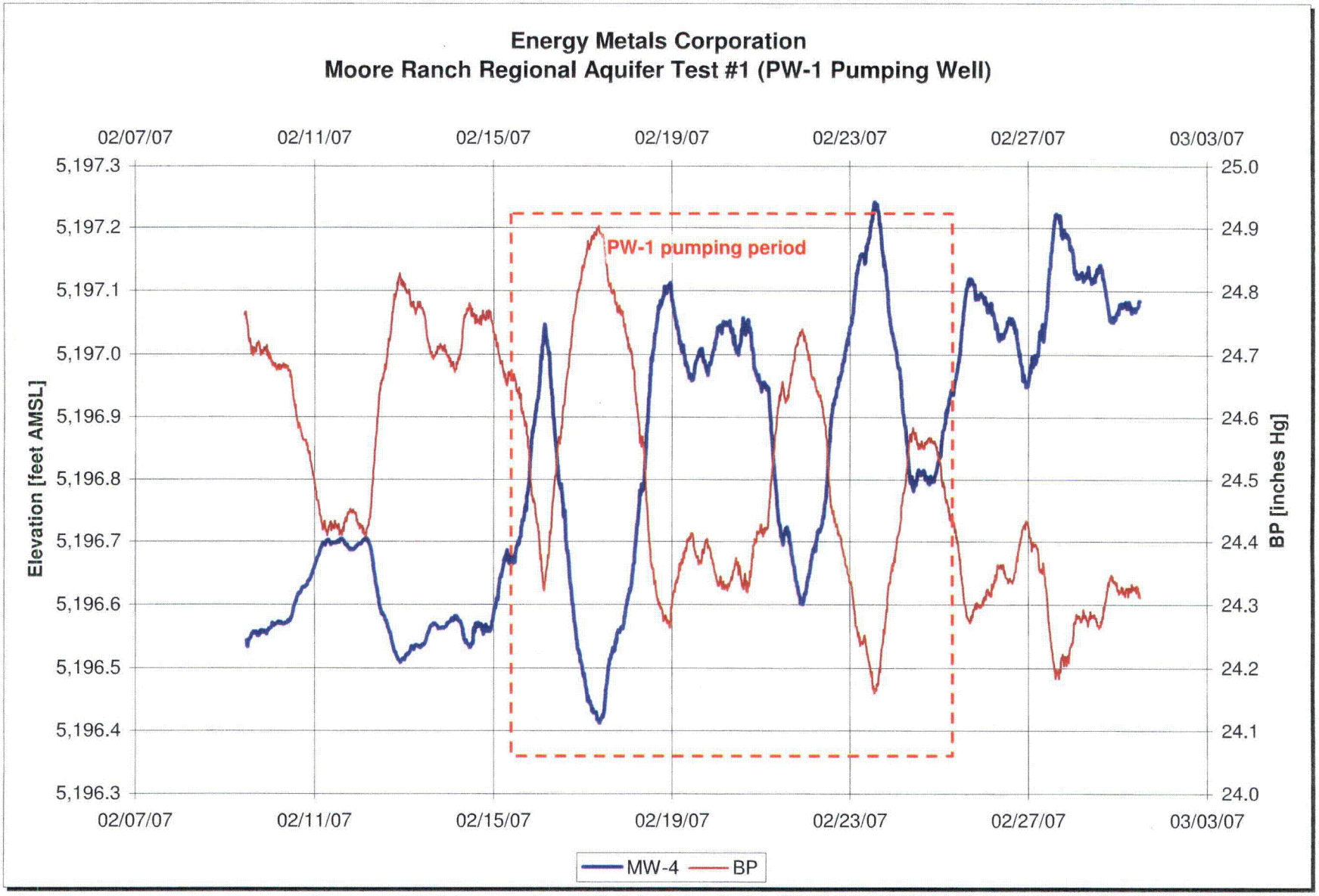
Tested by: _____ Date: _____
Observed by: _____
Starting Pressure: _____ Ending Pressure: _____
Pass (Y/N): _____
Comments: _____

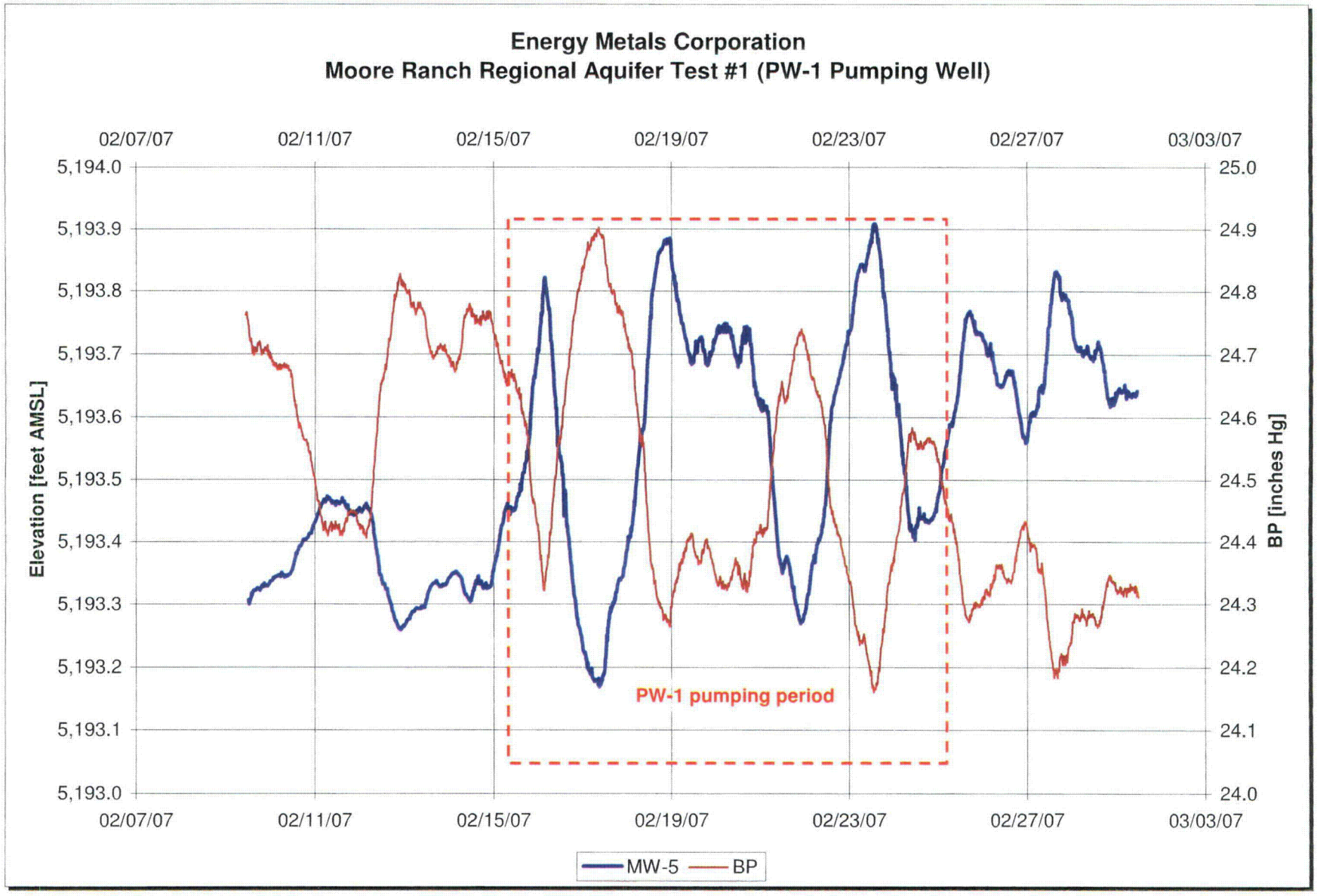
APPENDIX B
WATER PLOTS – TEST #1 (PW-1)

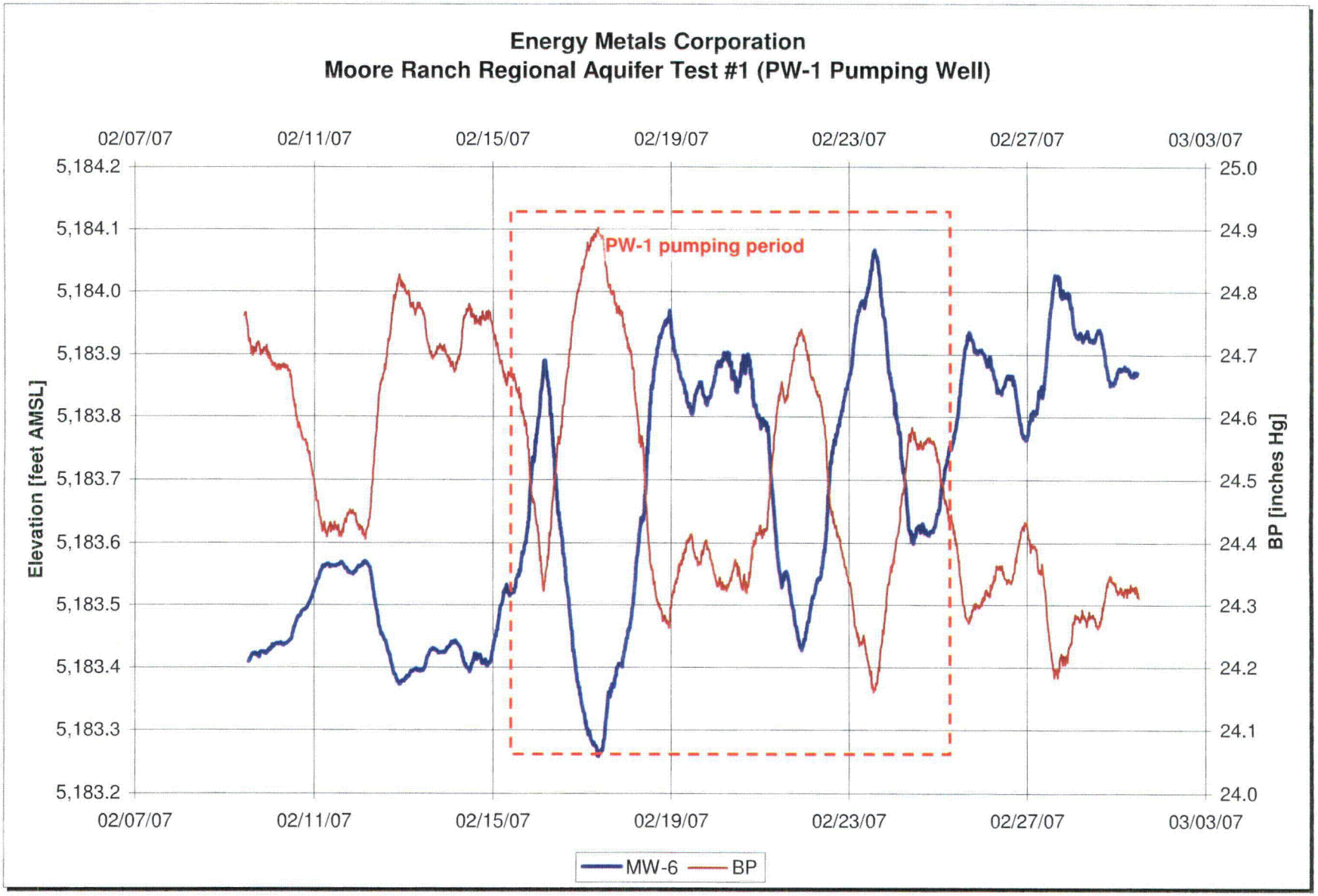

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,189.0
5,188.6
5,188.2
5,187.8
5,187.4
5,187.0
5,186.6
5,186.2
5,185.8
5,185.4
5,185.0
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
PW-1 pumping period
MW-1
BP

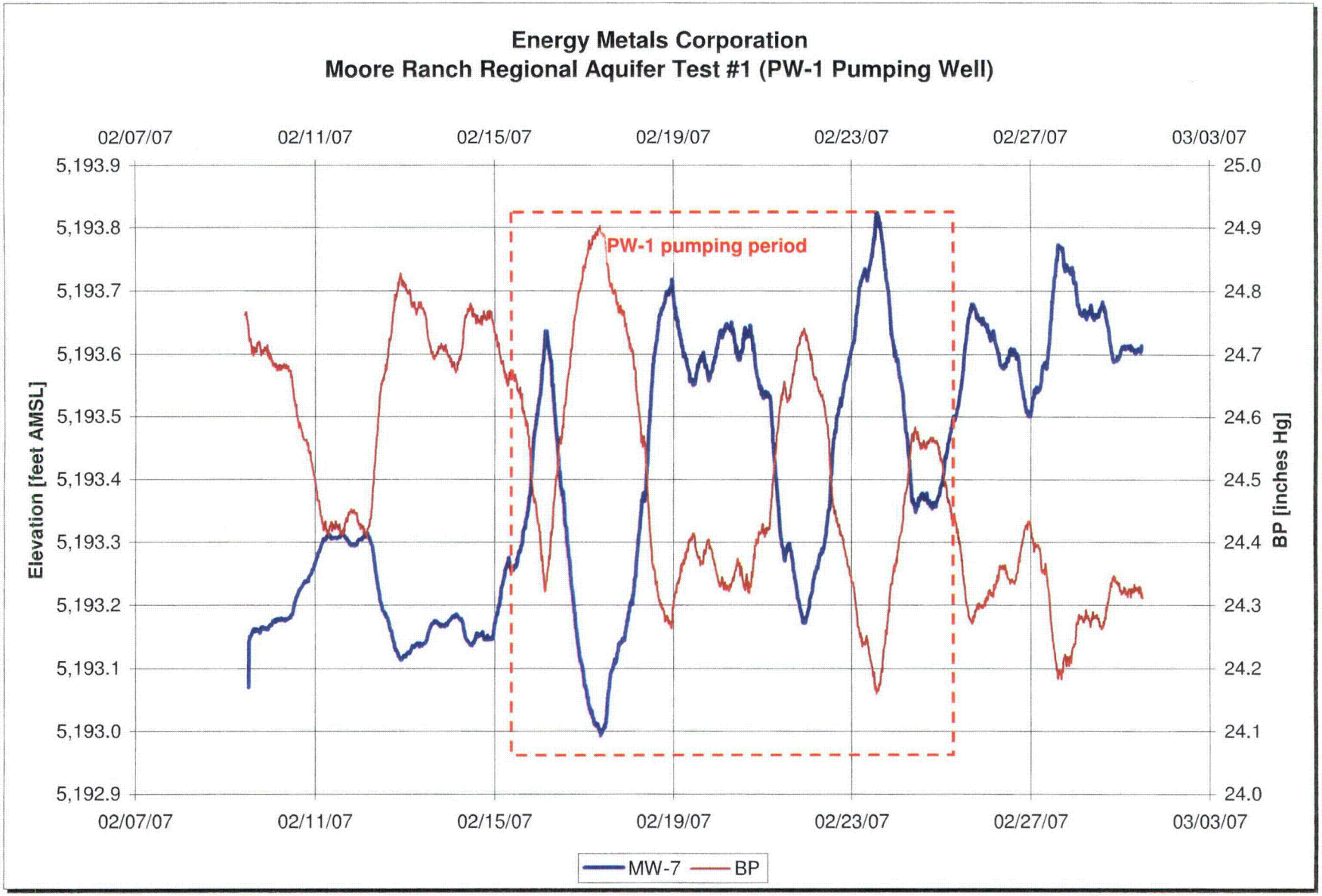

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,188.95
5,188.70
5,188.45
5,188.20
5,187.95
5,187.70
5,187.45
5,187.20
5,186.95
5,186.70
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
MW-2
BP

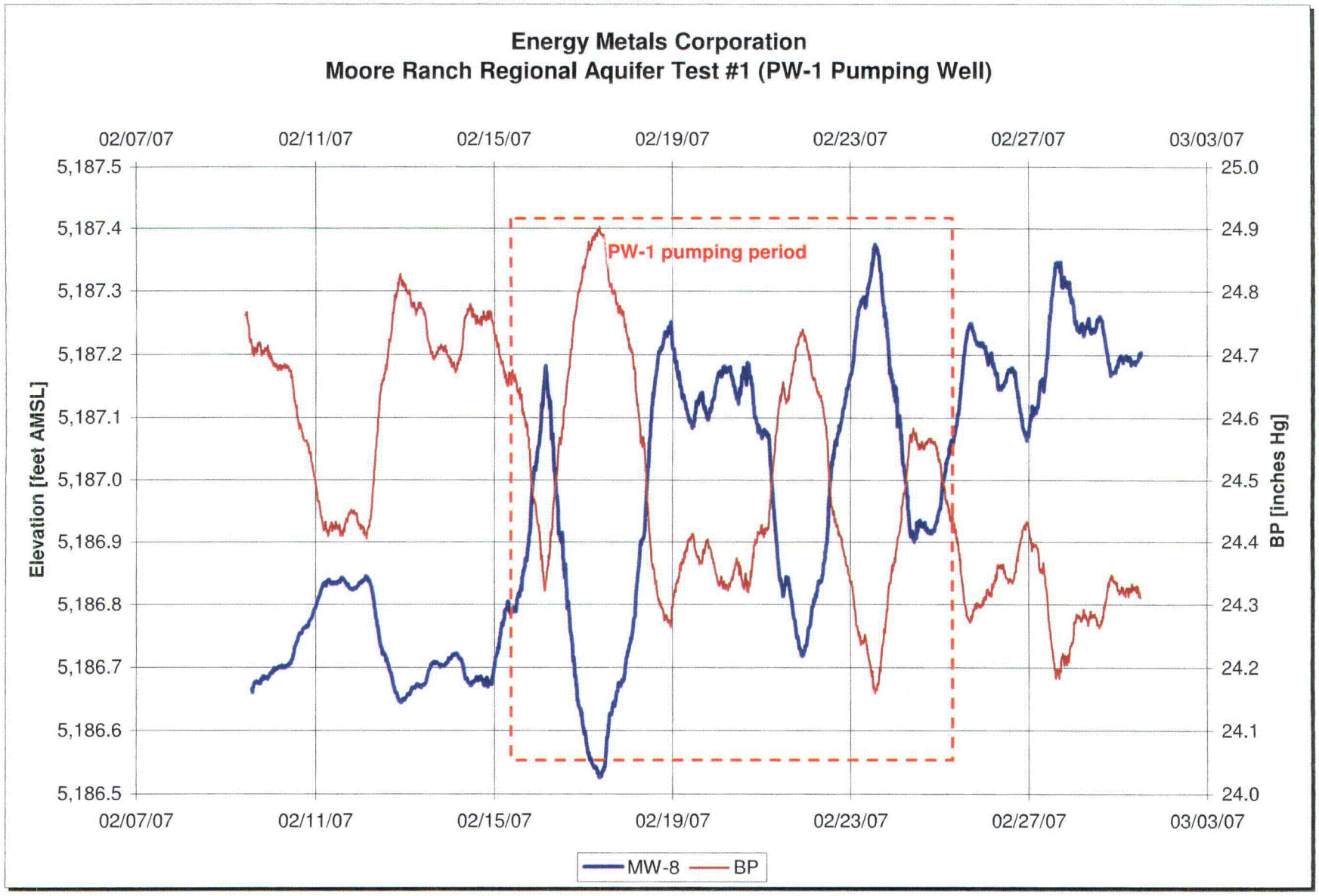

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,178.5
5,178.4
5,178.3
5,178.2
5,178.1
5,178.0
5,177.9
5,177.8
5,177.7
5,177.6
5,177.5
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
MW-3
BP

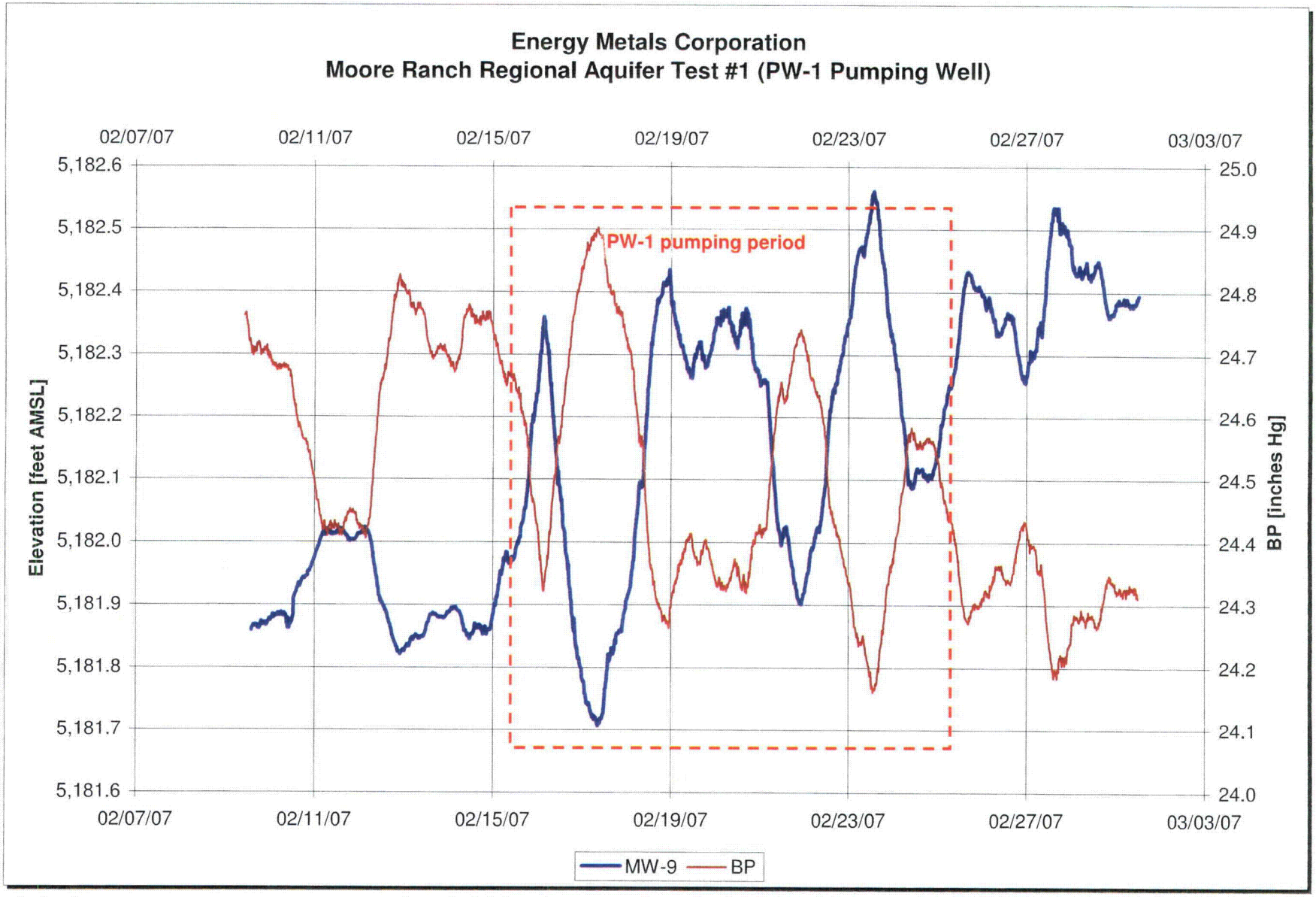

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,197.3
5,197.2
5,197.1
5,197.0
5,196.9
5,196.8
5,196.7
5,196.6
5,196.5
5,196.4
5,196.3
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
MW-4
BP

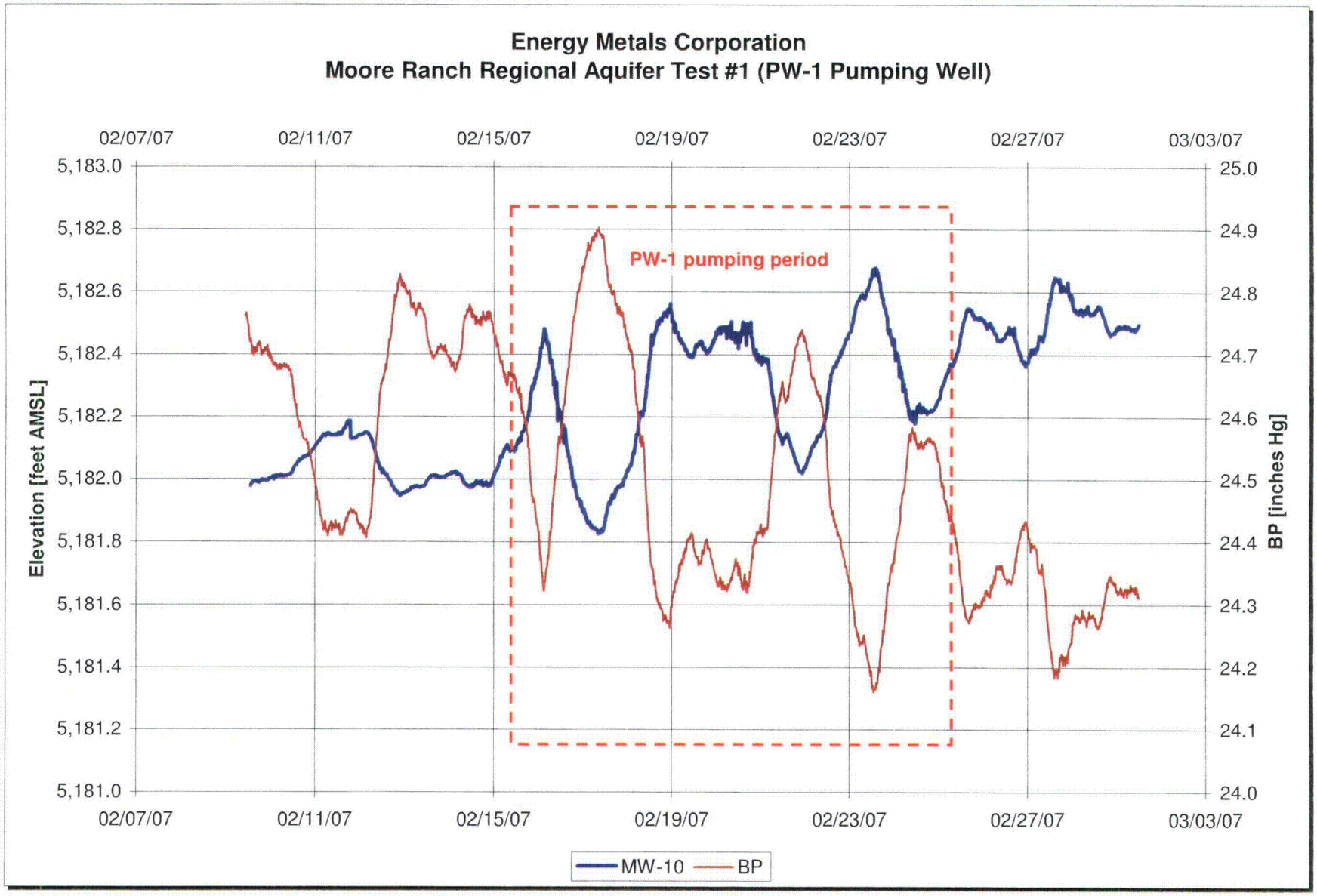

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,194.0
5,193.9
5,193.8
5,193.7
5,193.6
5,193.5
5,193.4
5,193.3
5,193.2
5,193.1
5,193.0
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
MW-5
BP

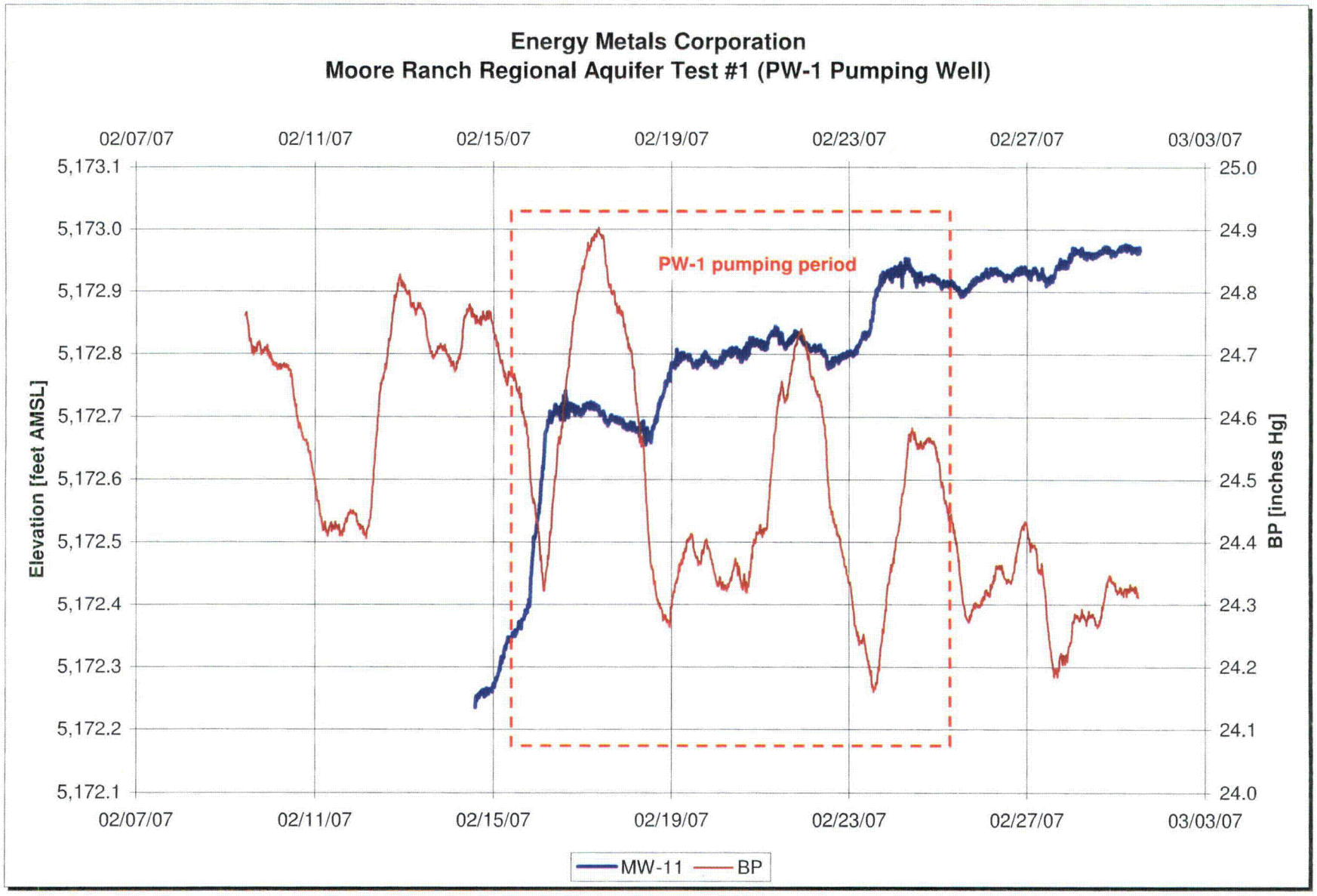

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,184.2
5,184.1
5,184.0
5,183.9
5,183.8
5,183.7
5,183.6
5,183.5
5,183.4
5,183.3
5,183.2
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
MW-6
BP

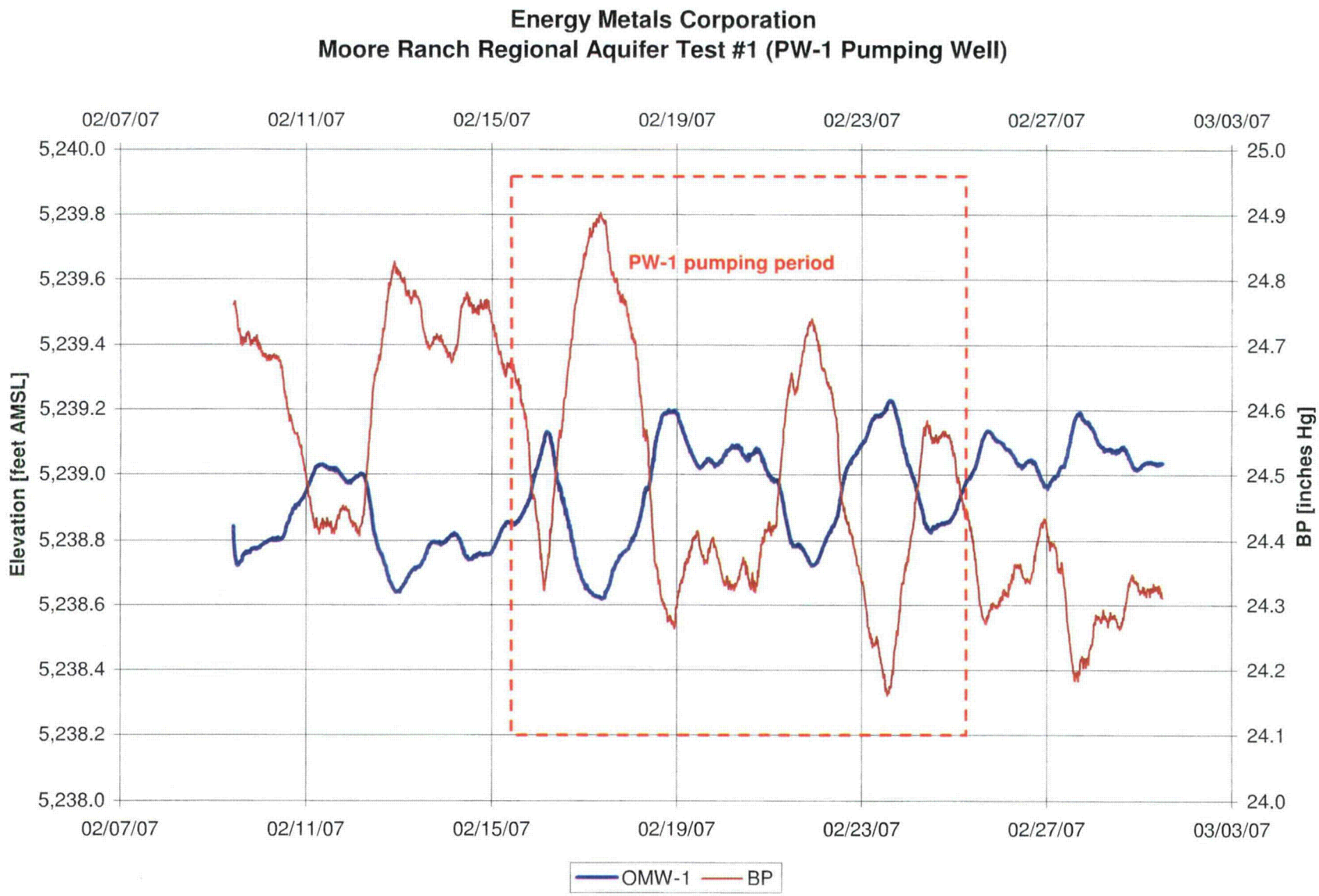

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,193.9
5,193.8
5,193.7
5,193.6
5,193.5
5,193.4
5,193.3
5,193.2
5,193.1
5,193.0
5,192.9
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
MW-7
BP

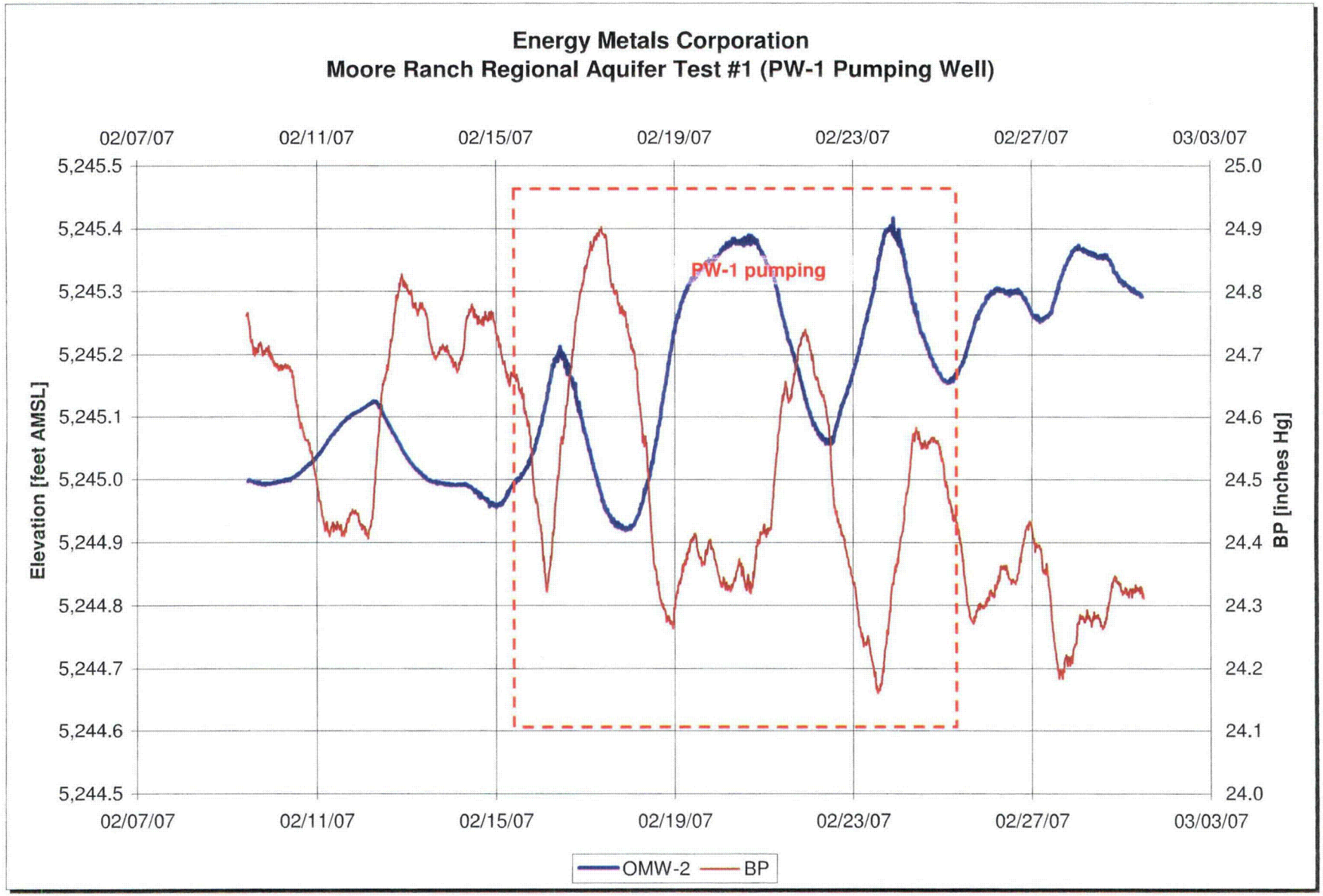

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,187.5
5,187.4
5,187.3
5,187.2
5,187.1
5,187.0
5,186.9
5,186.8
5,186.7
5,186.6
5,186.5
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
MW-8
BP

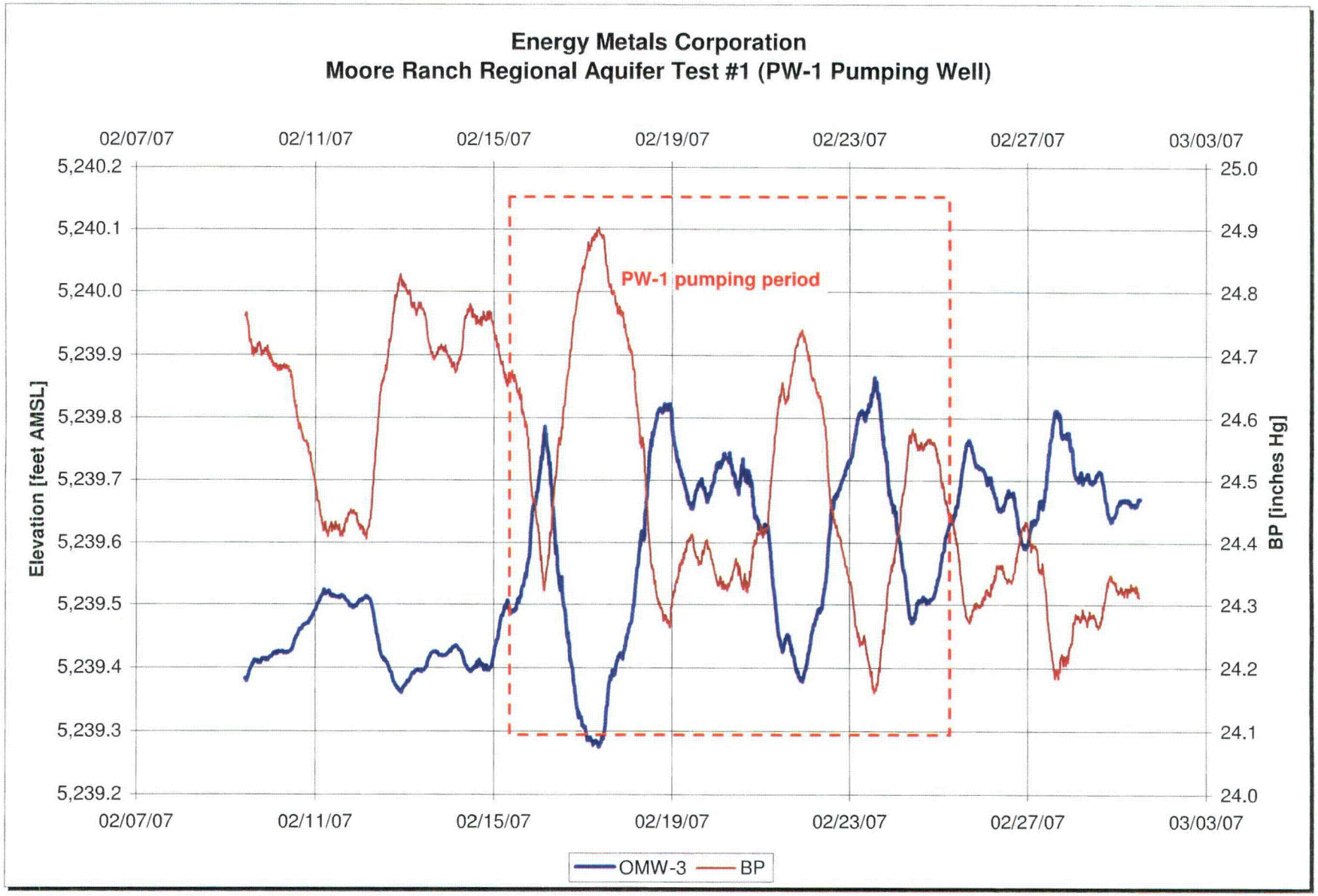

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,182.6
5,182.5
5,182.4
5,182.3
5,182.2
5,182.1
5,182.0
5,181.9
5,181.8
5,181.7
5,181.6
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
MW-9
BP

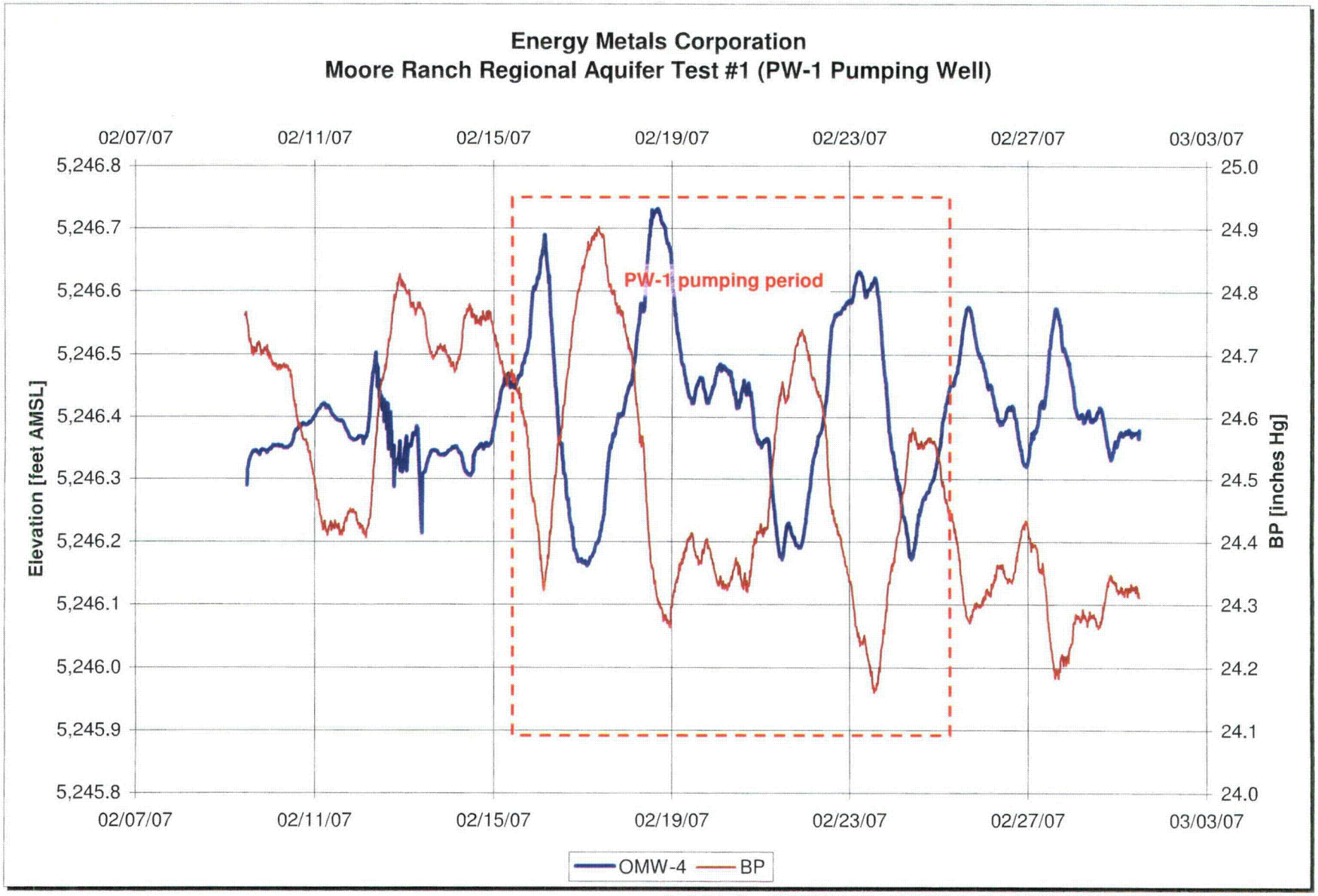

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,183.0
5,182.8
5,182.6
5,182.4
5,182.2
5,182.0
5,181.8
5,181.6
5,181.4
5,181.2
5,181.0
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
MW-10
BP

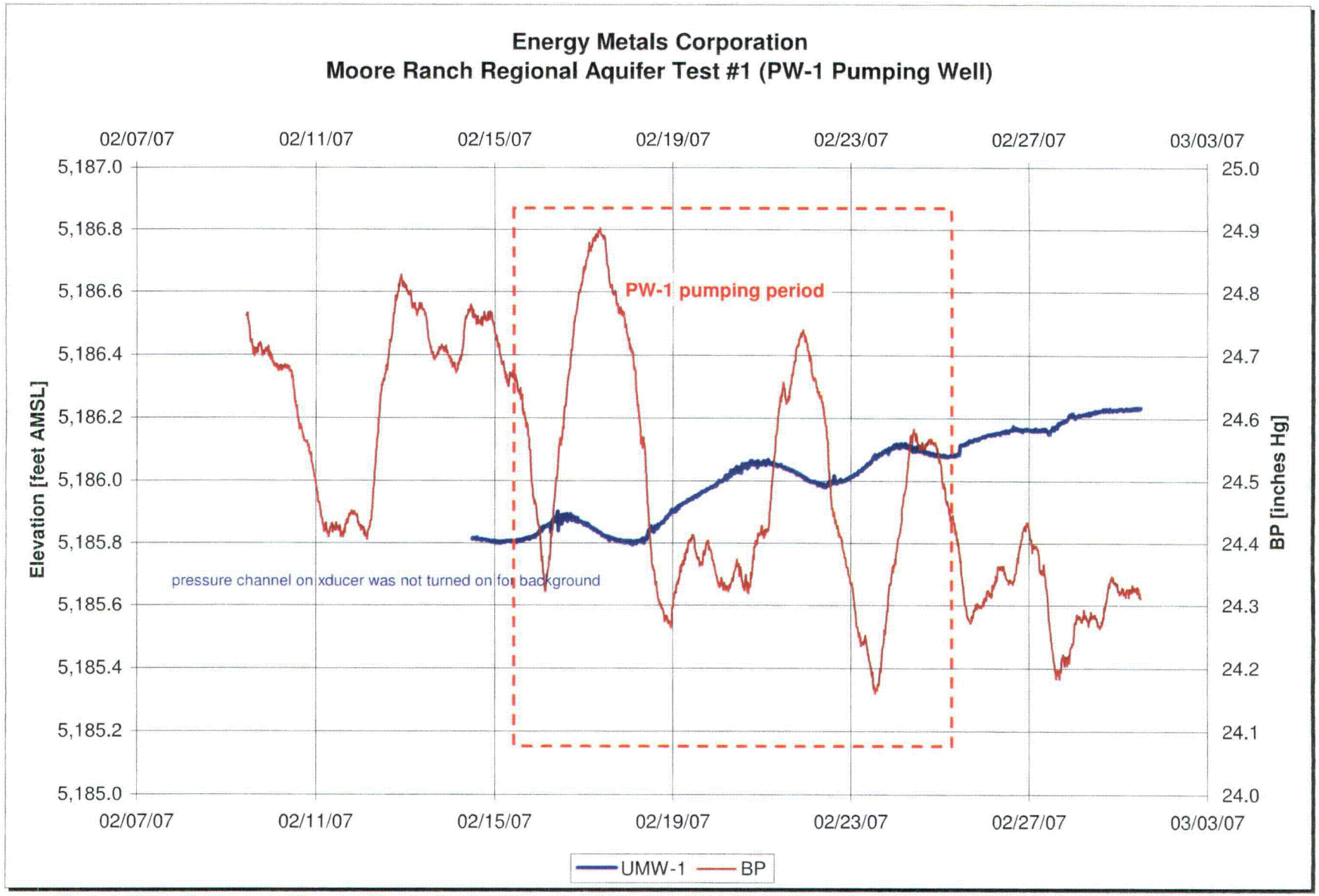

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,173.1
5,173.0
5,172.9
5,172.8
5,172.7
5,172.6
5,172.5
5,172.4
5,172.3
5,172.2
5,172.1
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
MW-11
BP

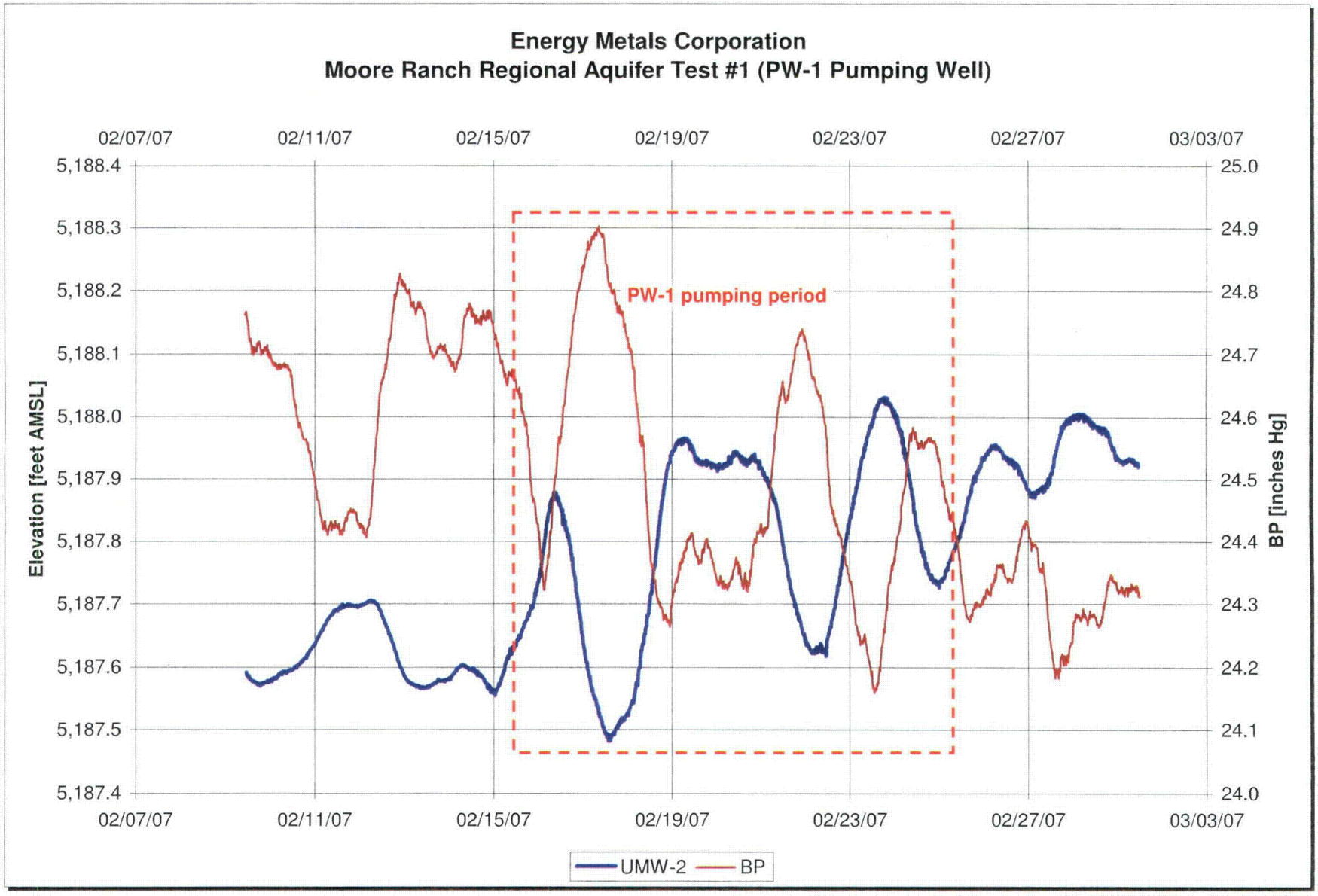

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,240.0
5,239.8
5,239.6
5,239.4
5,239.2
5,239.0
5,238.8
5,238.6
5,238.4
5,238.2
5,238.0
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
OMW-1
BP

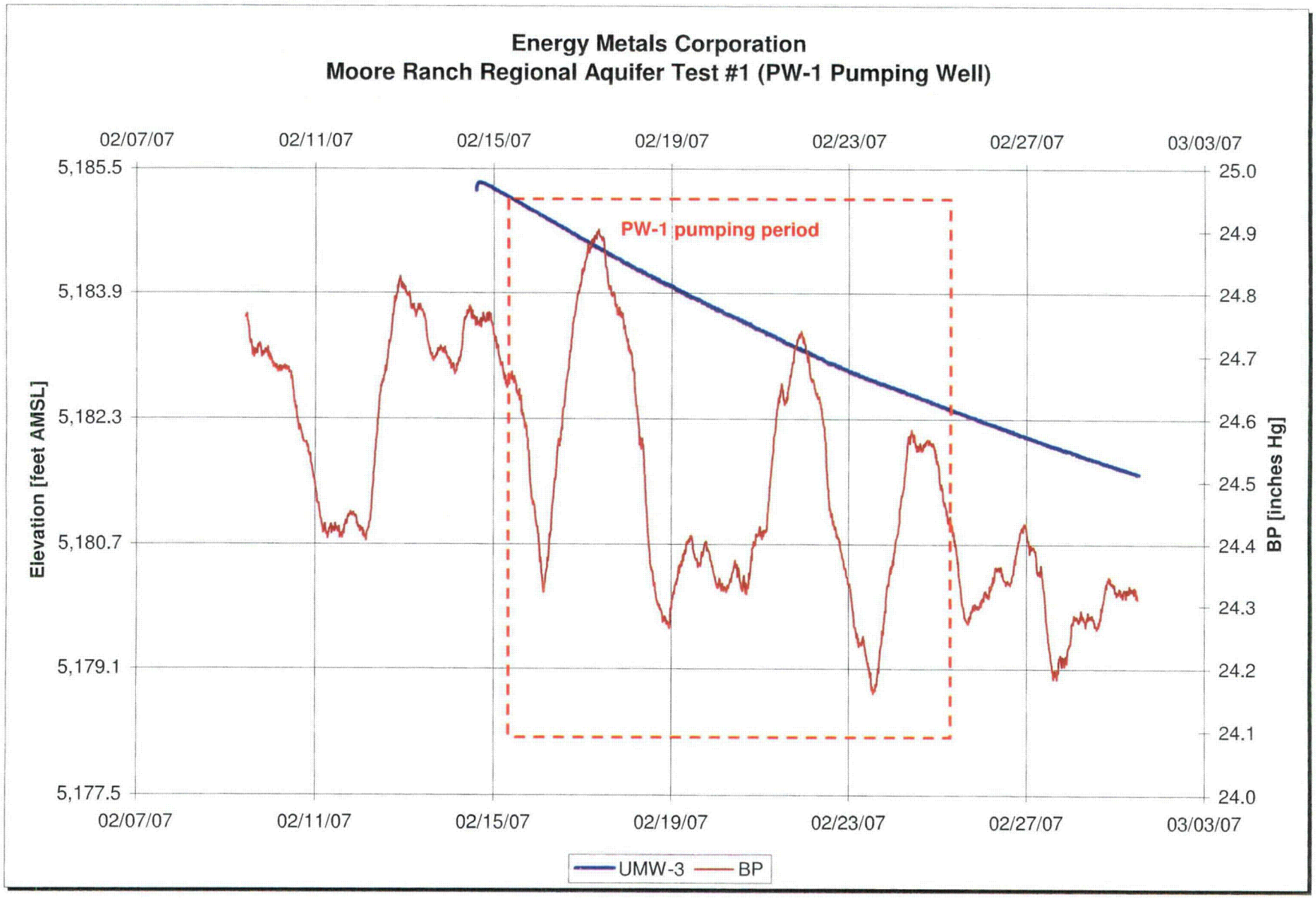

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,245.5
5,245.4
5,245.3
5,245.2
5,245.1
5,245.0
5,244.9
5,244.8
5,244.7
5,244.6
5,244.5
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping
OMW-2
BP

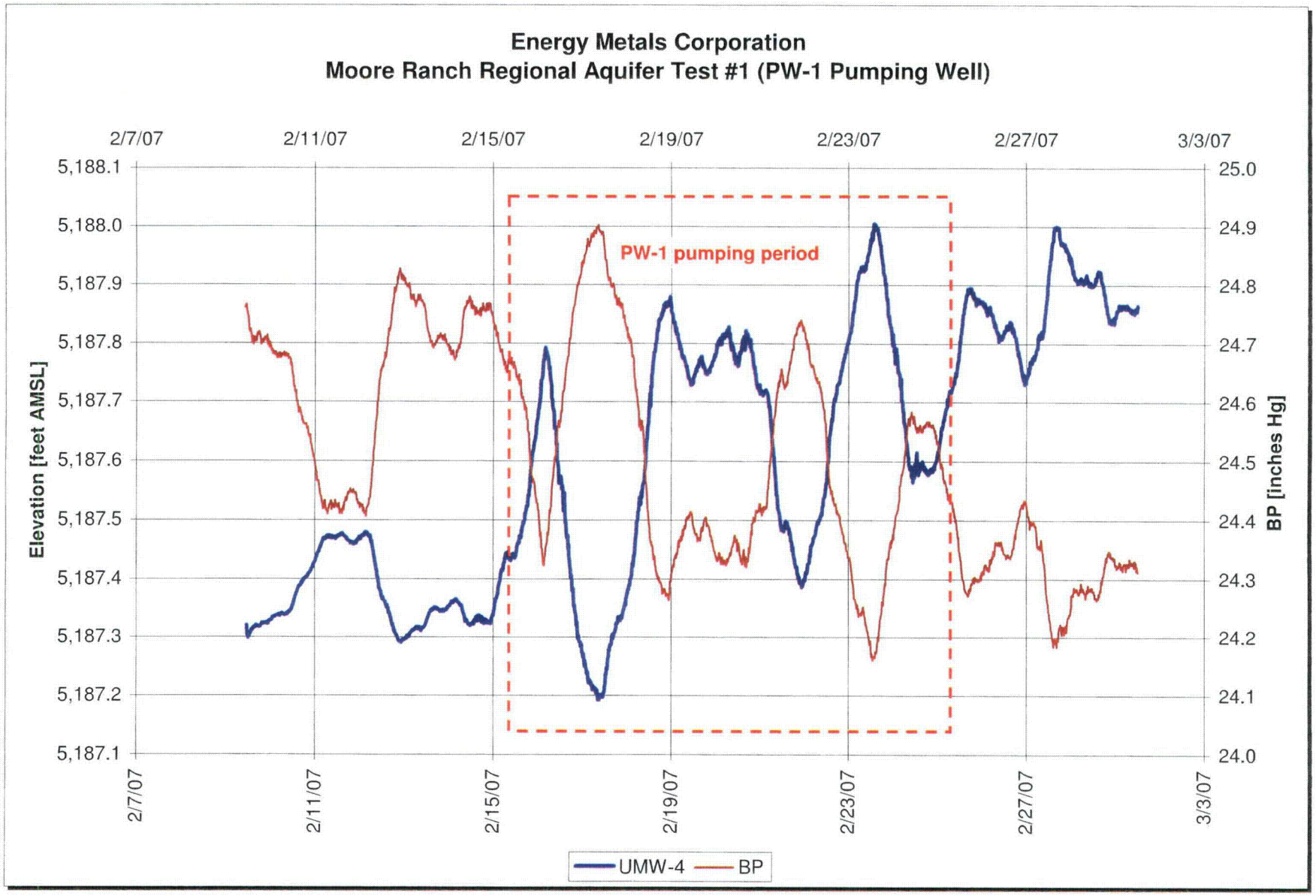

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,240.2
5,240.1
5,240.0
5,239.9
5,239.8
5,239.7
5,239.6
5,239.5
5,239.4
5,239.3
5,239.2
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
OMW-3
BP


Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,246.8
5,246.7
5,246.6
5,246.5
5,246.4
5,246.3
5,246.2
5,246.1
5,246.0
5,245.9
5,245.8
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
OMW-4
BP

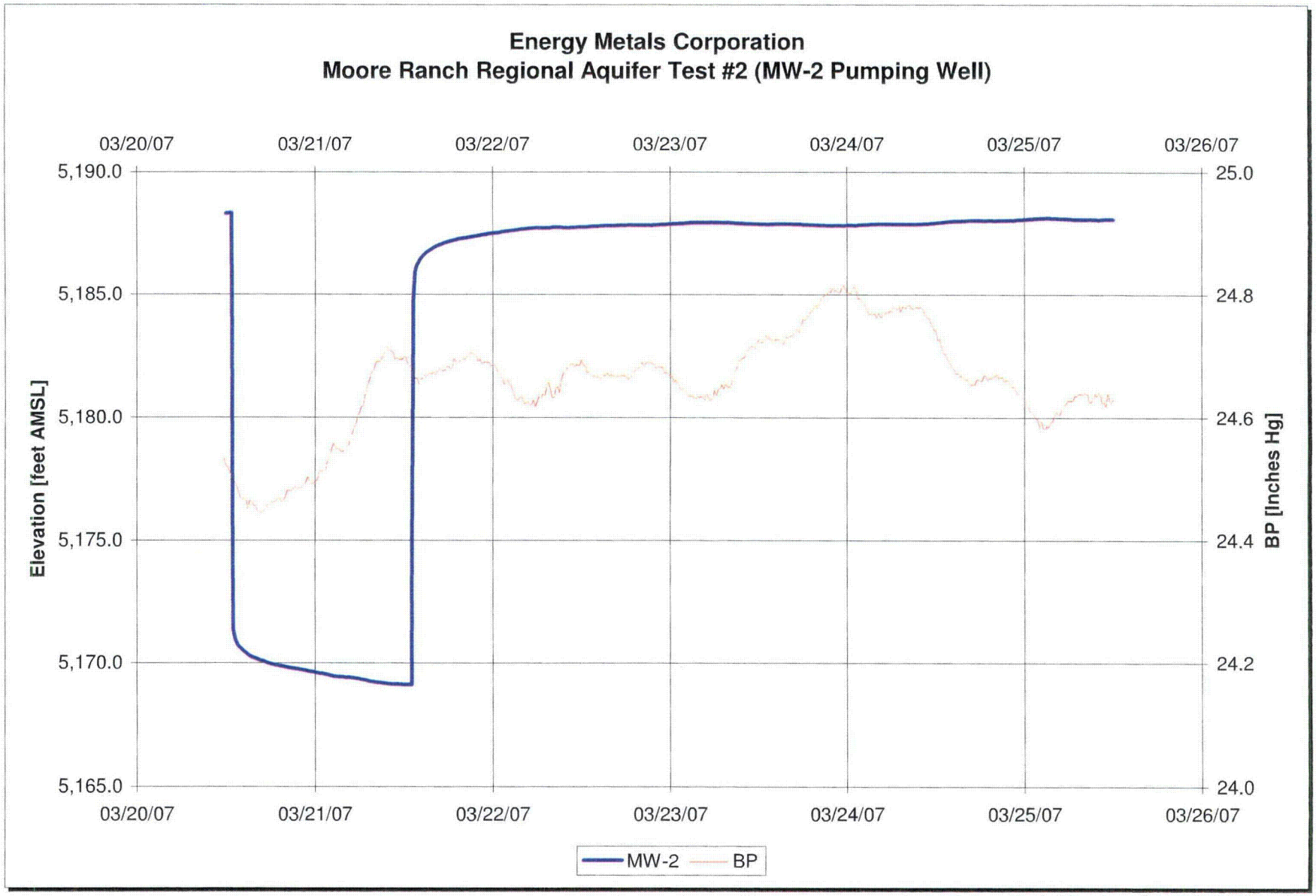

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,187.0
5,186.8
5,186.6
5,186.4
5,186.2
5,186.0
5,185.8
5,185.6
5,185.4
5,185.2
5,185.0
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
pressure channel on xducer was not turned on for background
UMW-1
BP

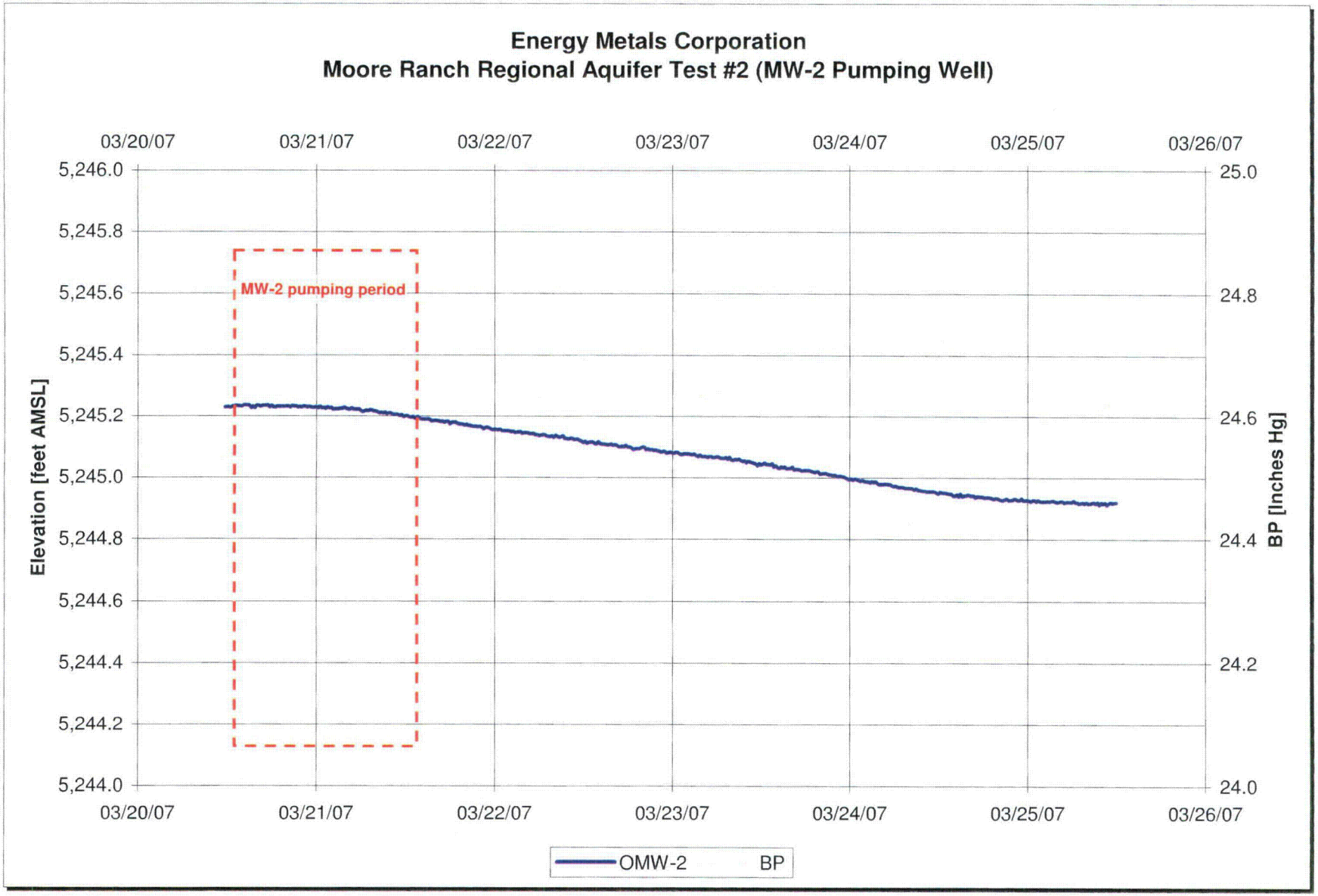

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,188.4
5,188.3
5,188.2
5,188.1
5,188.0
5,187.9
5,187.8
5,187.7
5,187.6
5,187.5
5,187.4
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
UMW-2
BP

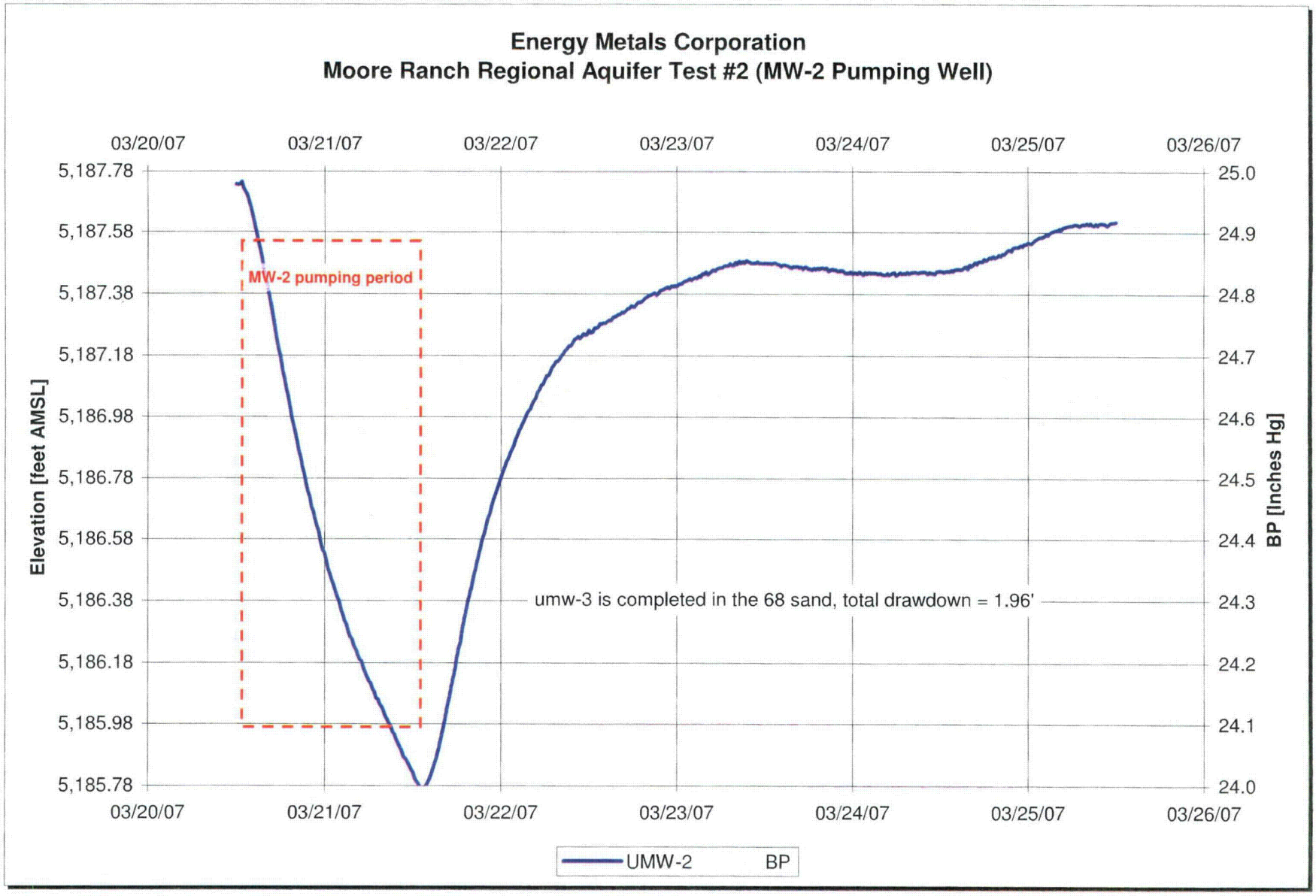

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
02/07/07
02/11/07
02/15/07
02/19/07
02/23/07
02/27/07
03/03/07
5,185.5
5,183.9
5,182.3
5,180.7
5,179.1
5,177.5
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
UMW-3
BP

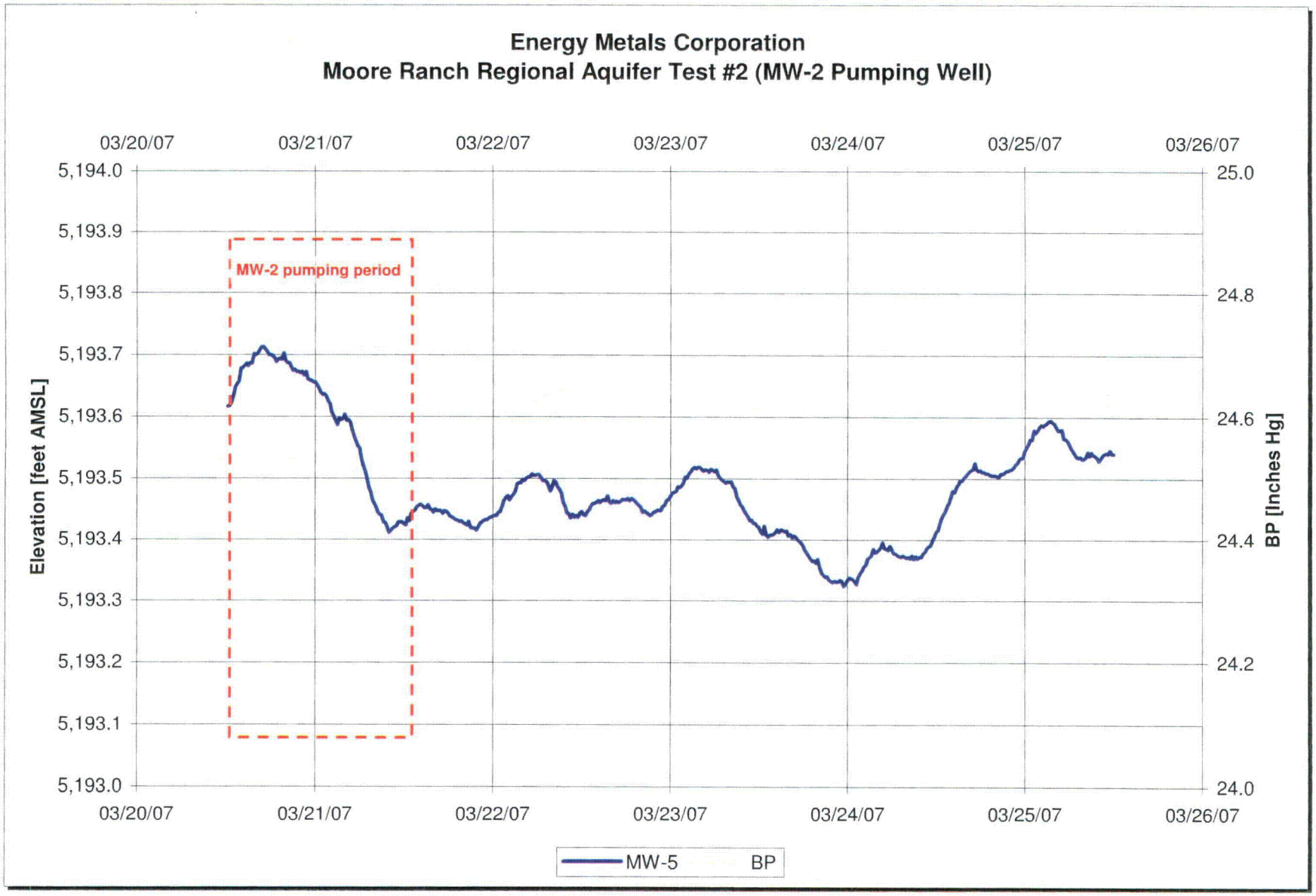

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #1 (PW-1 Pumping Well)
2/7/07
2/11/07
2/15/07
2/19/07
2/23/07
2/27/07
3/3/07
5,188.1
5,188.0
5,187.9
5,187.8
5,187.7
5,187.6
5,187.5
5,187.4
5,187.3
5,187.2
5,187.1
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
PW-1 pumping period
UMW-4
BP

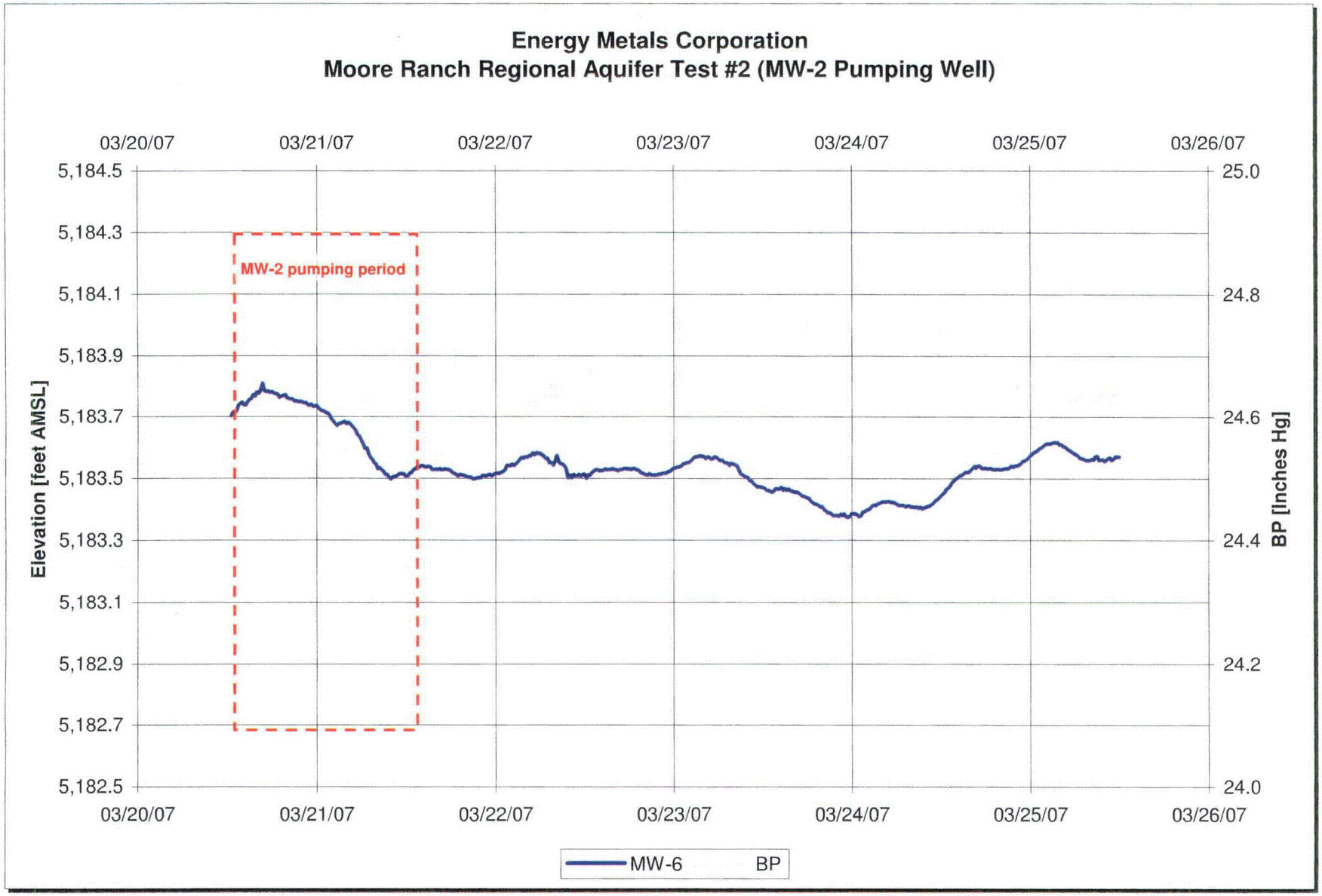
APPENDIX B
WATER PLOTS – TEST #2 (MW-2)

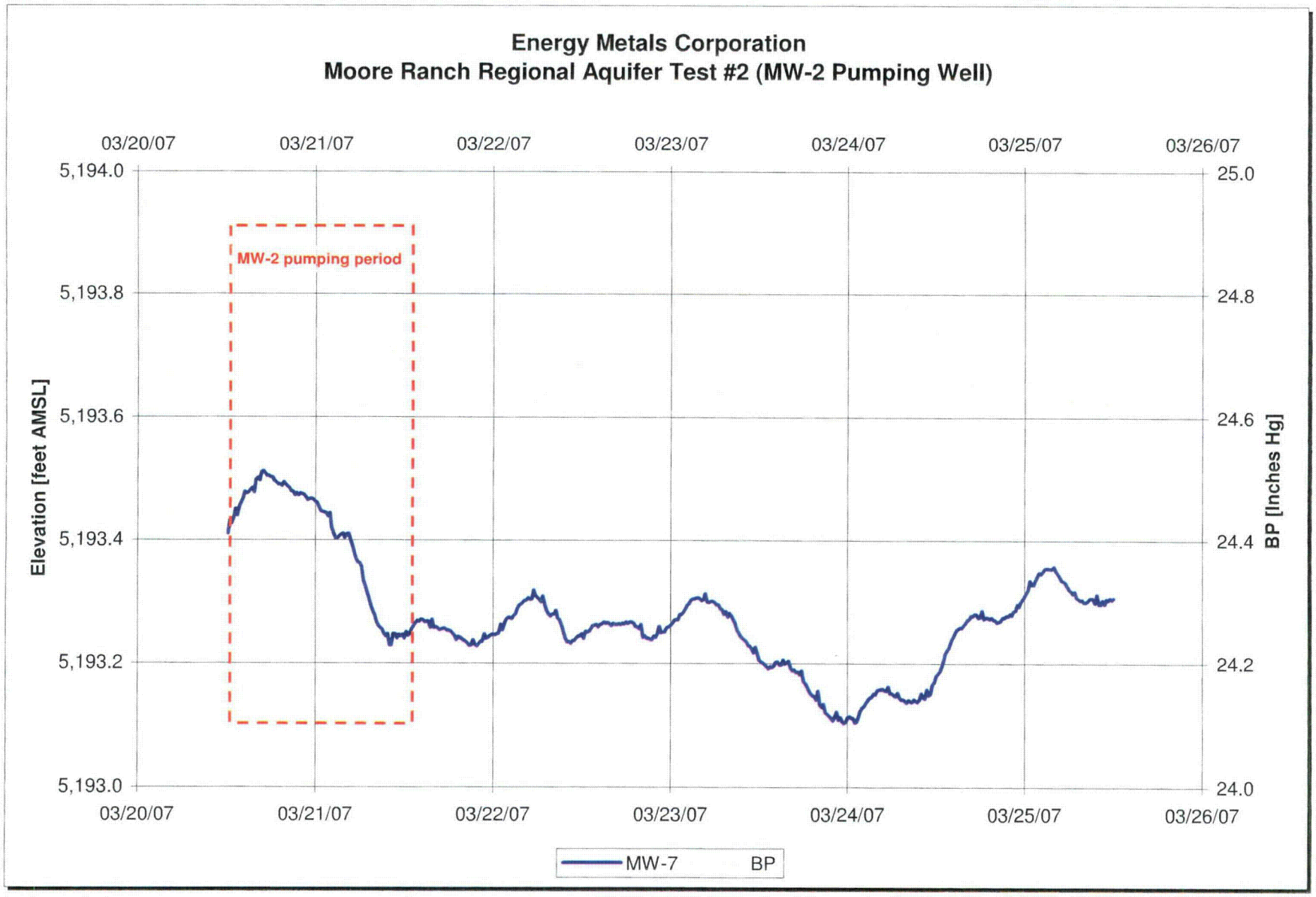

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #2 (MW-2 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
5,190.0
5,185.0
5,180.0
5,175.0
5,170.0
5,165.0
Elevation [feet AMSL]
25.0
24.8
24.6
24.4
24.2
24.0
BP [Inches Hg]
MW-2
BP

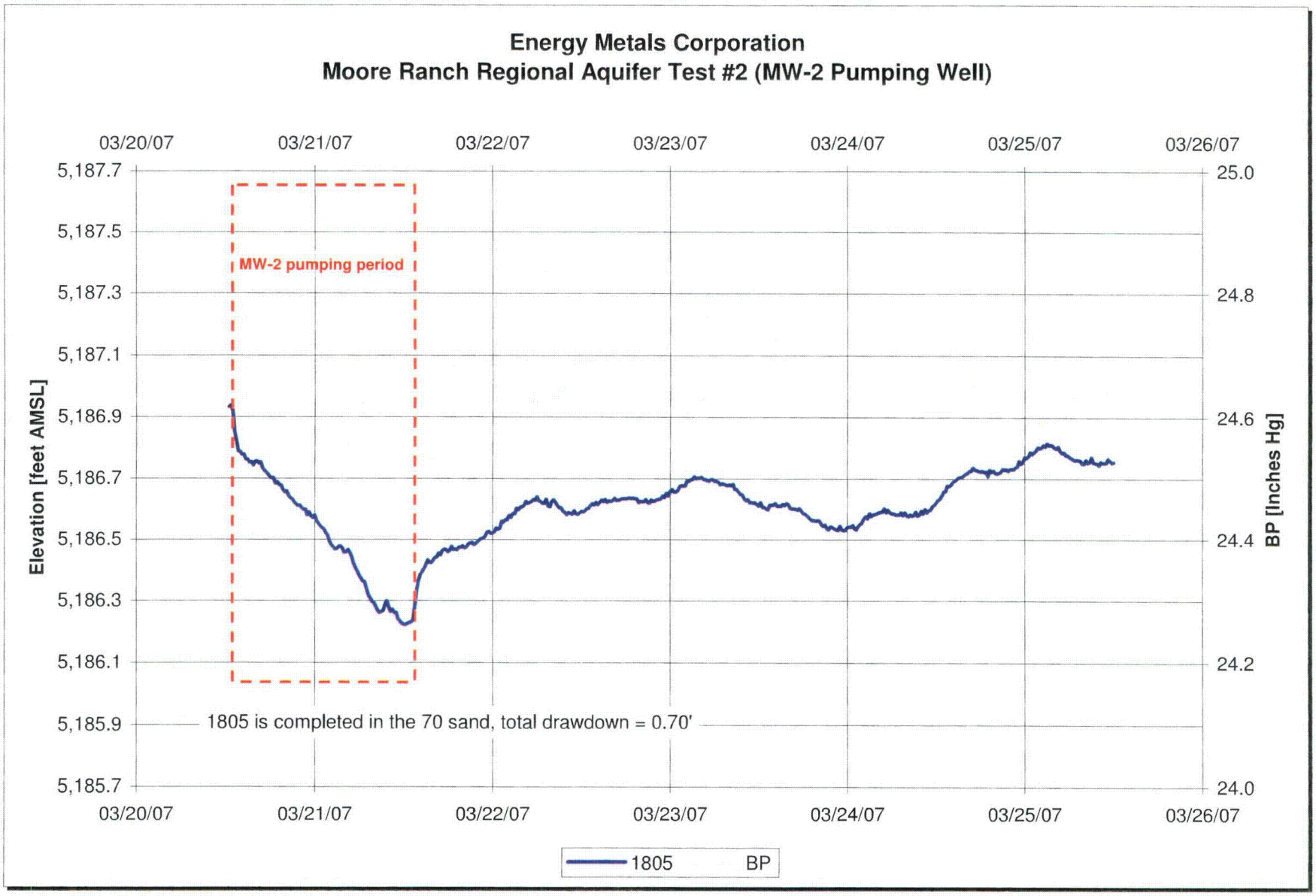

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #2 (MW-2 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
5,246.0
5,245.8
5,245.6
5,245.4
5,245.2
5,245.0
5,244.8
5,244.6
5,244.4
5,244.2
5,244.0
Elevation [feet AMSL]
25.0
24.8
24.6
24.4
24.2
24.0
BP [Inches Hg]
MW-2 pumping period
OMW-2
BP

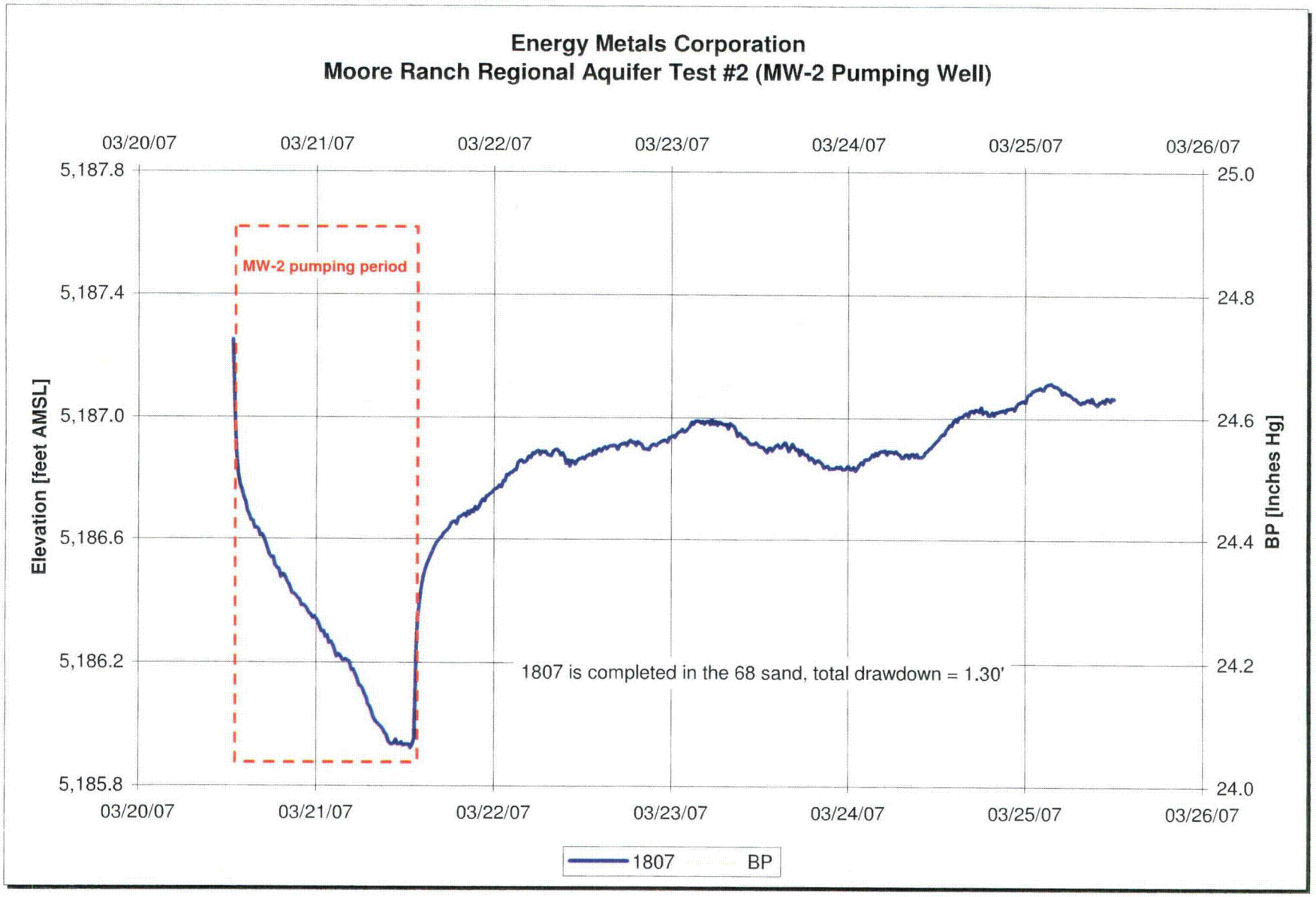

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #2 (MW-2 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
5,187.78
5,187.58
5,187.38
5,187.18
5,186.98
5,186.78
5,186.58
5,186.38
5,186.18
5,185.98
5,185.78
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [Inches Hg]
MW-2 pumping period
umw-3 is completed in the 68 sand, total drawdown = 1.96'
UMW-2
BP


Energy Metals Corporation
Moore Ranch Regional Aquifer Test #2 (MW-2 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
5,194.0
5,193.9
5,193.8
5,193.7
5,193.6
5,193.5
5,193.4
5,193.3
5,193.2
5,193.1
5,193.0
Elevation [feet AMSL]
25.0
24.8
24.6
24.4
24.2
24.0
BP [Inches Hg]
MW-2 pumping period
MW-5
BP

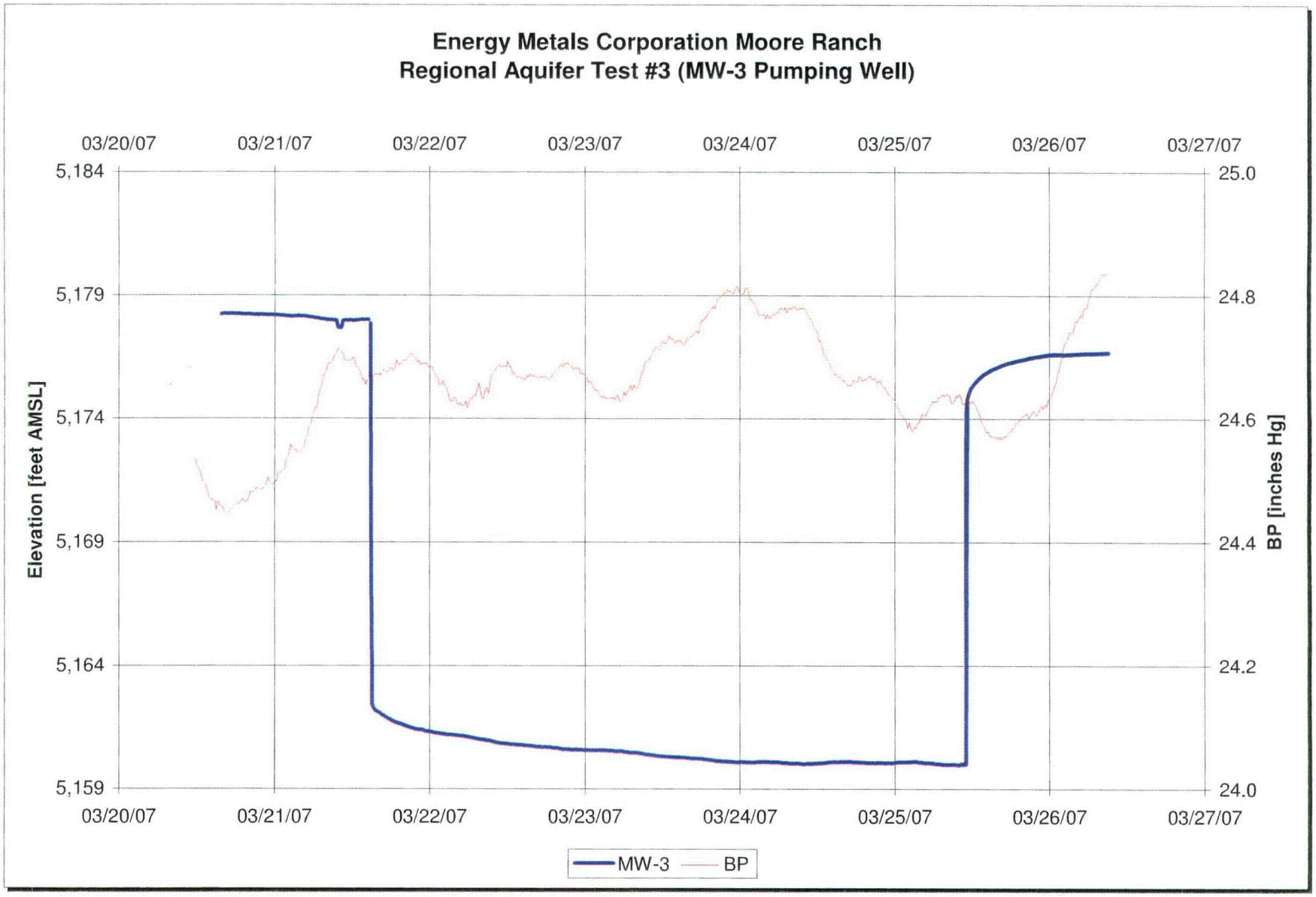

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #2 (MW-2 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
5,184.5
5,184.3
5,184.1
5,183.9
5,183.7
5,183.5
5,183.3
5,183.1
5,182.9
5,182.7
5,182.5
Elevation [feet AMSL]
25.0
24.8
24.6
24.4
24.2
24.0
BP [Inches Hg]
MW-2 pumping period
MW-6
BP

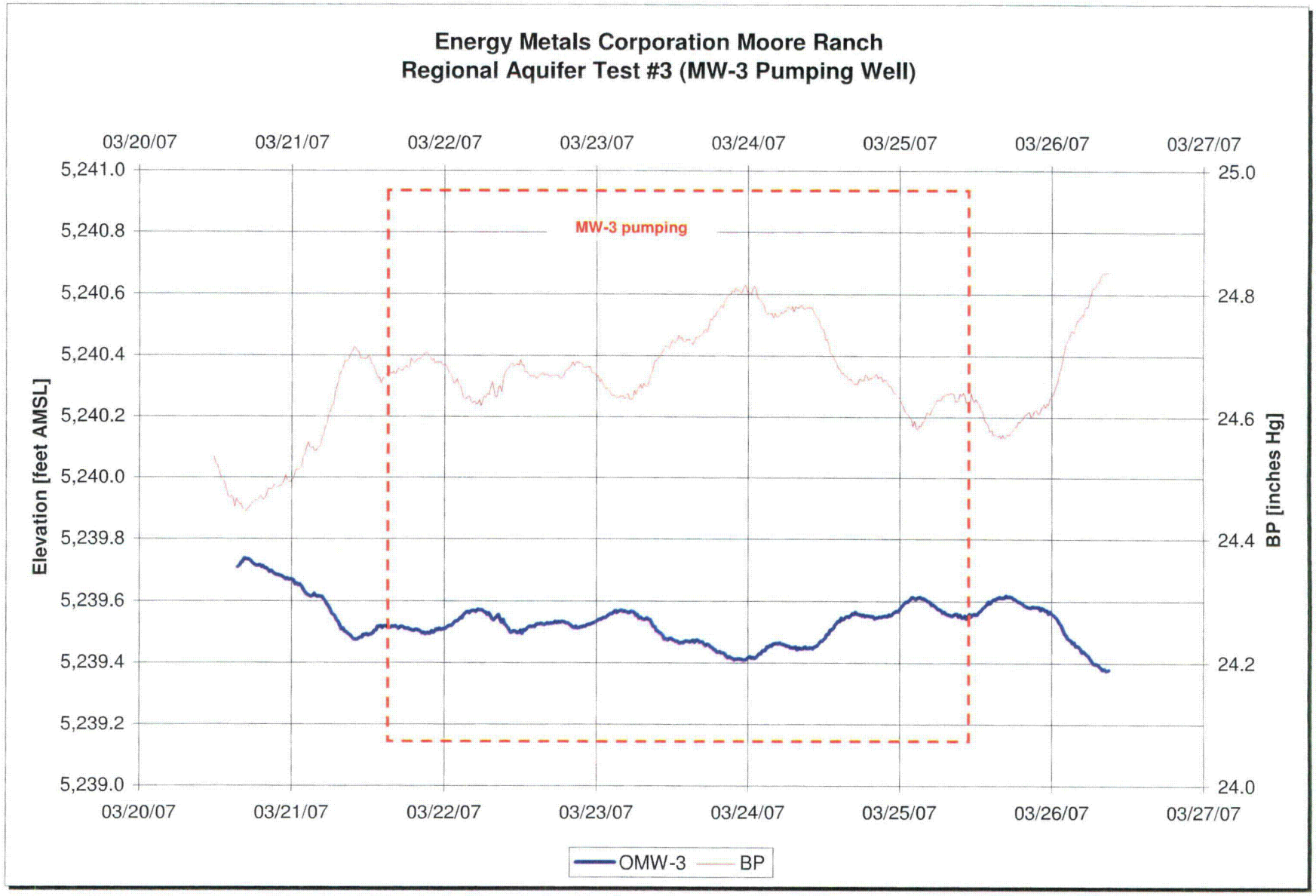

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #2 (MW-2 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
5,194.0
5,193.8
5,193.6
5,193.4
5,193.2
5,193.0
Elevation [feet AMSL]
25.0
24.8
24.6
24.4
24.2
24.0
BP [Inches Hg]
MW-2 pumping period
MW-7
BP

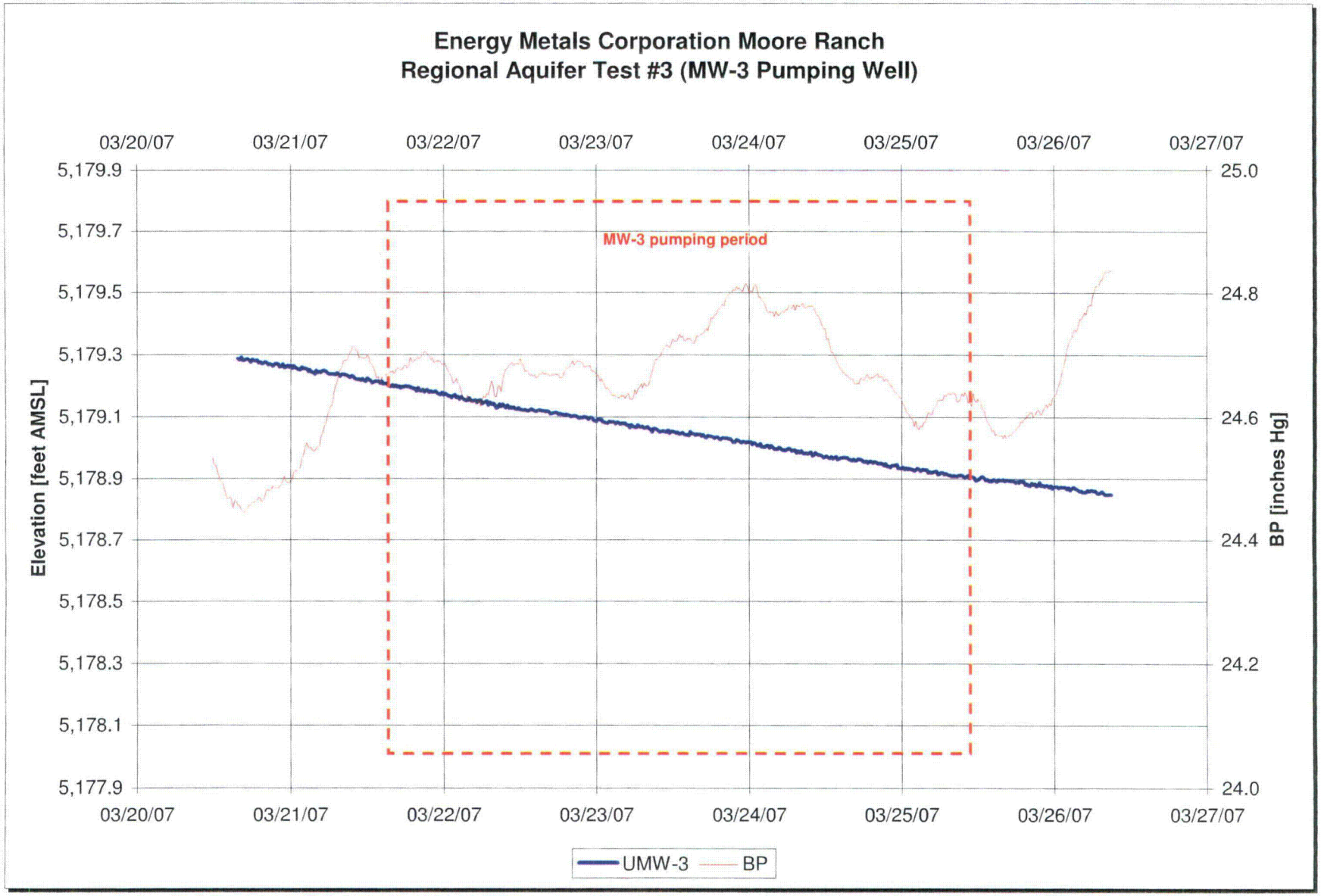

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #2 (MW-2 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
5,187.7
5,187.5
5,187.3
5,187.1
5,186.9
5,186.7
5,186.5
5,186.3
5,186.1
5,185.9
5,185.7
Elevation [feet AMSL]
25.0
24.8
24.6
24.4
24.2
24.0
BP [Inches Hg]
MW-2 pumping period
1805 is completed in the 70 sand, total drawdown = 0.70'
1805
BP

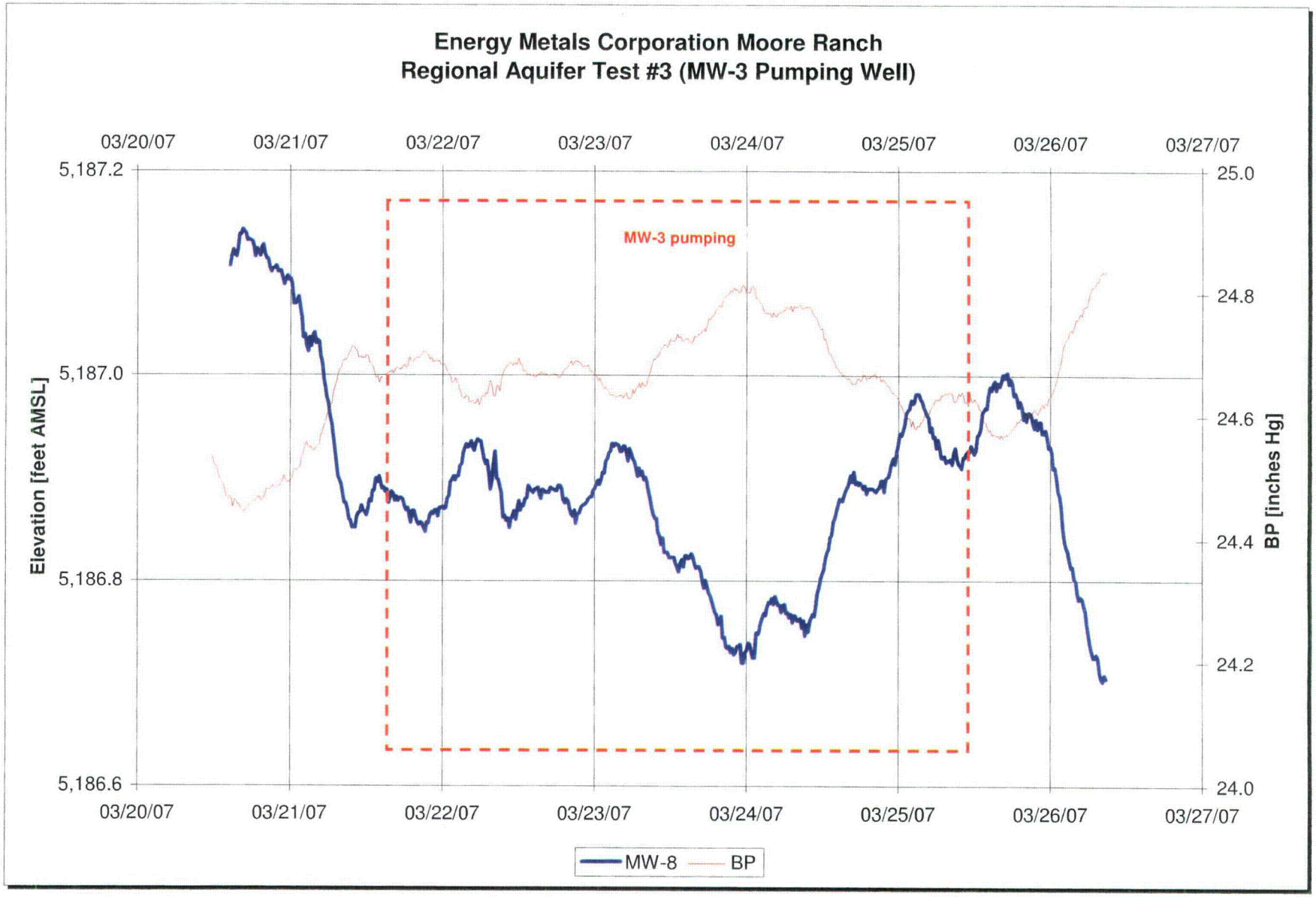

Energy Metals Corporation
Moore Ranch Regional Aquifer Test #2 (MW-2 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
5,187.8
5,187.4
5,187.0
5,186.6
5,186.2
5,185.8
Elevation [feet AMSL]
25.0
24.8
24.6
24.4
24.2
24.0
BP [Inches Hg]
MW-2 pumping period
1807 is completed in the 68 sand, total drawdown = 1.30'
1807
BP

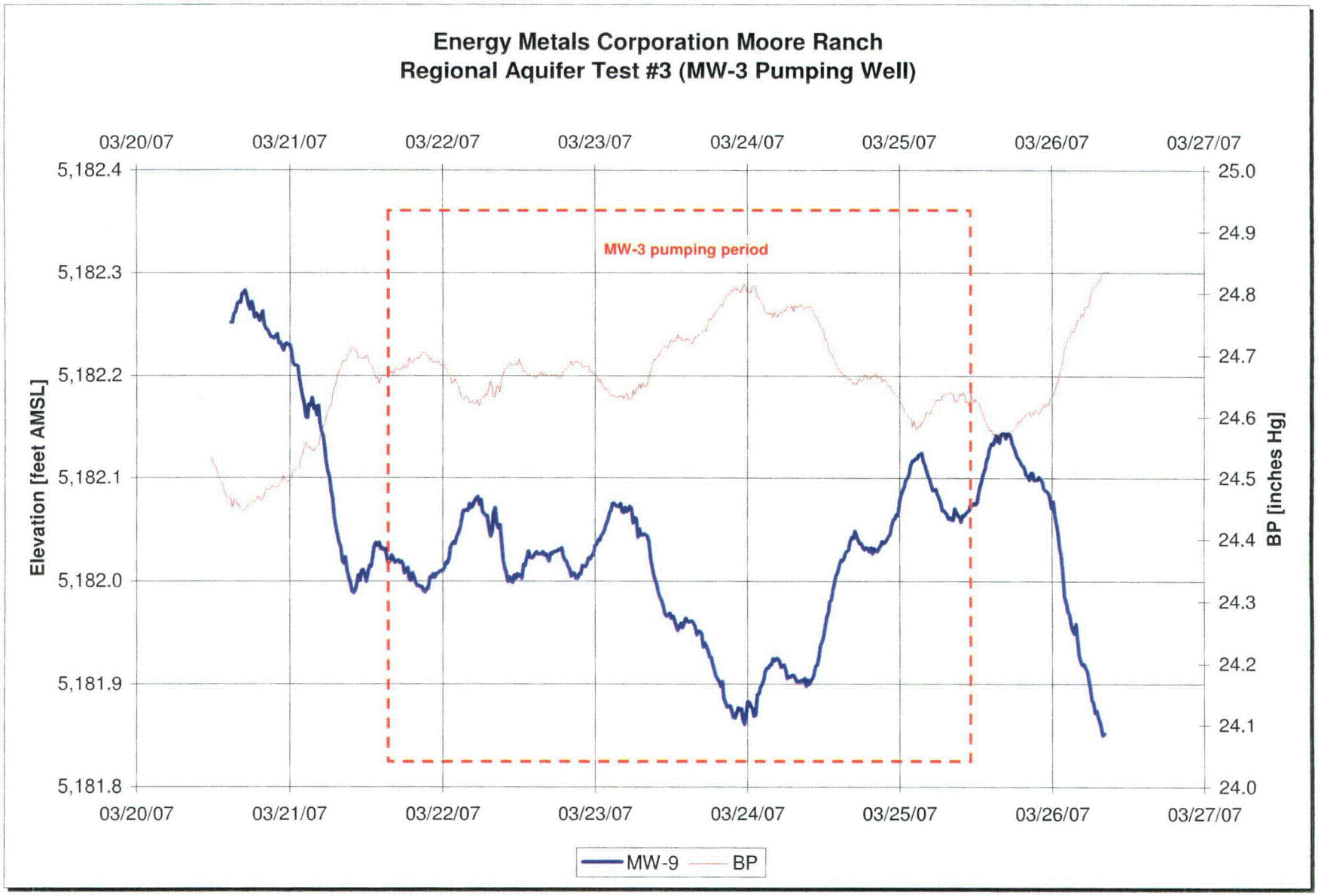
APPENDIX B
WATER PLOTS – TEST #3 (MW-3)

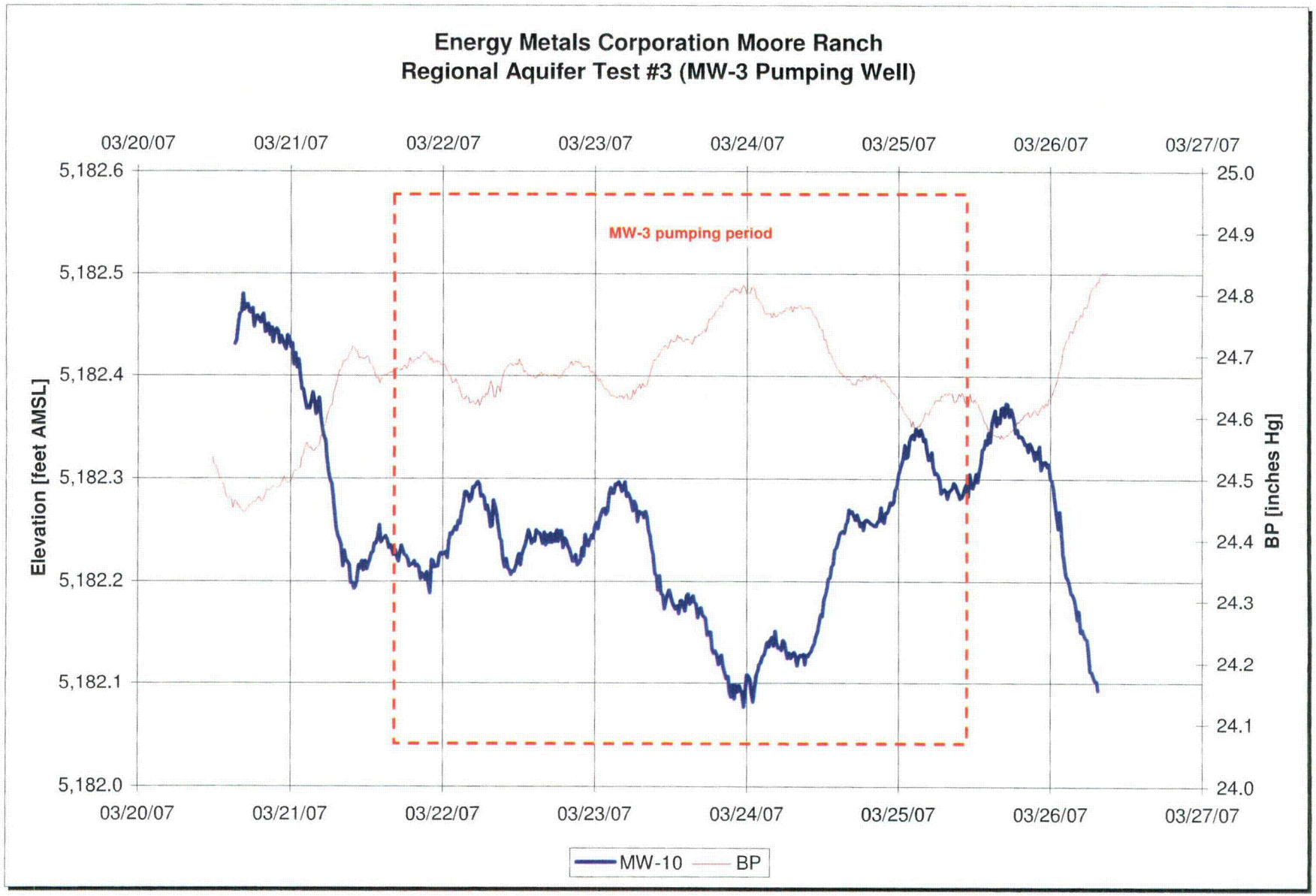

Energy Metals Corporation Moore Ranch
Regional Aquifer Test #3 (MW-3 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
03/27/07
5,184
5,179
5,174
5,169
5,164
5,159
Elevation [feet AMSL]
25.0
24.8
24.6
24.4
24.2
24.0
BP [inches Hg]
MW-3
BP

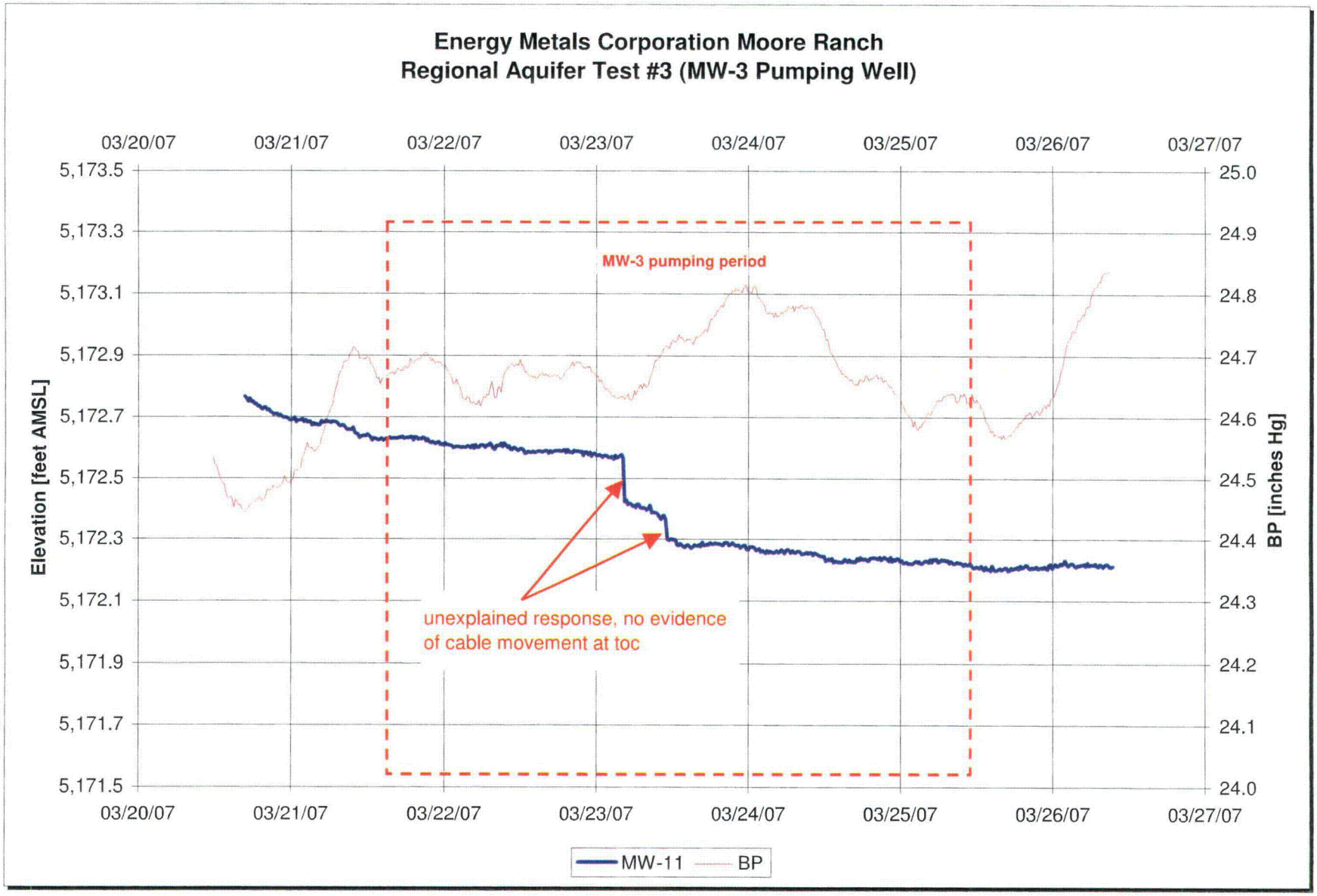

Energy Metals Corporation Moore Ranch
Regional Aquifer Test #3 (MW-3 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
03/27/07
5,241.0
5,240.8
5,240.6
5,240.4
5,240.2
5,240.0
5,239.8
5,239.6
5,239.4
5,239.2
5,239.0
Elevation [feet AMSL]
25.0
24.8
24.6
24.4
24.2
24.0
BP [inches Hg]
MW-3 pumping
OMW-3
BP


Energy Metals Corporation Moore Ranch
Regional Aquifer Test #3 (MW-3 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
03/27/07
5,179.9
5,179.7
5,179.5
5,179.3
5,179.1
5,178.9
5,178.7
5,178.5
5,178.3
5,178.1
5,177.9
Elevation [feet AMSL]
25.0
24.8
24.6
24.4
24.2
24.0
BP [inches Hg]
MW-3 pumping period
UMW-3
BP


Energy Metals Corporation Moore Ranch
Regional Aquifer Test #3 (MW-3 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
03/27/07
5,187.2
5,187.0
5,186.8
5,186.6
Elevation [feet AMSL]
25.0
24.8
24.6
24.4
24.2
24.0
BP [inches Hg]
MW-3 pumping
MW-8
BP


Energy Metals Corporation Moore Ranch
Regional Aquifer Test #3 (MW-3 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
03/27/07
5,182.4
5,182.3
5,182.2
5,182.1
5,182.0
5,181.9
5,181.8
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
MW-3 pumping period
MW-9
BP


Energy Metals Corporation Moore Ranch
Regional Aquifer Test #3 (MW-3 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
03/27/07
5,182.6
5,182.5
5,182.4
5,182.3
5,182.2
5,182.1
5,182.0
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
MW-3 pumping period
MW-10
BP


Energy Metals Corporation Moore Ranch
Regional Aquifer Test #3 (MW-3 Pumping Well)
03/20/07
03/21/07
03/22/07
03/23/07
03/24/07
03/25/07
03/26/07
03/27/07
5,173.5
5,173.3
5,173.1
5,172.9
5,172.7
5,172.5
5,172.3
5,172.1
5,171.9
5,171.7
5,171.5
Elevation [feet AMSL]
25.0
24.9
24.8
24.7
24.6
24.5
24.4
24.3
24.2
24.1
24.0
BP [inches Hg]
MW-3 pumping period
unexplained response, no evidence
of cable movement at toc
MW-11
BP

APPENDIX C
TYPE CURVE MATCHES

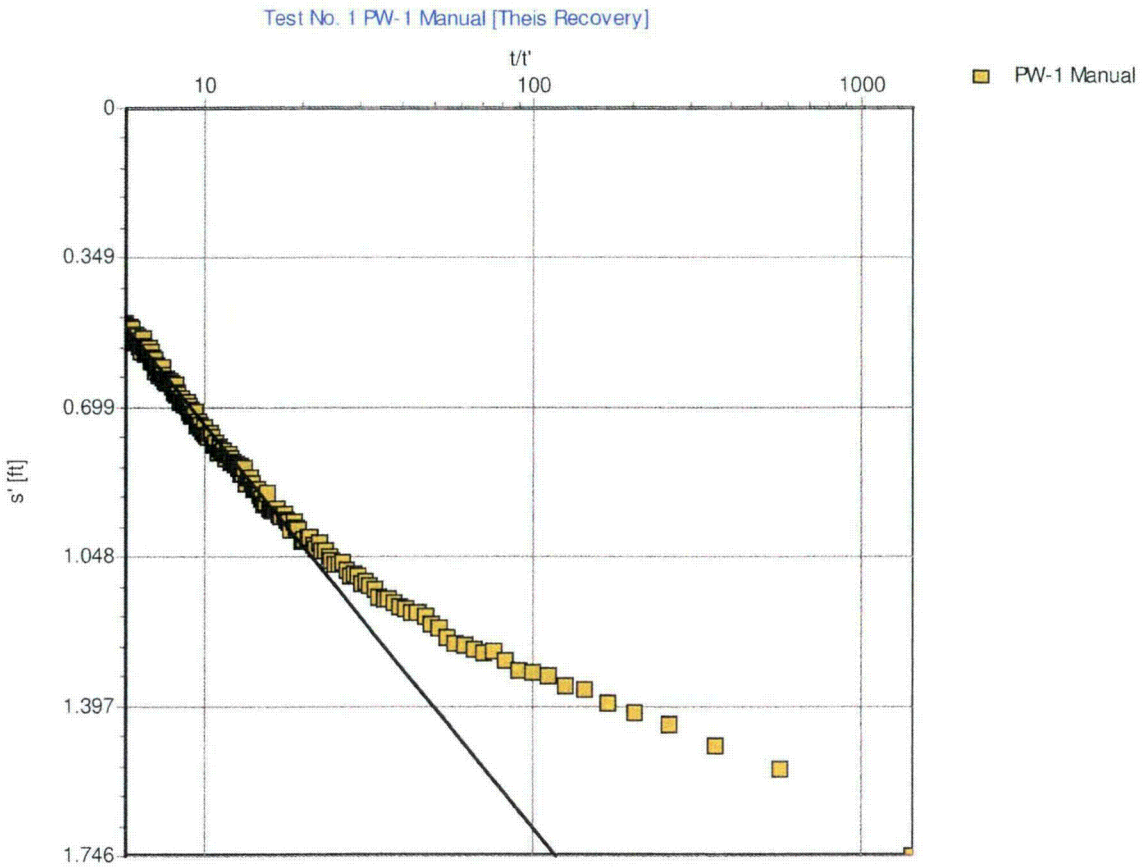
Petrotek
10288 West Chatfield Ave., Ste 201
Littleton, Colorado 80127
303-290-9414
www.petrotek.com

Pumping Test Analysis Report

Project: EMC Moore Ranch

Number: 312-4-5

Client: Energy Metals Corporation



Pumping Test: **Test No. 1 PW-1 Manual**

Analysis Method: **Theis Recovery**

Analysis Results:	Transmissivity:	6.06E+2 [ft²/d]	Conductivity:	8.19E+0 [ft/d]

Test parameters:	Pumping Well:	PW-1 Manual	Aquifer Thickness:	74 [ft]
	Casing radius:	0.1875 [ft]	Unconfined Aquifer	
	Screen length:	70 [ft]		
	Boring radius:	0.333333 [ft]		
	Discharge Rate:	16.290086 [U.S. gal/min]		
	Pumping Time	14285 [min]		

Comments:

Evaluated by: KRS/HPD

Evaluation Date: 8/16/2007

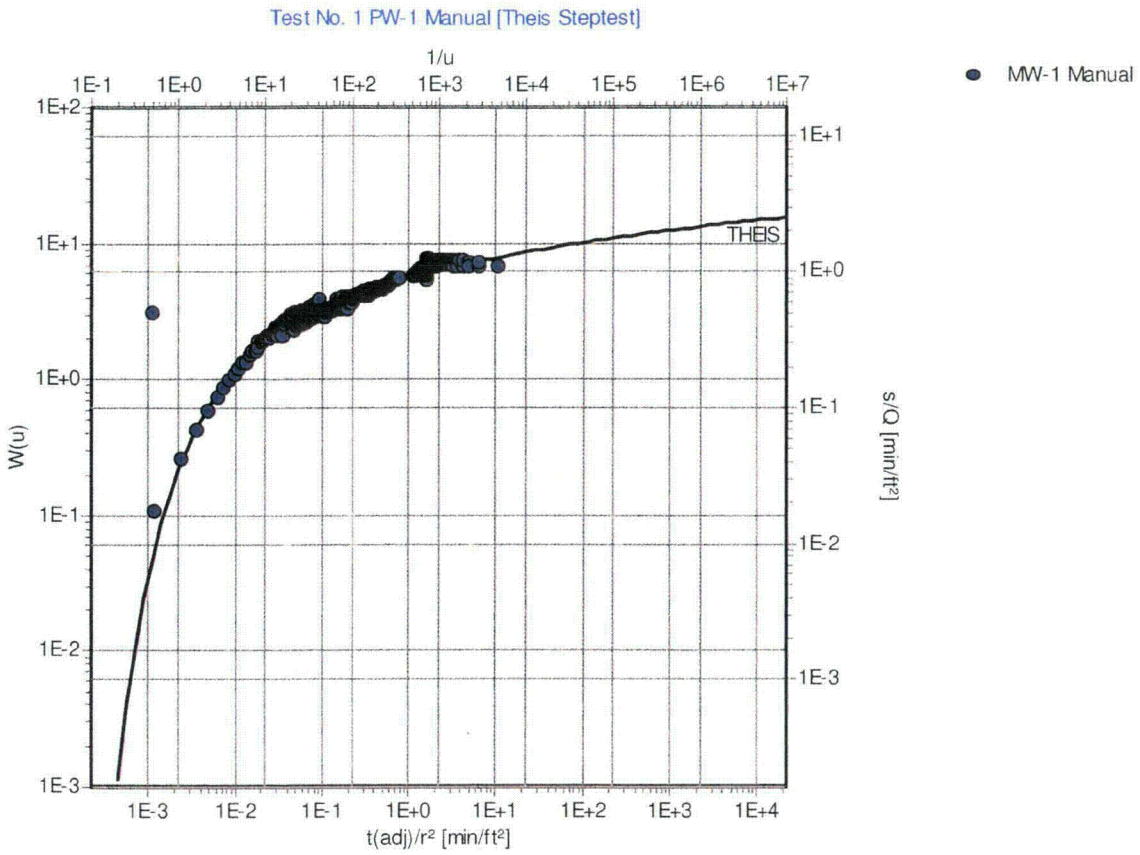
Petrotek
10288 West Chatfield Ave., Ste 201
Littleton, Colorado 80127
303-290-9414
www.petrotek.com

Pumping Test Analysis Report

Project: EMC Moore Ranch

Number: 312-4-5

Client: Energy Metals Corporation



Pumping Test: **Test No. 1 PW-1 Manual**

Analysis Method: **Theis Steptest**

Analysis Results:	Transmissivity:	7.07E+2 [ft²/d]	Conductivity:	9.55E+0 [ft/d]
	Storativity:	4.39E-3		
Test parameters:	Pumping Well:	PW-1 Manual	Aquifer Thickness:	74 [ft]
	Casing radius:	0.1875 [ft]	Confined Aquifer	
	Screen length:	70 [ft]		
	Boring radius:	0.333333 [ft]		
	Discharge Rate:	16.290086 [U.S. gal/min]		

Comments:

Evaluated by: KRS/HPD

Evaluation Date: 8/17/2007

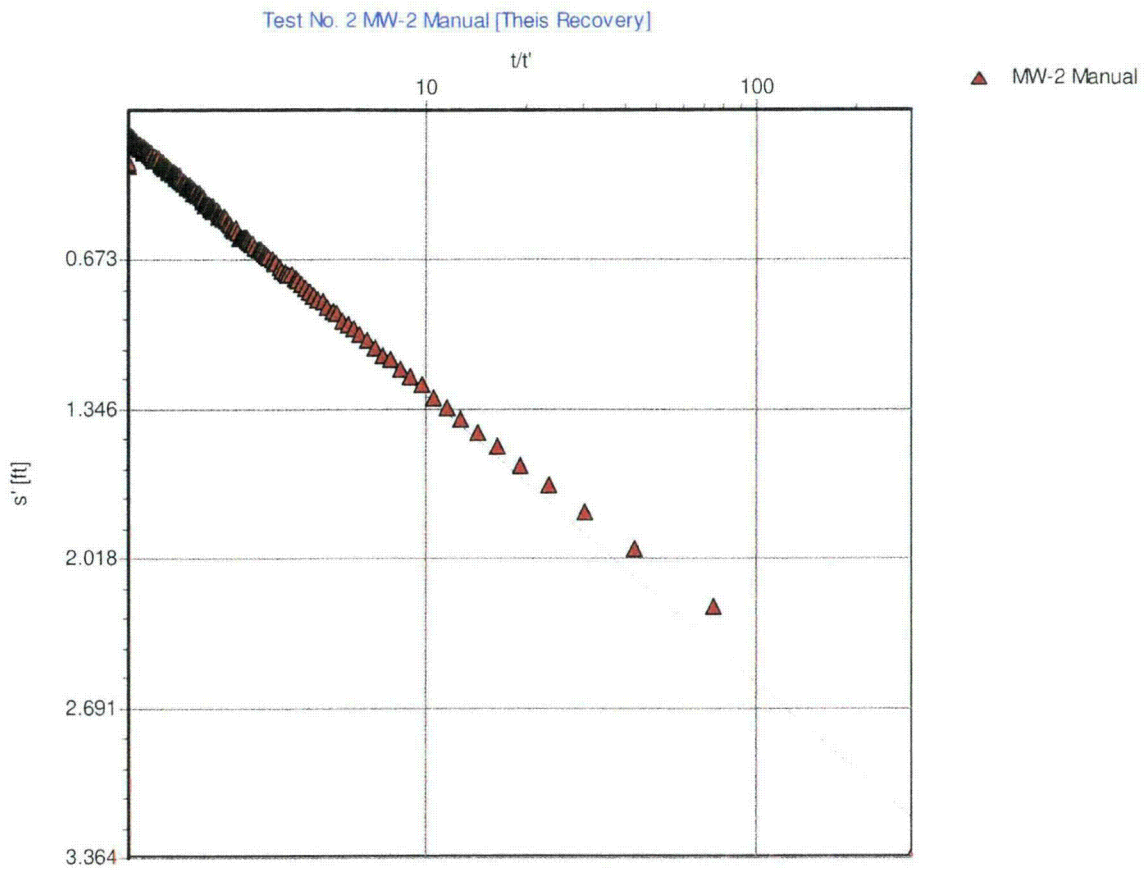
Petrotek
10288 West Chatfield Ave., Ste 201
Littleton, Colorado 80127
303-290-9414
www.petrotek.com

Pumping Test Analysis Report

Project: EMC Moore Ranch

Number: 312-4-5

Client: Energy Metals Corporation



Pumping Test: **Test No. 2 MW-2 Manual**

Analysis Method: **Theis Recovery**

Analysis Results:	Transmissivity:	7.11E+2 [ft²/d]	Conductivity:	7.33E+0 [ft/d]

Test parameters:	Pumping Well:	MW-2	Aquifer Thickness:	97 [ft]
	Casing radius:	0.1875 [ft]	Confined Aquifer	
	Screen length:	65 [ft]		
	Boring radius:	0.33333333 [ft]		
	Discharge Rate:	26.04 [U.S. gal/min]		
	Pumping Time	1465 [min]		

Comments:

Evaluated by: KRS/HPD

Evaluation Date: 8/17/2007

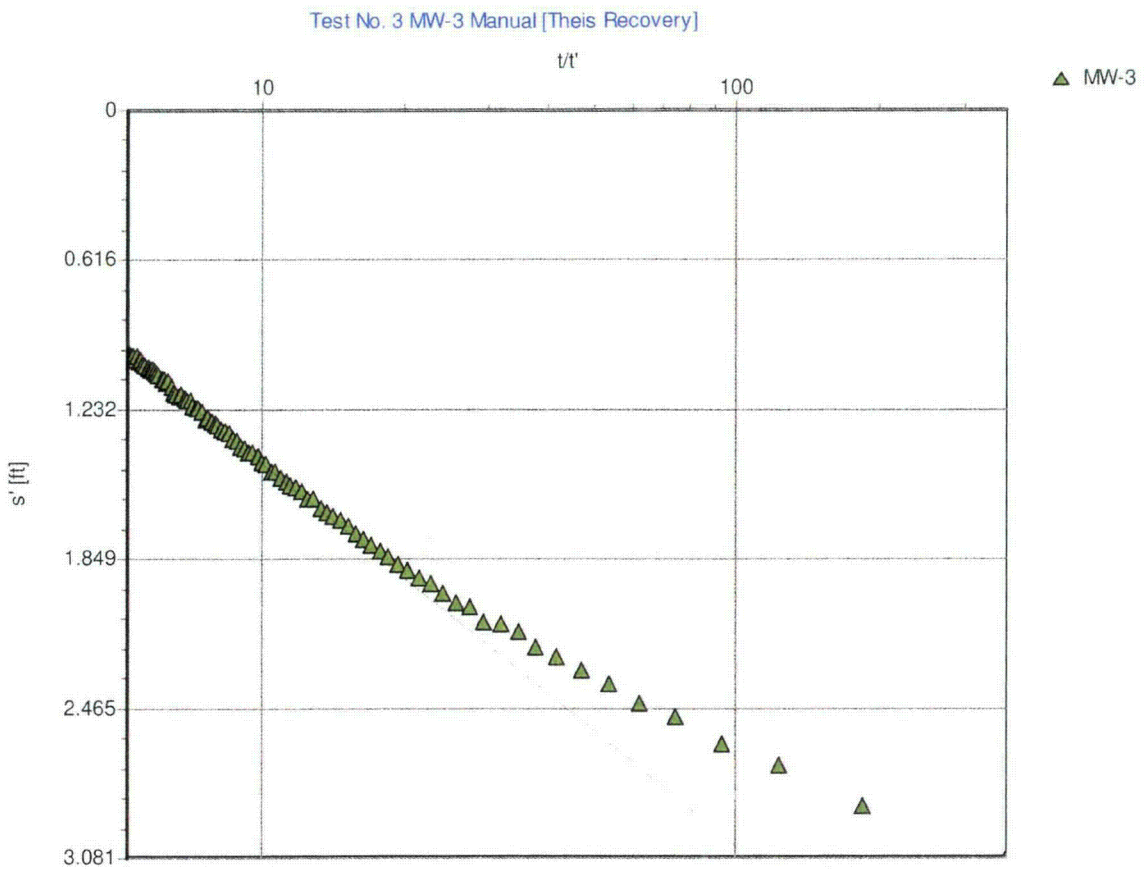
Petrotek
10288 West Chatfield Ave., Ste 201
Littleton, Colorado 80127
303-290-9414
www.petrotek.com

Pumping Test Analysis Report

Project: EMC Moore Ranch

Number: 312-4-5

Client: Energy Metals Corporation



Pumping Test: **Test No. 3 MW-3 Manual**

Analysis Method: **Theis Recovery**

Analysis Results:	Transmissivity:	3.21E+2 [ft²/d]	Conductivity:	4.46E+0 [ft/d]

Test parameters:	Pumping Well:	MW-3	Aquifer Thickness:	72 [ft]
	Casing radius:	0.1875 [ft]	Confined Aquifer	
	Screen length:	48 [ft]		
	Boring radius:	0.33333333 [ft]		
	Discharge Rate:	14.4 [U.S. gal/min]		
	Pumping Time	5535 [min]		

Comments:

Evaluated by: KRS/HPD

Evaluation Date: 7/26/2007

APPENDIX C

MILDOS Modeling Output

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METSET: DATA: MRANCH.RAD 07/10/07

JOINT FREQUENCY IN PERCENT, DIRECTION INDICATES WHERE WIND IS FROM FREQWS=0.18990,0.25630,0.34520,0.10040,0.05560,0.00000

MPH	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTALS
STABILITY CLASS 1																	
1.5	0.2200	0.2600	0.1900	0.2300	0.1800	0.2100	0.2800	0.2400	0.2800	0.2300	0.2100	0.2700	0.2700	0.3500	0.2700	0.2600	3.9500
5.5	0.1700	0.1300	0.0800	0.0500	0.0600	0.0800	0.1100	0.1200	0.1500	0.1200	0.1500	0.1700	0.2200	0.2300	0.2300	0.1700	2.2300
10.0	0.0100	0.0000	0.0100	0.0000	0.0000	0.0100	0.0100	0.0100	0.0100	0.0100	0.0300	0.0400	0.0400	0.0500	0.0300	0.0200	0.2800
15.5	0.0100	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0200	0.0200	0.0000	0.0000	0.0000	0.0000	0.0500
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0200	0.0000	0.0000	0.0000	0.0000	0.0000	0.0200
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	0.4100	0.3800	0.2800	0.2800	0.2400	0.3000	0.4000	0.3700	0.4400	0.3600	0.4300	0.5000	0.5300	0.6300	0.5300	0.4500	6.5300
STABILITY CLASS 2																	
1.5	0.0500	0.0600	0.0200	0.0200	0.0500	0.0400	0.0700	0.0800	0.0800	0.0400	0.0400	0.0600	0.1100	0.0800	0.0800	0.0600	0.9400
5.5	0.1500	0.0900	0.0600	0.0300	0.0300	0.0900	0.1100	0.1200	0.1000	0.0800	0.0600	0.1100	0.1900	0.1600	0.1500	0.1100	1.6400
10.0	0.0800	0.0300	0.0100	0.0000	0.0000	0.0200	0.0300	0.0200	0.0200	0.0100	0.0500	0.1500	0.1100	0.1200	0.0900	0.0800	0.6200
15.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0100	0.0300	0.0100	0.0100	0.0000	0.0000	0.0600
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0100	0.0200	0.0000	0.0000	0.0000	0.0100	0.0400
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	0.2800	0.1800	0.0900	0.0500	0.0900	0.1500	0.2100	0.2200	0.2000	0.1300	0.1700	0.3700	0.4200	0.3700	0.3200	0.2600	3.5000
STABILITY CLASS 3																	
1.5	0.0400	0.0600	0.0400	0.0400	0.0500	0.0900	0.0800	0.1200	0.0900	0.0300	0.0300	0.0700	0.2400	0.1800	0.1200	0.0600	1.3400
5.5	0.2200	0.1500	0.0500	0.0400	0.0400	0.1400	0.1800	0.1800	0.1600	0.0800	0.0800	0.1100	0.3100	0.2300	0.2300	0.2100	2.4100
10.0	0.5000	0.1300	0.0300	0.0100	0.0200	0.0800	0.1700	0.1600	0.1000	0.1100	0.1500	0.4200	0.4000	0.3100	0.3200	0.4600	3.3700
15.5	0.1700	0.0100	0.0000	0.0000	0.0000	0.0000	0.0100	0.0100	0.0100	0.0100	0.0700	0.2000	0.1000	0.0500	0.1000	0.1200	0.8600
21.5	0.1200	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0900	0.1400	0.0200	0.0100	0.0200	0.0600	0.4600
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	1.0500	0.3500	0.1200	0.0900	0.1100	0.3100	0.4400	0.4700	0.3600	0.2300	0.4200	0.9400	1.0700	0.7800	0.7900	0.9100	8.4400
STABILITY CLASS 4																	
1.5	0.4000	0.2900	0.2300	0.3100	0.5100	0.6800	0.5200	0.3800	0.2900	0.1900	0.1300	0.3100	1.0500	0.8400	0.4500	0.3700	6.9500
5.5	1.0200	0.6300	0.3900	0.2400	0.4900	1.0500	0.8500	0.6100	0.5000	0.3700	0.4300	1.2800	3.4600	1.7900	1.1500	0.9200	15.1800
10.0	1.9100	1.0000	0.2400	0.1000	0.3700	1.4000	1.0500	0.8100	0.6300	0.4800	0.9600	2.3800	3.7500	1.1400	1.4100	1.9200	20.0500
15.5	1.0500	0.3700	0.0600	0.0000	0.0300	0.2800	0.2900	0.1800	0.1600	0.1500	0.7900	2.5100	1.0200	0.2800	0.6500	1.2500	9.0700
21.5	0.4800	0.1900	0.0200	0.0000	0.0000	0.0300	0.1200	0.0500	0.0400	0.0400	0.5200	2.0000	0.2800	0.0700	0.3700	0.8300	5.0400
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	4.8600	2.4800	0.9400	0.6500	1.4000	3.4400	2.8300	2.0300	1.6200	1.2300	2.8300	8.9800	9.5600	4.1200	4.0300	5.2900	56.2900
STABILITY CLASS 5																	
1.5	0.1300	0.1000	0.1000	0.1400	0.2200	0.3000	0.2600	0.3000	0.1800	0.1500	0.0900	0.1900	0.4900	0.3700	0.1600	0.1100	3.2900
5.5	0.1100	0.1300	0.0400	0.0400	0.1600	0.4900	0.3700	0.3400	0.2500	0.1500	0.0700	0.2300	1.1400	0.3800	0.1600	0.1100	4.1700
10.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	0.2400	0.2300	0.1400	0.1800	0.3800	0.7900	0.6300	0.6400	0.4300	0.3000	0.1600	0.4200	1.6300	0.7500	0.3200	0.2200	7.4600
STABILITY CLASS 6																	
1.5	0.0900	0.0700	0.0900	0.0800	0.1200	0.1400	0.1300	0.1600	0.1500	0.1600	0.1800	0.2300	0.3400	0.3100	0.1500	0.1200	2.5200
5.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21.5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ALL	0.0900	0.0700	0.0900	0.0800	0.1200	0.1400	0.1300	0.1600	0.1500	0.1600	0.1800	0.2300	0.3400	0.3100	0.1500	0.1200	2.5200
ALL	6.9300	3.6900	1.6600	1.3300	2.3300	5.1300	4.6400	3.8900	3.2000	2.4100	4.1900	11.4400	13.5500	6.9600	6.1400	7.2500	84.7400

INDIVIDUAL RECEPTOR LOCATION DATA, 19 LOCATIONS INPUT THIS RUN

I	LOCATION NAMES	X(KM)	Y(KM)	Z(M)	DIST(KM)	TYPE	I	LOCATION NAMES	X(KM)	Y(KM)	Z(M)	DIST(KM)	TYPE
1	N PB	0.00	2.60	0.00	2.60	10	11	SW PB	-2.85	-2.85	0.00	4.03	10
2	NNE PB	1.09	2.63	0.00	2.85	10	12	WSW PB	-3.02	-1.25	0.00	3.27	10
3	NE PB	1.96	1.96	0.00	2.77	10	13	W PB	-2.77	0.00	0.00	2.77	10
4	ENE PB	3.64	1.50	0.00	3.94	10	14	WNW PB	-2.17	0.90	0.00	2.35	10
5	E PB	6.71	0.00	0.00	6.71	10	15	NW PB	-1.42	1.47	0.00	2.01	10
6	ESE PB	4.72	-1.96	0.00	5.11	10	16	NNW PB	-1.09	2.63	0.00	2.85	10
7	SE PB	2.31	-2.31	0.00	3.27	10	17	Nearest Resident Eas	4.50	0.00	0.00	4.50	10
8	SSE PB	1.19	-2.87	0.00	3.11	10	18	Nearest Resident Sou	0.00	-13.40	0.00	13.40	10
9	S PB	0.00	-2.85	0.00	2.85	10	19	Wright	26.05	18.93	0.00	32.20	10
10	SSW PB	-1.51	-3.64	0.00	3.94	10							

MISCELLANEOUS INPUTABLE PARAMETER VALUES

DMM	DMA	TSTART	FFORI	FHAYI	FFORP	FHAYP	FPR(1)	FPR(2)	FPR(3)	ACTRAT
100.0	100.0	2007.00	0.50	0.50	0.50	0.50	0.00	0.00	0.00	2.50

IPACT EQUALS 0, 0, 0, 0, 0,

JC EQUALS 1, 1, 1, 1, 0, 0, 1, 0, 1, 0

TIME STEP DATA....	STEP NAMES	LENGTH, YRS	IFTODO
	1	100.00	1

XRHO EQUALS 1.5, 2.5, 3.5, 4.5, 7.5, 15.0, 25.0, 35.0, 45.0, 55.0, 65.0, 75.0,

HDP EQUALS 50.0

POPULATION DISTRIBUTION

KILOMETERS	N 0.0	NNE 22.5	NE 45.0	ENE 67.5	E 90.0	ESE 112.5	SE 135.0	SSE 157.5	S 180.0	SSW 202.5	SW 225.0	WSW 247.5	W 270.0	WNW 292.5	NW 315.0	NNW 337.5
1.0- 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.0- 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.0- 4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.0- 5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.0-10.0	0	0	0	0	9	0	3	0	0	0	0	2	0	0	0	0
10.0-20.0	8	11	3	0	0	3	3	0	5	3	0	3	8	0	0	0
20.0-30.0	33	5	3	3	0	0	5	0	5	0	0	0	3	3	0	0
30.0-40.0	88	88	1408	503	1007	69	68	125	136	30	29	599	29	29	30	0
40.0-50.0	112	112	109	113	113	91	146	242	190	38	38	38	0	38	71	112
50.0-60.0	137	147	116	132	587	117	263	273	188	67	46	53	63	38	110	136
60.0-70.0	161	205	624	224	435	131	303	194	164	115	177	83	39	269	113	148
70.0-80.0	3682	1901	679	3139	1207	107	153	1701	2763	133	341	98	49	37	78	164
1.0-80.0	4221	2469	2942	4114	3354	518	944	2535	3451	386	631	876	170	414	402	560

TOTAL 1-80 KM POPULATION IS 27987 PERSONS

NUMBER OF SOURCES= 5

NO.	KM X	KM Y	M Z	KM2 AREA	U-238	Th-230	CI/YEAR Ra-226	Pb-210	Rn-222	ID	PSIZE SET	M/SEC EXIT VEL	SOURCE NAME
1	0.00	0.00	16.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E+02	1001	1	3.30E-01	Main Plant
2	0.00	0.00	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-01	1002	1	0.00E+00	New Well
3	-0.42	0.07	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+02	1003	1	0.00E+00	MU1
4	0.89	-0.53	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+02	1004	1	0.00E+00	MU2
5	0.47	-0.64	0.00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+02	1005	1	0.00E+00	MU3

INPUT TAILS ACTIVITIES, PCI/G

SET	URANIUM	THORIUM	RADIUM	LEAD
1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AMAD AND FRACTIONAL DISTRIBUTION

SET	1.5	3.0	7.7	54.0
1	0.000	1.000	0.000	0.000
2	1.000	0.000	0.000	0.000
3	0.000	0.000	0.300	0.700

PARTICULATE SOURCE STRENGTH MULTIPLIERS BY TIME STEP, 1 TIME STEP(S) USED FOR THIS RUN

SOURCE NUMBER	TSTEP 1 100.00YRS	TSTEP 2 5.00YRS	TSTEP 3 5.00YRS	TSTEP 4 5.00YRS	TSTEP 5 5.00YRS	TSTEP 6 5.00YRS	TSTEP 7 5.00YRS	TSTEP 8 5.00YRS	TSTEP 9 5.00YRS	TSTEP10 5.00YRS
1	1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2	1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3	1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4	1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5	1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

RADON SOURCE STRENGTH MULTIPLIERS BY TIME STEP, 1 TIME STEP(S) USED FOR THIS RUN

SOURCE NUMBER	TSTEP 1 100.00YRS	TSTEP 2 5.00YRS	TSTEP 3 5.00YRS	TSTEP 4 5.00YRS	TSTEP 5 5.00YRS	TSTEP 6 5.00YRS	TSTEP 7 5.00YRS	TSTEP 8 5.00YRS	TSTEP 9 5.00YRS	TSTEP10 5.00YRS
1	1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2	1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3	1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4	1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5	1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

CONCENTRATION DATA FOR THE N DIRECTION, THETA EQUALS 0.0 DEGREES

TOTAL AIR CONCENTRATIONS, PCI/M3, AND WL

XRHO, KM	U-238	Th-230	Ra-226	Pb-210	Rn-222	Po-218	Pb-214	Bi-214	Pb-210	WL
1.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.080E+01	1.037E+01	5.179E+00	2.462E+00	2.369E-06	4.612E-
2.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.619E+00	5.544E+00	3.628E+00	2.327E+00	3.834E-06	3.279E-
3.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E+00	3.582E+00	2.685E+00	2.010E+00	4.965E-06	2.480E-
4.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.635E+00	2.630E+00	2.125E+00	1.731E+00	5.888E-06	1.994E-
7.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.461E+00	1.461E+00	1.300E+00	1.162E+00	7.633E-06	1.243E-
15.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.578E-01	6.581E-01	6.319E-01	5.978E-01	8.860E-06	6.112E-
25.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.661E-01	3.663E-01	3.624E-01	3.546E-01	9.109E-06	3.537E-
35.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.494E-01	2.495E-01	2.492E-01	2.472E-01	9.115E-06	2.443E-
45.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.864E-01	1.865E-01	1.869E-01	1.865E-01	9.024E-06	1.835E-
55.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.474E-01	1.475E-01	1.480E-01	1.481E-01	8.914E-06	1.455E-
65.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.209E-01	1.210E-01	1.215E-01	1.217E-01	8.792E-06	1.195E-
75.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.017E-01	1.018E-01	1.022E-01	1.025E-01	8.661E-06	1.006E-

GROUND SURFACE CONCENTRATIONS, PCI/M2

XRHO, KM	U-238	Th-230	Ra-226	Pb-210	Rn-222	Po-218	Pb-214	Bi-214	Pb-210
1.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.213E+00	8.213E+00	8.213E+00	4.935E+00
2.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.391E+00	4.391E+00	4.391E+00	7.966E+00
3.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.837E+00	2.837E+00	2.837E+00	1.034E+01
4.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.083E+00	2.083E+00	2.083E+00	1.226E+01
7.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.157E+00	1.157E+00	1.157E+00	1.590E+01
15.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.213E-01	5.213E-01	5.213E-01	1.846E+01
25.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.901E-01	2.901E-01	2.901E-01	1.897E+01
35.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.976E-01	1.976E-01	1.976E-01	1.899E+01
45.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.477E-01	1.477E-01	1.477E-01	1.880E+01
55.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.168E-01	1.168E-01	1.168E-01	1.857E+01
65.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.581E-02	9.581E-02	9.581E-02	1.831E+01
75.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.061E-02	8.061E-02	8.061E-02	1.804E+01

TOTAL DEPOSITION RATES, PCI/M2-SEC

XRHO, KM	U-238	Th-230	Ra-226	Pb-210
1.5	0.000E+00	0.000E+00	0.000E+00	7.108E-09
2.5	0.000E+00	0.000E+00	0.000E+00	1.150E-08
3.5	0.000E+00	0.000E+00	0.000E+00	1.490E-08
4.5	0.000E+00	0.000E+00	0.000E+00	1.766E-08
7.5	0.000E+00	0.000E+00	0.000E+00	2.290E-08
15.0	0.000E+00	0.000E+00	0.000E+00	2.658E-08
25.0	0.000E+00	0.000E+00	0.000E+00	2.733E-08
35.0	0.000E+00	0.000E+00	0.000E+00	2.734E-08
45.0	0.000E+00	0.000E+00	0.000E+00	2.707E-08
55.0	0.000E+00	0.000E+00	0.000E+00	2.674E-08
65.0	0.000E+00	0.000E+00	0.000E+00	2.637E-08
75.0	0.000E+00	0.000E+00	0.000E+00	2.598E-08

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

CONCENTRATION DATA FOR THE E DIRECTION, THETA EQUALS 90.0 DEGREES

TOTAL AIR CONCENTRATIONS, PCI/M3, AND WL

XRHO, KM	U-238	Th-230	Ra-226	Pb-210	Rn-222	Po-218	Pb-214	Bi-214	Pb-210	WL
1.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.576E+01	3.184E+01	1.186E+01	4.698E+00	3.658E-06	1.105E-
2.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.880E+01	1.785E+01	9.128E+00	5.069E+00	7.036E-06	8.358E-
3.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.191E+01	1.169E+01	7.226E+00	4.801E+00	1.012E-05	6.658E-
4.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.520E+00	8.452E+00	5.859E+00	4.309E+00	1.267E-05	5.448E-
7.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.728E+00	4.725E+00	3.827E+00	3.151E+00	1.789E-05	3.602E-
15.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.166E+00	2.167E+00	2.006E+00	1.812E+00	2.221E-05	1.916E-
25.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.221E+00	1.221E+00	1.193E+00	1.144E+00	2.359E-05	1.157E-
35.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.357E-01	8.362E-01	8.304E-01	8.162E-01	2.390E-05	8.116E-
45.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.291E-01	6.295E-01	6.292E-01	6.250E-01	2.389E-05	6.170E-
55.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.000E-01	5.003E-01	5.015E-01	5.006E-01	2.372E-05	4.925E-
65.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.120E-01	4.122E-01	4.137E-01	4.140E-01	2.347E-05	4.066E-
75.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.483E-01	3.485E-01	3.499E-01	3.507E-01	2.319E-05	3.441E-

GROUND SURFACE CONCENTRATIONS, PCI/M2

XRHO, KM	U-238	Th-230	Ra-226	Pb-210	Rn-222	Po-218	Pb-214	Bi-214	Pb-210
1.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.522E+01	2.522E+01	2.522E+01	7.619E+00
2.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.414E+01	1.414E+01	1.414E+01	1.466E+01
3.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.255E+00	9.255E+00	9.255E+00	2.108E+01
4.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.694E+00	6.694E+00	6.694E+00	2.638E+01
7.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.743E+00	3.743E+00	3.743E+00	3.725E+01
15.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.716E+00	1.716E+00	1.716E+00	4.626E+01
25.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.674E-01	9.674E-01	9.674E-01	4.913E+01
35.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.623E-01	6.623E-01	6.623E-01	4.978E+01
45.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.986E-01	4.986E-01	4.986E-01	4.976E+01
55.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.963E-01	3.963E-01	3.963E-01	4.940E+01
65.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.265E-01	3.265E-01	3.265E-01	4.889E+01
75.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.760E-01	2.760E-01	2.760E-01	4.831E+01

TOTAL DEPOSITION RATES, PCI/M2-SEC

XRHO, KM	U-238	Th-230	Ra-226	Pb-210
1.5	0.000E+00	0.000E+00	0.000E+00	1.097E-08
2.5	0.000E+00	0.000E+00	0.000E+00	2.111E-08
3.5	0.000E+00	0.000E+00	0.000E+00	3.036E-08
4.5	0.000E+00	0.000E+00	0.000E+00	3.800E-08
7.5	0.000E+00	0.000E+00	0.000E+00	5.365E-08
15.0	0.000E+00	0.000E+00	0.000E+00	6.663E-08
25.0	0.000E+00	0.000E+00	0.000E+00	7.076E-08
35.0	0.000E+00	0.000E+00	0.000E+00	7.170E-08
45.0	0.000E+00	0.000E+00	0.000E+00	7.167E-08
55.0	0.000E+00	0.000E+00	0.000E+00	7.115E-08
65.0	0.000E+00	0.000E+00	0.000E+00	7.042E-08
75.0	0.000E+00	0.000E+00	0.000E+00	6.958E-08

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

CONCENTRATION DATA FOR THE S DIRECTION, THETA EQUALS 180.0 DEGREES

TOTAL AIR CONCENTRATIONS, PCI/M3, AND WL

XRHO, KM	U-238	Th-230	Ra-226	Pb-210	Rn-222	Po-218	Pb-214	Bi-214	Pb-210	WL
1.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.501E+01	1.337E+01	4.932E+00	1.892E+00	1.346E-06	4.584E-
2.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.315E+00	6.931E+00	3.491E+00	1.932E+00	2.591E-06	3.104E-
3.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.540E+00	4.422E+00	2.629E+00	1.740E+00	3.612E-06	2.437E-
4.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.247E+00	3.204E+00	2.103E+00	1.530E+00	4.448E-06	1.967E-
7.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.839E+00	1.835E+00	1.395E+00	1.117E+00	6.271E-06	1.313E-
15.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.622E-01	8.626E-01	7.638E-01	6.638E-01	7.841E-06	7.237E-
25.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.947E-01	4.950E-01	4.718E-01	4.393E-01	8.426E-06	4.541E-
35.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.437E-01	3.439E-01	3.372E-01	3.250E-01	8.653E-06	3.276E-
45.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.610E-01	2.612E-01	2.592E-01	2.544E-01	8.722E-06	2.532E-
55.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.091E-01	2.092E-01	2.089E-01	2.070E-01	8.726E-06	2.046E-
65.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.735E-01	1.736E-01	1.738E-01	1.732E-01	8.692E-06	1.706E-
75.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.476E-01	1.477E-01	1.481E-01	1.479E-01	8.633E-06	1.455E-

GROUND SURFACE CONCENTRATIONS, PCI/M2

XRHO, KM	U-238	Th-230	Ra-226	Pb-210	Rn-222	Po-218	Pb-214	Bi-214	Pb-210
1.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.059E+01	1.059E+01	1.059E+01	2.804E+00
2.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.489E+00	5.489E+00	5.489E+00	5.376E+00
3.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.503E+00	3.503E+00	3.503E+00	7.524E+00
4.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.537E+00	2.537E+00	2.537E+00	9.266E+00
7.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.454E+00	1.454E+00	1.454E+00	1.306E+01
15.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.832E-01	6.832E-01	6.832E-01	1.633E+01
25.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.920E-01	3.920E-01	3.920E-01	1.755E+01
35.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.724E-01	2.724E-01	2.724E-01	1.802E+01
45.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.069E-01	2.069E-01	2.069E-01	1.817E+01
55.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.657E-01	1.657E-01	1.657E-01	1.818E+01
65.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.375E-01	1.375E-01	1.375E-01	1.811E+01
75.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.170E-01	1.170E-01	1.170E-01	1.798E+01

TOTAL DEPOSITION RATES, PCI/M2-SEC

XRHO, KM	U-238	Th-230	Ra-226	Pb-210
1.5	0.000E+00	0.000E+00	0.000E+00	4.039E-09
2.5	0.000E+00	0.000E+00	0.000E+00	7.743E-09
3.5	0.000E+00	0.000E+00	0.000E+00	1.084E-08
4.5	0.000E+00	0.000E+00	0.000E+00	1.335E-08
7.5	0.000E+00	0.000E+00	0.000E+00	1.881E-08
15.0	0.000E+00	0.000E+00	0.000E+00	2.352E-08
25.0	0.000E+00	0.000E+00	0.000E+00	2.528E-08
35.0	0.000E+00	0.000E+00	0.000E+00	2.596E-08
45.0	0.000E+00	0.000E+00	0.000E+00	2.617E-08
55.0	0.000E+00	0.000E+00	0.000E+00	2.618E-08
65.0	0.000E+00	0.000E+00	0.000E+00	2.608E-08
75.0	0.000E+00	0.000E+00	0.000E+00	2.590E-08

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

CONCENTRATION DATA FOR THE W DIRECTION, THETA EQUALS 270.0 DEGREES

TOTAL AIR CONCENTRATIONS, PCI/M3, AND WL

XRHO, KM	U-238	Th-230	Ra-226	Pb-210	Rn-222	Po-218	Pb-214	Bi-214	Pb-210	WL
1.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.300E+01	1.260E+01	6.171E+00	2.804E+00	2.611E-06	5.473E-
2.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.938E+00	5.886E+00	3.987E+00	2.085E+00	4.140E-06	3.581E-
3.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.607E+00	3.598E+00	2.819E+00	2.142E+00	5.265E-06	2.509E-
4.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.582E+00	2.580E+00	2.182E+00	1.819E+00	6.224E-06	2.050E-
7.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.405E+00	1.406E+00	1.301E+00	1.199E+00	8.111E-06	1.251E-
15.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.236E-01	6.240E-01	6.106E-01	5.909E-01	9.419E-06	5.943E-
25.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.439E-01	3.441E-01	3.431E-01	3.397E-01	9.645E-06	3.361E-
35.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.325E-01	2.326E-01	2.332E-01	2.328E-01	9.606E-06	2.290E-
45.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.736E-01	1.737E-01	1.743E-01	1.746E-01	9.516E-06	1.714E-
55.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.368E-01	1.369E-01	1.375E-01	1.379E-01	9.388E-06	1.352E-
65.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.118E-01	1.118E-01	1.124E-01	1.127E-01	9.246E-06	1.105E-
75.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.372E-02	9.377E-02	9.422E-02	9.454E-02	9.100E-06	9.269E-

GROUND SURFACE CONCENTRATIONS, PCI/M2

XRHO, KM	U-238	Th-230	Ra-226	Pb-210	Rn-222	Po-218	Pb-214	Bi-214	Pb-210
1.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.982E+00	9.982E+00	9.982E+00	5.439E+00
2.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.662E+00	4.662E+00	4.662E+00	8.624E+00
3.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.850E+00	2.850E+00	2.850E+00	1.097E+01
4.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.044E+00	2.044E+00	2.044E+00	1.297E+01
7.5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.113E+00	1.113E+00	1.113E+00	1.690E+01
15.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.942E-01	4.942E-01	4.942E-01	1.962E+01
25.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.725E-01	2.725E-01	2.725E-01	2.009E+01
35.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.843E-01	1.843E-01	1.843E-01	2.001E+01
45.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.376E-01	1.376E-01	1.376E-01	1.982E+01
55.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.084E-01	1.084E-01	1.084E-01	1.956E+01
65.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.859E-02	8.859E-02	8.859E-02	1.926E+01
75.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.427E-02	7.427E-02	7.427E-02	1.895E+01

TOTAL DEPOSITION RATES, PCI/M2-SEC

XRHO, KM	U-238	Th-230	Ra-226	Pb-210
1.5	0.000E+00	0.000E+00	0.000E+00	7.833E-09
2.5	0.000E+00	0.000E+00	0.000E+00	1.242E-08
3.5	0.000E+00	0.000E+00	0.000E+00	1.580E-08
4.5	0.000E+00	0.000E+00	0.000E+00	1.867E-08
7.5	0.000E+00	0.000E+00	0.000E+00	2.433E-08
15.0	0.000E+00	0.000E+00	0.000E+00	2.826E-08
25.0	0.000E+00	0.000E+00	0.000E+00	2.893E-08
35.0	0.000E+00	0.000E+00	0.000E+00	2.882E-08
45.0	0.000E+00	0.000E+00	0.000E+00	2.855E-08
55.0	0.000E+00	0.000E+00	0.000E+00	2.816E-08
65.0	0.000E+00	0.000E+00	0.000E+00	2.774E-08
75.0	0.000E+00	0.000E+00	0.000E+00	2.730E-08

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS INHAL. EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.177E-06	2.197E-05	5.863E-05	7.392E-05	8.935E-05	1.036E-04	2.335
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.437E-06	2.491E-06	4.324E-05	5.412E-05	6.973E-05	9.560E-05	8.712
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.307E-06	1.329E-06	6.195E-04	4.732E-05	4.965E-05	2.633E-04	2.823
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.281E-06	3.874E-04	8.702E-05	1.012E-04	1.704E-04	2.365
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.529E-06	0.000E+00	0.000E+00	1.759E-03	1.974E-04	1.018E-03	7.473E-04	2.049
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.032E-06	0.000E+00	9.711E-05	1.271E-04	1.615E-04	1.784E-04	1.436
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.853E-06	2.291E-06	4.093E-06	5.648E-05	1.214E-04	2.175E-04	2.483E-04	1.241
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.277E-05	1.614E-04	1.819E-04	1.286E-04	1.119
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.863E-06	3.078E-06	8.601E-05	1.212E-04	1.200E-04	1.043E-04	1.746
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.472E-06	0.000E+00	1.601E-05	2.036E-05	3.578E-05	6.105E-05	7.002
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.198E-05	1.553E-05	1.858E-05	7.061E-05	1.342
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.278E-07	1.432E-06	0.000E+00	2.901E-04	1.816E-05	2.503E-05	3.867E-05	4.498
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.330E-06	5.504E-06	2.114E-06	2.036E-05	0.000E+00	2.267E-05	2.640E-05	3.265
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.838E-06	2.761E-05	3.596E-05	3.558E-05	2.486E-04	3.373
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.566E-05	6.037E-05	9.254E-05	9.386E-05	6.390
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.840E-05	1.058E-04	1.134E-04	1.236

TOTAL DOSE COMMITMENT IS 2.147E-02 PERSON-REM/YR

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS INHAL. EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.200E-05	1.781E-04	4.752E-04	5.988E-04	7.236E-04	8.386E-04	1.889
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.411E-05	2.020E-05	3.504E-04	4.384E-04	5.647E-04	7.738E-04	7.049
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.060E-05	1.078E-05	5.021E-03	3.834E-04	4.021E-04	2.132E-03	2.284
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.850E-05	3.140E-03	7.051E-04	8.198E-04	1.380E-03	1.914
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.298E-05	0.000E+00	0.000E+00	1.426E-02	1.599E-03	8.249E-03	6.050E-03	1.659
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.270E-05	0.000E+00	7.871E-04	1.030E-03	1.308E-03	1.444E-03	1.162
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.503E-05	1.859E-05	3.311E-05	4.578E-04	9.835E-04	1.761E-03	2.010E-03	1.004
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.709E-04	1.308E-03	1.474E-03	1.041E-03	9.055
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.323E-05	2.496E-05	6.572E-04	9.519E-04	9.719E-04	8.446E-04	1.413
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.194E-05	0.000E+00	1.297E-04	1.649E-04	2.898E-04	4.942E-04	5.665
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.706E-05	1.258E-04	1.504E-04	5.715E-04	1.086
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.717E-06	1.161E-05	0.000E+00	2.351E-03	1.471E-04	2.027E-04	3.129E-04	3.639
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.325E-05	4.465E-05	1.714E-05	1.650E-04	0.000E+00	1.836E-04	2.137E-04	2.642
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.301E-05	2.237E-04	2.913E-04	2.881E-04	2.013E-03	2.729
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.079E-04	4.891E-04	7.494E-04	7.507E-04	5.170
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.162E-04	8.569E-04	9.175E-04	9.998

TOTAL DOSE COMMITMENT IS 1.738E-01 PERSON-REM/YR

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS INHAL. EXPOSED ORGAN IS AVG.LUNG

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.112E-07	2.660E-06	7.282E-06	9.410E-06	1.166E-05	1.384E-05	3.195
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.418E-07	3.017E-07	5.370E-06	6.889E-06	9.096E-06	1.277E-05	1.192
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.542E-07	1.608E-07	7.678E-05	6.006E-06	6.449E-06	3.500E-05	3.837
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.753E-07	4.785E-05	1.099E-05	1.306E-05	2.347E-05	3.184
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.555E-07	0.000E+00	0.000E+00	2.174E-04	2.496E-05	1.317E-04	9.684E-05	2.771
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.754E-07	0.000E+00	1.204E-05	1.615E-05	2.102E-05	2.377E-05	1.958
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.144E-07	2.701E-07	4.933E-07	6.989E-06	1.538E-05	2.820E-05	3.296E-05	1.684
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.023E-05	2.042E-05	2.354E-05	1.701E-05	1.513
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.374E-07	3.715E-07	1.062E-05	1.531E-05	1.550E-05	1.377E-05	2.356
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.736E-07	0.000E+00	1.983E-06	2.583E-06	4.648E-06	8.117E-06	9.524
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.487E-06	1.978E-06	2.425E-06	9.442E-06	1.838
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.587E-08	1.691E-07	0.000E+00	3.611E-05	2.320E-06	3.280E-06	5.195E-06	6.195
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.174E-07	6.500E-07	2.563E-07	2.534E-06	0.000E+00	2.967E-06	3.541E-06	4.488
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.435E-07	3.426E-06	4.573E-06	4.634E-06	3.316E-06	4.604
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.185E-06	7.678E-06	1.206E-05	1.252E-05	8.726
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.126E-05	1.380E-05	1.514E-05	1.690

TOTAL DOSE COMMITMENT IS 2.835E-03 PERSON-REM/YR

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS INHAL. EXPOSED ORGAN IS BRONCHI

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.578E-03	1.510E-02	2.743E-02	2.609E-02	2.524E-02	2.433E-02	4.682
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.908E-03	1.715E-03	2.030E-02	1.921E-02	1.983E-02	2.263E-02	1.763
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.054E-03	1.149E-03	3.680E-01	2.138E-02	1.808E-02	8.021E-02	2.384
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.524E-03	2.930E-01	4.989E-02	4.668E-02	6.571E-02	7.833
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.955E-02	0.000E+00	0.000E+00	1.052E+00	8.887E-02	3.669E-01	2.240E-01	5.255
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.496E-03	0.000E+00	4.776E-02	4.708E-02	4.783E-02	4.389E-02	3.015
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.996E-03	3.634E-03	3.449E-03	3.228E-02	5.224E-02	7.487E-02	7.113E-02	3.038
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.518E-02	8.108E-02	7.317E-02	4.308E-02	3.209
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.389E-03	3.092E-03	5.844E-02	6.200E-02	4.915E-02	3.557E-02	5.097
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.219E-03	0.000E+00	8.734E-03	8.365E-03	1.176E-02	1.669E-02	1.634
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.339E-03	5.222E-03	4.995E-03	1.576E-02	2.555
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.323E-03	1.530E-03	0.000E+00	1.132E-01	5.326E-03	5.856E-03	7.480E-03	7.409
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.581E-02	6.236E-03	1.290E-03	8.428E-03	0.000E+00	5.643E-03	5.450E-03	5.740
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.067E-03	1.367E-02	1.343E-02	1.064E-02	6.181E-02	7.160
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.263E-02	2.244E-02	2.754E-02	2.323E-02	1.351
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.139E-02	3.010E-02	2.681E-02	2.497

TOTAL DOSE COMMITMENT IS 7.381E+00 PERSON-REM/YR

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS GROUND EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.022E-06	2.884E-06	6.237E-06	6.899E-06	7.624E-06	8.278E-06	1.774
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.073E-06	3.273E-07	4.608E-06	5.063E-06	5.965E-06	7.659E-06	6.638
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.025E-07	2.011E-07	7.476E-05	4.947E-06	4.695E-06	2.312E-05	2.341
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.077E-07	5.386E-05	1.030E-05	1.069E-05	1.653E-05	2.147
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.693E-06	0.000E+00	0.000E+00	2.131E-04	2.060E-05	9.588E-05	6.521E-05	1.687
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.380E-07	0.000E+00	1.059E-05	1.212E-05	1.403E-05	1.448E-05	1.107
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.003E-06	5.341E-07	6.088E-07	6.671E-06	1.239E-05	2.008E-05	2.130E-05	1.005
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.067E-05	1.760E-05	1.799E-05	1.174E-05	9.597
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.634E-07	5.146E-07	1.121E-05	1.349E-05	1.197E-05	9.591E-06	1.508
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.300E-07	0.000E+00	1.844E-06	2.034E-06	3.240E-06	5.143E-06	5.581
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.244E-06	1.420E-06	1.556E-06	5.549E-06	1.004
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.074E-07	2.499E-07	0.000E+00	2.830E-05	1.572E-06	1.998E-06	2.909E-06	3.235
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.075E-06	1.000E-06	2.590E-07	2.042E-06	0.000E+00	1.848E-06	2.024E-06	2.390
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.857E-07	3.022E-06	3.440E-06	3.102E-06	2.025E-05	2.608
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.800E-06	5.762E-06	8.054E-06	7.634E-06	4.934
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.272E-06	9.052E-06	9.079E-06	9.411

TOTAL DOSE COMMITMENT IS 1.981E-03 PERSON-REM/YR

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS CLOUD EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.275E-05	1.285E-04	2.385E-04	2.288E-04	2.222E-04	2.146E-04	4.133
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.521E-05	1.455E-05	1.761E-04	1.682E-04	1.745E-04	1.995E-04	1.556
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.463E-05	9.038E-06	3.046E-03	1.819E-04	1.561E-04	6.989E-04	6.469
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.883E-05	2.354E-03	4.171E-04	3.990E-04	5.690E-04	6.835
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.772E-04	0.000E+00	0.000E+00	9.020E-03	7.740E-04	3.219E-03	1.972E-03	4.634
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.362E-05	0.000E+00	4.151E-04	4.129E-04	4.210E-04	3.871E-04	2.662
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.913E-05	2.694E-05	2.822E-05	2.747E-04	4.525E-04	6.544E-04	6.246E-04	2.675
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.560E-04	6.902E-04	6.328E-04	3.759E-04	2.814
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.703E-05	2.428E-05	4.863E-04	5.305E-04	4.266E-04	3.111E-04	4.477
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.671E-05	0.000E+00	7.465E-05	7.266E-05	1.029E-04	1.468E-04	1.439
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.665E-05	4.591E-05	4.402E-05	1.391E-04	2.256
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.834E-05	1.304E-05	0.000E+00	9.965E-04	4.701E-05	5.172E-05	6.617E-05	6.546
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.194E-04	5.198E-05	1.117E-05	7.393E-05	0.000E+00	4.980E-05	4.813E-05	5.071
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.745E-05	1.185E-04	1.177E-04	9.360E-05	5.450E-04	6.320
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.093E-04	1.962E-04	2.420E-04	2.047E-04	1.192
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.752E-04	2.649E-04	2.365E-04	2.204

TOTAL DOSE COMMITMENT IS 6.384E-02 PERSON-REM/YR

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS VEG. ING EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED BY THE POPULATION OF THIS REGION. SEE SUMMARY TABLE FOR THIS INFORMATION.

TIME STEP NUMBER 1. DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS VEG. ING EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED BY THE POPULATION OF THIS REGION. SEE SUMMARY TABLE FOR THIS INFORMATION.

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS MEAT ING . EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED BY THE POPULATION OF THIS REGION. SEE SUMMARY TABLE FOR THIS INFORMATION.

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS MEAT ING EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED BY THE POPULATION OF THIS REGION. SEE SUMMARY TABLE FOR THIS INFORMATION.

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS MILK ING EXPOSED ORGAN IS EFFECTIV

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN
ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL
FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED
BY THE POPULATION OF THIS REGION. SEE SUMMARY
TABLE FOR THIS INFORMATION.

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

EXPOSURE PATHWAY IS MILK ING EXPOSED ORGAN IS BONE

DOSES SHOWN BELOW ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEAR

DIRECTION	XRHO 1.5	XRHO 2.5	XRHO 3.5	XRHO 4.5	XRHO 7.5	XRHO 15.0	XRHO 25.0	XRHO 35.0	XRHO 45.0	XRHO 55.0	XRHO 65.0	XRH 75.
N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ENE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
E	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
ESE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSE	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
S	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
SW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WSW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
W	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
WNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
NNW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000

TOTAL DOSE COMMITMENT IS 0.000E+00 PERSON-REM/YR

WARNING--POPULATION FOOD INGESTION DOSES SHOWN ABOVE HAVE NOT BEEN CORRECTED TO REFLECT POTENTIAL FOOD EXPORT AND MAY EXCEED DOSES ACTUALLY RECEIVED BY THE POPULATION OF THIS REGION. SEE SUMMARY TABLE FOR THIS INFORMATION.

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

SUMMARY PRINT OF POPULATION DOSES COMPUTED FOR TSTEP 1--DOSES SHOWN ARE 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS, PERSON-REM/YEA

DOSES RECEIVED BY PEOPLE WITHIN 80 KILOMETERS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	2.147E-02	1.738E-01	2.835E-03	1.304E-01	6.270E-02	7.381E+00
GROUND	1.981E-03	1.981E-03	1.981E-03	1.981E-03	1.981E-03	1.981E-03
CLOUD	6.384E-02	6.384E-02	6.384E-02	6.384E-02	6.384E-02	6.384E-02
VEG. ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MEAT ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
TOTALS	8.729E-02	2.397E-01	6.865E-02	1.962E-01	1.285E-01	7.447E+00

DOSES RECEIVED BY PEOPLE BEYOND 80 KILOMETERS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
GROUND	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CLOUD	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
VEG. ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MEAT ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	5.321E+00	7.256E+01	1.209E+00	5.321E+00	5.321E+00	3.386E+01
TOTALS	5.321E+00	7.256E+01	1.209E+00	5.321E+00	5.321E+00	3.386E+01

TOTAL DOSES COMPUTED OVER ALL POPULATIONS

PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INHAL.	2.147E-02	1.738E-01	2.835E-03	1.304E-01	6.270E-02	7.381E+00
GROUND	1.981E-03	1.981E-03	1.981E-03	1.981E-03	1.981E-03	1.981E-03
CLOUD	6.384E-02	6.384E-02	6.384E-02	6.384E-02	6.384E-02	6.384E-02
VEG. ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MEAT ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MILK ING	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
RNPLUS50	5.321E+00	7.256E+01	1.209E+00	5.321E+00	5.321E+00	3.386E+01
TOTALS	5.408E+00	7.280E+01	1.278E+00	5.517E+00	5.449E+00	4.131E+01

COMPLETE SUMMARY OF COMPUTED ENVIRONMENTAL DOSE COMMITMENTS, INTEGRATED OVER ALL TIME STEPS

100-YEAR ENVIRONMENTAL DOSE COMMITMENTS RECEIVED BY PEOPLE WITHIN 80 KILOMETERS, PERSON-REM

NO.	T-START	T-END	T-LONG	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONC
1	2007.00	2107.00	100.00	TOTALS	8.729E+00	2.397E+01	6.865E+00	1.962E+01	1.285E+01	7.447E
TOTALS OVER ALL 1 TIME STEPS					8.729E+00	2.397E+01	6.865E+00	1.962E+01	1.285E+01	7.447E

100-YEAR ENVIRONMENTAL DOSE COMMITMENTS RECEIVED BY PEOPLE BEYOND 80 KILOMETERS, PERSON-REM

NO.	T-START	T-END	T-LONG	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONC
1	2007.00	2107.00	100.00	TOTALS	5.321E+02	7.256E+03	1.209E+02	5.321E+02	5.321E+02	3.386E
TOTALS OVER ALL 1 TIME STEPS					5.321E+02	7.256E+03	1.209E+02	5.321E+02	5.321E+02	3.386E

GRAND TOTAL 100-YEAR ENVIRONMENTAL DOSE COMMITMENTS RECEIVED OVER ALL POPULATIONS, PERSON-REM

NO.	T-START	T-END	T-LONG	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONC
1	2007.00	2107.00	100.00	TOTALS	5.408E+02	7.280E+03	1.278E+02	5.517E+02	5.449E+02	4.131E
TOTALS OVER ALL 1 TIME STEPS					5.408E+02	7.280E+03	1.278E+02	5.517E+02	5.449E+02	4.131E

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

INDIVIDUAL RECEPTOR PARTICULATE CONCENTRATIONS

NO.	NAME	PTSZ	AIRBORNE CONCENTRATIONS, PCI/M3 U-238	Th-230	Ra-226	Pb-210	GROUND CONCENTRATIONS, PCI/M2 U-238	Th-230	Ra-226	Pb-
1	N PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
1	N PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
1	N PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
1	N PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
2	NNE PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
2	NNE PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
2	NNE PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
2	NNE PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
3	NE PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
3	NE PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
3	NE PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
3	NE PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
4	ENE PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
4	ENE PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
4	ENE PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
4	ENE PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
5	E PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
5	E PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
5	E PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
5	E PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
6	ESE PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
6	ESE PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
6	ESE PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
6	ESE PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
7	SE PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
7	SE PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
7	SE PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
7	SE PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
8	SSE PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
8	SSE PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
8	SSE PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
8	SSE PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

INDIVIDUAL RECEPTOR PARTICULATE CONCENTRATIONS

NO.	NAME	PTSZ	AIRBORNE CONCENTRATIONS, PCI/M3 U-238	Th-230	Ra-226	Pb-210	GROUND CONCENTRATIONS, PCI/M2 U-238	Th-230	Ra-226	Pb-
9	S PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
9	S PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
9	S PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
9	S PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
10	SSW PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
10	SSW PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
10	SSW PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
10	SSW PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
11	SW PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
11	SW PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
11	SW PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
11	SW PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
12	WSW PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
12	WSW PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
12	WSW PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
12	WSW PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
13	W PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
13	W PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
13	W PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
13	W PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
14	WNW PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
14	WNW PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
14	WNW PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
14	WNW PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
15	NW PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
15	NW PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
15	NW PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
15	NW PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
16	NNW PB	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
16	NNW PB	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
16	NNW PB	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
16	NNW PB	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

INDIVIDUAL RECEPTOR PARTICULATE CONCENTRATIONS

NO.	NAME	PTS#	AIRBORNE CONCENTRATIONS, PCI/M3 U-238	Th-230	Ra-226	Pb-210	GROUND CONCENTRATIONS, PCI/M2 U-238	Th-230	Ra-226	Pb-
17	Nearest Resident Eas	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
17	Nearest Resident Eas	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
17	Nearest Resident Eas	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
17	Nearest Resident Eas	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
18	Nearest Resident Sou	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
18	Nearest Resident Sou	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
18	Nearest Resident Sou	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
18	Nearest Resident Sou	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
19	Wright	1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
19	Wright	2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
19	Wright	3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
19	Wright	4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000
	CONCENTRATION TOTALS		0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

INDIVIDUAL RECEPTOR RADON AND RADON DAUGHTER CONCENTRATIONS

NO.	AIRBORNE CONCENTRATIONS, PCI/M3								GROUND CONCENTRATIONS, PCI/M2			
	Rn-222	Po-218	Pb-214	Bi-214	Pb-210	Bi-210	Po-210	WL	Po-218	Pb-214	Bi-214	Pb-210
1	5.337E+00	5.272E+00	3.512E+00	2.299E+00	3.963E-06	7.626E-09	4.100E-13	3.181E-05	4.176E+00	4.176E+00	4.176E+00	6.254E+00
2	3.911E+00	3.866E+00	2.677E+00	1.830E+00	3.430E-06	7.018E-09	3.952E-13	2.438E-05	3.062E+00	3.062E+00	3.062E+00	7.145E+00
3	4.295E+00	4.157E+00	2.579E+00	1.681E+00	2.912E-06	5.550E-09	2.915E-13	2.363E-05	3.293E+00	3.293E+00	3.293E+00	6.066E+00
4	5.098E+00	4.955E+00	3.013E+00	2.118E+00	5.421E-06	1.513E-08	1.182E-12	2.828E-05	3.925E+00	3.925E+00	3.925E+00	1.129E+01
5	5.364E+00	5.356E+00	4.216E+00	3.411E+00	1.686E-05	8.867E-08	1.239E-11	3.962E-05	4.242E+00	4.242E+00	4.242E+00	3.512E+01
6	5.402E+00	5.391E+00	4.294E+00	3.469E+00	1.224E-05	4.543E-08	4.556E-12	4.026E-05	4.270E+00	4.270E+00	4.270E+00	2.550E+01
7	6.760E+00	6.579E+00	3.983E+00	2.551E+00	4.682E-06	9.861E-09	5.866E-13	3.649E-05	5.211E+00	5.211E+00	5.211E+00	9.753E+00
8	6.347E+00	6.057E+00	3.285E+00	2.012E+00	3.458E-06	6.822E-09	3.790E-13	3.040E-05	4.798E+00	4.798E+00	4.798E+00	7.203E+00
9	6.040E+00	5.795E+00	3.130E+00	1.872E+00	2.966E-06	5.350E-09	2.696E-13	2.882E-05	4.590E+00	4.590E+00	4.590E+00	6.179E+00
10	2.657E+00	2.631E+00	1.847E+00	1.359E+00	3.472E-06	9.505E-09	7.060E-13	1.714E-05	2.084E+00	2.084E+00	2.084E+00	7.231E+00
11	1.844E+00	1.840E+00	1.484E+00	1.177E+00	3.286E-06	9.569E-09	7.515E-13	1.381E-05	1.457E+00	1.457E+00	1.457E+00	6.845E+00
12	2.689E+00	2.685E+00	2.139E+00	1.603E+00	3.568E-06	8.507E-09	5.571E-13	1.959E-05	2.127E+00	2.127E+00	2.127E+00	7.432E+00
13	5.096E+00	5.065E+00	3.605E+00	2.446E+00	4.484E-06	9.189E-09	5.295E-13	3.262E-05	4.011E+00	4.011E+00	4.011E+00	9.340E+00
14	9.309E+00	9.102E+00	5.392E+00	3.210E+00	4.818E-06	8.499E-09	4.336E-13	4.869E-05	7.209E+00	7.209E+00	7.209E+00	1.004E+01
15	1.009E+01	9.783E+00	5.402E+00	2.960E+00	3.789E-06	5.845E-09	2.650E-13	4.850E-05	7.749E+00	7.749E+00	7.749E+00	7.892E+00
16	5.691E+00	5.634E+00	3.873E+00	2.638E+00	5.086E-06	1.094E-08	6.598E-13	3.528E-05	4.462E+00	4.462E+00	4.462E+00	1.059E+01
17	8.520E+00	8.452E+00	5.859E+00	4.309E+00	1.267E-05	4.078E-08	3.582E-12	5.448E-05	6.694E+00	6.694E+00	6.694E+00	2.638E+01
18	9.749E-01	9.753E-01	8.454E-01	7.235E-01	7.657E-06	9.188E-08	2.875E-11	7.989E-06	7.725E-01	7.725E-01	7.725E-01	1.595E+01
19	3.445E-01	3.446E-01	3.313E-01	3.118E-01	7.745E-06	2.406E-07	1.995E-10	3.198E-06	2.730E-01	2.730E-01	2.730E-01	1.613E+01

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 1 NAME=N PR X= 0.0KM, Y= 2.6KM, Z= 0.0M, DIST= 2.6KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 1 NAME-N PR X= 0.0KM, Y= 2.6KM, Z= 0.0M, DIST= 2.6KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	4.01E-01	2.14E-03	1.99E-04	1.11E-03	4.31E-03	6.67E+00
INFANT	GROUND	7.62E-04	7.62E-04	7.62E-04	7.62E-04	7.62E-04	7.62E-04
INFANT	CLOUD	2.69E-02	2.69E-02	2.69E-02	2.69E-02	2.69E-02	2.69E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	4.28E-01	2.98E-02	2.78E-02	3.67E-02	3.19E-02	6.70E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	4.01E-01	1.62E-03	9.28E-05	4.93E-03	2.03E-03	6.67E+00
CHILD	GROUND	7.62E-04	7.62E-04	7.62E-04	7.62E-04	7.62E-04	7.62E-04
CHILD	CLOUD	2.69E-02	2.69E-02	2.69E-02	2.69E-02	2.69E-02	2.69E-02
CHILD	VEG. ING	1.64E-04	1.89E-03	5.62E-04	5.62E-04	4.58E-04	0.00E+00
CHILD	MEAT ING	2.92E-05	2.37E-04	1.00E-04	1.00E-04	5.16E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	4.28E-01	3.15E-02	2.34E-02	3.32E-02	3.02E-02	6.70E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	4.01E-01	3.99E-03	3.98E-05	2.11E-03	1.01E-03	6.67E+00
TEENAGE	GROUND	7.62E-04	7.62E-04	7.62E-04	7.62E-04	7.62E-04	7.62E-04
TEENAGE	CLOUD	2.69E-02	2.69E-02	2.69E-02	2.69E-02	2.69E-02	2.69E-02
TEENAGE	VEG. ING	2.70E-04	3.12E-03	9.26E-04	9.26E-04	7.54E-04	0.00E+00
TEENAGE	MEAT ING	4.73E-05	5.47E-04	1.63E-04	1.63E-04	1.32E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	4.29E-01	3.53E-02	2.87E-02	3.08E-02	2.95E-02	6.70E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	4.01E-01	2.35E-03	3.32E-05	1.76E-03	8.46E-04	6.67E+00
ADULT	GROUND	7.62E-04	7.62E-04	7.62E-04	7.62E-04	7.62E-04	7.62E-04
ADULT	CLOUD	2.69E-02	2.69E-02	2.69E-02	2.69E-02	2.69E-02	2.69E-02
ADULT	VEG. ING	3.72E-04	4.30E-03	1.28E-03	1.28E-03	1.04E-03	0.00E+00
ADULT	MEAT ING	8.27E-05	9.56E-04	2.84E-04	2.84E-04	2.31E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	4.29E-01	3.52E-02	2.92E-02	3.09E-02	2.97E-02	6.70E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 2 NAME=NNE PB X= 1.1KM, Y= 2.6KM, Z= 0.0M, DIST= 2.8KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 2 NAME=NNE 2B X= 1.1KM, Y= 2.6KM, Z= 0.0M, DIST= 2.8KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	2.94E-01	1.85E-03	1.72E-04	9.60E-03	3.73E-03	4.89E+00
INFANT	GROUND	5.61E-04	5.61E-04	5.61E-04	5.61E-04	5.61E-04	5.61E-04
INFANT	CLOUD	2.12E-02	2.12E-02	2.12E-02	2.12E-02	2.12E-02	2.12E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	3.16E-01	2.36E-02	2.19E-02	3.14E-02	2.55E-02	4.91E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	2.94E-01	1.40E-03	8.04E-05	4.27E-03	1.76E-03	4.89E+00
CHILD	GROUND	5.61E-04	5.61E-04	5.61E-04	5.61E-04	5.61E-04	5.61E-04
CHILD	CLOUD	2.12E-02	2.12E-02	2.12E-02	2.12E-02	2.12E-02	2.12E-02
CHILD	VEG. ING	1.42E-04	1.64E-03	4.87E-04	4.87E-04	3.96E-04	0.00E+00
CHILD	MEAT ING	2.52E-05	2.92E-04	8.67E-05	8.67E-05	7.06E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	3.16E-01	2.51E-02	2.24E-02	2.66E-02	2.40E-02	4.91E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	2.94E-01	3.45E-03	3.44E-05	1.83E-03	8.78E-04	4.89E+00
TEENAGE	GROUND	5.61E-04	5.61E-04	5.61E-04	5.61E-04	5.61E-04	5.61E-04
TEENAGE	CLOUD	2.12E-02	2.12E-02	2.12E-02	2.12E-02	2.12E-02	2.12E-02
TEENAGE	VEG. ING	2.33E-04	2.70E-03	8.02E-04	8.02E-04	6.53E-04	0.00E+00
TEENAGE	MEAT ING	4.10E-05	4.73E-04	1.41E-04	1.41E-04	1.15E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	3.16E-01	2.84E-02	2.28E-02	2.45E-02	2.34E-02	4.91E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	2.94E-01	2.03E-03	2.87E-05	1.52E-03	7.32E-04	4.89E+00
ADULT	GROUND	5.61E-04	5.61E-04	5.61E-04	5.61E-04	5.61E-04	5.61E-04
ADULT	CLOUD	2.12E-02	2.12E-02	2.12E-02	2.12E-02	2.12E-02	2.12E-02
ADULT	VEG. ING	3.22E-04	3.73E-03	1.11E-03	1.11E-03	9.02E-04	0.00E+00
ADULT	MEAT ING	7.16E-05	8.28E-04	2.46E-04	2.46E-04	2.00E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	3.16E-01	2.84E-02	2.32E-02	2.47E-02	2.36E-02	4.91E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 3 NAME=NE PB X= 2.0KM, Y= 2.0KM, Z= 0.0M, DIST= 2.83KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 3 NAME=NE PB X= 2.0KM, Y= 2.0KM, Z= 0.0M, DIST= 2.8KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	3.23E-01	1.57E-03	1.46E-04	8.15E-03	3.17E-03	5.37E+00
INFANT	GROUND	6.00E-04	6.00E-04	6.00E-04	6.00E-04	6.00E-04	6.00E-04
INFANT	CLOUD	1.97E-02	1.97E-02	1.97E-02	1.97E-02	1.97E-02	1.97E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	3.43E-01	2.18E-02	2.04E-02	2.84E-02	2.34E-02	5.39E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	3.22E-01	1.19E-03	6.82E-05	3.62E-03	1.49E-03	5.37E+00
CHILD	GROUND	6.00E-04	6.00E-04	6.00E-04	6.00E-04	6.00E-04	6.00E-04
CHILD	CLOUD	1.97E-02	1.97E-02	1.97E-02	1.97E-02	1.97E-02	1.97E-02
CHILD	VEG. ING	1.20E-04	1.39E-03	4.15E-04	4.13E-04	3.37E-04	0.00E+00
CHILD	MEAT ING	2.14E-05	2.48E-04	7.36E-05	7.36E-05	6.00E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	3.43E-01	2.31E-02	2.08E-02	2.44E-02	2.21E-02	5.39E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	3.22E-01	2.93E-03	2.92E-05	1.55E-03	7.46E-04	5.37E+00
TEENAGE	GROUND	6.00E-04	6.00E-04	6.00E-04	6.00E-04	6.00E-04	6.00E-04
TEENAGE	CLOUD	1.97E-02	1.97E-02	1.97E-02	1.97E-02	1.97E-02	1.97E-02
TEENAGE	VEG. ING	1.98E-04	2.29E-03	6.81E-04	6.81E-04	5.54E-04	0.00E+00
TEENAGE	MEAT ING	3.48E-05	4.02E-04	1.19E-04	1.19E-04	9.73E-05	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	3.43E-01	2.59E-02	2.11E-02	2.26E-02	2.17E-02	5.39E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	3.22E-01	1.73E-03	2.44E-05	1.29E-03	6.21E-04	5.37E+00
ADULT	GROUND	6.00E-04	6.00E-04	6.00E-04	6.00E-04	6.00E-04	6.00E-04
ADULT	CLOUD	1.97E-02	1.97E-02	1.97E-02	1.97E-02	1.97E-02	1.97E-02
ADULT	VEG. ING	2.74E-04	3.16E-03	9.40E-04	9.40E-04	7.66E-04	0.00E+00
ADULT	MEAT ING	6.08E-05	7.03E-04	2.09E-04	2.09E-04	1.70E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	3.43E-01	2.58E-02	2.14E-02	2.27E-02	2.18E-02	5.39E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 4 NAME=ENE PB X= 3.6KM, Y= 1.5KM, Z= 0.0M, DIST= 3.9KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 4 NAME=ENE PB X= 3.6KM, Y= 1.5KM, Z= 0.0M, DIST= 3.9KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	3.83E-01	2.92E-03	2.73E-04	1.52E-02	5.90E-03	6.37E+00
INFANT	GROUND	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04
INFANT	CLOUD	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.44E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	4.08E-01	2.81E-02	2.54E-02	4.03E-02	3.11E-02	6.40E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	3.83E-01	2.22E-03	1.27E-04	6.74E-03	2.78E-03	6.37E+00
CHILD	GROUND	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04
CHILD	CLOUD	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.44E-02
CHILD	VEG. ING	2.24E-04	2.59E-03	7.69E-04	7.69E-04	6.27E-04	0.00E+00
CHILD	MEAT ING	3.99E-05	4.61E-04	1.37E-04	1.37E-04	1.12E-04	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	4.08E-01	3.04E-02	2.62E-02	3.28E-02	2.87E-02	6.40E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	3.83E-01	5.46E-03	9.45E-05	2.89E-03	1.39E-03	6.37E+00
TEENAGE	GROUND	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04
TEENAGE	CLOUD	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.44E-02
TEENAGE	VEG. ING	3.69E-04	4.26E-03	1.27E-03	1.27E-03	1.03E-03	0.00E+00
TEENAGE	MEAT ING	6.48E-05	7.48E-04	2.22E-04	2.22E-04	1.81E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	4.08E-01	3.56E-02	2.67E-02	2.95E-02	2.78E-02	6.40E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	3.83E-01	3.21E-03	4.54E-05	2.41E-03	1.16E-03	6.37E+00
ADULT	GROUND	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04
ADULT	CLOUD	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.44E-02
ADULT	VEG. ING	5.10E-04	5.89E-03	1.75E-03	1.75E-03	1.43E-03	0.00E+00
ADULT	MEAT ING	1.13E-04	1.31E-03	3.89E-04	3.89E-04	3.17E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	4.09E-01	3.56E-02	2.73E-02	2.97E-02	2.81E-02	6.40E+00

TIME STEP NUMBER 1, DURATION IN YRS TS...100.0

NUMBER 5 NAME=E F8 X= 6.7KM, Y= 0.0KM, Z= 0.0M, DIST= 6.7KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 5 NAME=E PB X= 6.7KM, Y= 0.0KM, Z= 0.0M, DIST= 6.7KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	4.05E-01	9.09E-03	8.53E-04	4.72E-02	1.83E-02	6.70E+00
INFANT	GROUND	8.24E-04	8.24E-04	8.24E-04	8.24E-04	8.24E-04	8.24E-04
INFANT	CLOUD	3.85E-02	3.85E-02	3.85E-02	3.85E-02	3.85E-02	3.85E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	4.45E-01	4.84E-02	4.01E-02	8.65E-02	5.76E-02	6.74E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	4.04E-01	6.89E-03	3.98E-04	2.10E-02	8.63E-03	6.70E+00
CHILD	GROUND	8.24E-04	8.24E-04	8.24E-04	8.24E-04	8.24E-04	8.24E-04
CHILD	CLOUD	3.85E-02	3.85E-02	3.85E-02	3.85E-02	3.85E-02	3.85E-02
CHILD	VEG. ING	6.96E-04	8.05E-03	2.39E-03	2.39E-03	1.95E-03	0.00E+00
CHILD	MEAT ING	1.24E-04	1.43E-03	4.26E-04	4.26E-04	3.47E-04	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	4.44E-01	5.57E-02	4.25E-02	6.31E-02	5.02E-02	6.74E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	4.04E-01	1.70E-02	1.71E-04	8.99E-03	4.32E-03	6.70E+00
TEENAGE	GROUND	8.24E-04	8.24E-04	8.24E-04	8.24E-04	8.24E-04	8.24E-04
TEENAGE	CLOUD	3.85E-02	3.85E-02	3.85E-02	3.85E-02	3.85E-02	3.85E-02
TEENAGE	VEG. ING	1.15E-03	1.33E-02	3.94E-03	3.94E-03	3.21E-03	0.00E+00
TEENAGE	MEAT ING	2.01E-04	2.33E-03	6.92E-04	6.92E-04	5.63E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	4.44E-01	7.19E-02	4.41E-02	5.29E-02	4.74E-02	6.74E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	4.04E-01	9.99E-03	1.42E-04	7.49E-03	3.60E-03	6.70E+00
ADULT	GROUND	8.24E-04	8.24E-04	8.24E-04	8.24E-04	8.24E-04	8.24E-04
ADULT	CLOUD	3.85E-02	3.85E-02	3.85E-02	3.85E-02	3.85E-02	3.85E-02
ADULT	VEG. ING	1.58E-03	1.83E-02	5.44E-03	5.44E-03	4.43E-03	0.00E+00
ADULT	MEAT ING	3.52E-04	4.07E-03	1.21E-03	1.21E-03	9.85E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	4.45E-01	7.17E-02	4.61E-02	5.34E-02	4.83E-02	6.74E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 6 NAME=ESE PB X= 4.7KM, Y= -2.0KM, Z= 0.0M, DIST= 5.1KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 6 NAME=ESE PB X= 4.7KM, Y= -2.0KM, Z= 0.0M, DIST= 5.1KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	4.07E-01	6.60E-03	6.17E-04	3.43E-02	1.33E-02	6.75E+00
INFANT	GROUND	8.11E-04	8.11E-04	8.11E-04	8.11E-04	8.11E-04	8.11E-04
INFANT	CLOUD	3.91E-02	3.91E-02	3.91E-02	3.91E-02	3.91E-02	3.91E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	4.47E-01	4.65E-02	4.06E-02	7.42E-02	5.33E-02	6.79E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	4.06E-01	5.60E-03	2.88E-04	1.52E-02	6.27E-03	6.75E+00
CHILD	GROUND	8.11E-04	8.11E-04	8.11E-04	8.11E-04	8.11E-04	8.11E-04
CHILD	CLOUD	3.91E-02	3.91E-02	3.91E-02	3.91E-02	3.91E-02	3.91E-02
CHILD	VEG. ING	5.06E-04	5.84E-03	1.74E-03	1.74E-03	1.41E-03	0.00E+00
CHILD	MEAT ING	9.01E-05	1.04E-03	3.09E-04	3.09E-04	2.52E-04	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	4.47E-01	5.18E-02	4.23E-02	5.72E-02	4.79E-02	6.79E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	4.06E-01	1.23E-02	1.23E-04	6.53E-03	3.13E-03	6.75E+00
TEENAGE	GROUND	8.11E-04	8.11E-04	8.11E-04	8.11E-04	8.11E-04	8.11E-04
TEENAGE	CLOUD	3.91E-02	3.91E-02	3.91E-02	3.91E-02	3.91E-02	3.91E-02
TEENAGE	VEG. ING	8.33E-04	9.63E-03	2.86E-03	2.86E-03	2.33E-03	0.00E+00
TEENAGE	MEAT ING	1.46E-04	1.69E-03	5.02E-04	5.02E-04	4.09E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	4.47E-01	6.36E-02	4.34E-02	4.98E-02	4.58E-02	6.79E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	4.06E-01	7.25E-03	1.03E-04	5.44E-03	2.61E-03	6.75E+00
ADULT	GROUND	8.11E-04	8.11E-04	8.11E-04	8.11E-04	8.11E-04	8.11E-04
ADULT	CLOUD	3.91E-02	3.91E-02	3.91E-02	3.91E-02	3.91E-02	3.91E-02
ADULT	VEG. ING	1.15E-03	1.33E-02	3.95E-03	3.95E-03	3.22E-03	0.00E+00
ADULT	MEAT ING	2.56E-04	2.95E-03	8.78E-04	8.78E-04	7.15E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	4.47E-01	6.34E-02	4.49E-02	5.02E-02	4.65E-02	6.79E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 7 NAME=SE PB X= 2.3KM, Y= -2.3KM, Z= 0.0M, DIST= 3.3KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 7 NAME=SE PB X= 2.3KM, Y= -2.3KM, Z= 0.0M, DIST= 3.3KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	5.08E-01	2.52E-03	2.35E-04	1.31E-02	5.10E-03	8.45E+00
INFANT	GROUND	9.49E-04	9.49E-04	9.49E-04	9.49E-04	9.49E-04	9.49E-04
INFANT	CLOUD	2.99E-02	2.99E-02	2.99E-02	2.99E-02	2.99E-02	2.99E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	5.35E-01	3.34E-02	3.11E-02	4.40E-02	3.60E-02	8.48E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	5.07E-01	1.91E-03	1.10E-04	5.83E-03	2.40E-03	8.45E+00
CHILD	GROUND	9.49E-04	9.49E-04	9.49E-04	9.49E-04	9.49E-04	9.49E-04
CHILD	CLOUD	2.99E-02	2.99E-02	2.99E-02	2.99E-02	2.99E-02	2.99E-02
CHILD	VEG. ING	1.93E-04	3.24E-03	6.64E-04	6.64E-04	5.41E-04	0.00E+00
CHILD	MEAT ING	3.45E-05	3.98E-04	1.18E-04	1.18E-04	9.64E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	5.38E-01	3.54E-02	3.18E-02	3.75E-02	3.39E-02	8.48E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	5.07E-01	4.72E-03	4.70E-05	2.50E-03	1.20E-03	8.45E+00
TEENAGE	GROUND	9.49E-04	9.49E-04	9.49E-04	9.49E-04	9.49E-04	9.49E-04
TEENAGE	CLOUD	2.99E-02	2.99E-02	2.99E-02	2.99E-02	2.99E-02	2.99E-02
TEENAGE	VEG. ING	3.19E-04	3.68E-03	1.09E-03	1.09E-03	8.91E-04	0.00E+00
TEENAGE	MEAT ING	5.59E-05	6.46E-04	1.92E-04	1.92E-04	1.56E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	5.39E-01	3.99E-02	3.22E-02	3.47E-02	3.31E-02	8.48E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	5.07E-01	2.77E-03	3.92E-05	2.08E-03	9.99E-04	8.45E+00
ADULT	GROUND	9.49E-04	9.49E-04	9.49E-04	9.49E-04	9.49E-04	9.49E-04
ADULT	CLOUD	2.99E-02	2.99E-02	2.99E-02	2.99E-02	2.99E-02	2.99E-02
ADULT	VEG. ING	4.40E-04	5.09E-03	1.51E-03	1.51E-03	1.23E-03	0.00E+00
ADULT	MEAT ING	9.78E-05	1.13E-03	3.36E-04	3.36E-04	2.74E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	5.39E-01	3.99E-02	3.28E-02	3.48E-02	3.34E-02	8.48E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 8 NAME=SSE PB X= 1.2KM, Y= -2.9KM, Z= 0.0M, DIST= 3.1KM, IRTYPE=10

40CFR130 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 8 NAME=SSE PB X= 1.2KM, Y= -2.9KM, Z= 0.0M, DIST= 3.1KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	4.77E-01	1.86E-03	1.74E-04	9.68E-03	3.76E-03	7.93E+00
INFANT	GROUND	8.71E-04	8.71E-04	8.71E-04	8.71E-04	8.71E-04	8.71E-04
INFANT	CLOUD	2.38E-02	2.38E-02	2.38E-02	2.38E-02	2.38E-02	2.38E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	5.01E-01	2.65E-02	2.48E-02	3.44E-02	2.84E-02	7.96E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	4.76E-01	1.41E-03	8.10E-05	4.30E-03	1.77E-03	7.93E+00
CHILD	GROUND	8.71E-04	8.71E-04	8.71E-04	8.71E-04	8.71E-04	8.71E-04
CHILD	CLOUD	2.38E-02	2.38E-02	2.38E-02	2.38E-02	2.38E-02	2.38E-02
CHILD	VEG. ING	1.43E-04	1.65E-03	4.91E-04	4.91E-04	4.00E-04	0.00E+00
CHILD	MEAT ING	2.55E-05	2.94E-04	8.74E-05	8.74E-05	7.12E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	5.01E-01	2.80E-02	2.53E-02	2.96E-02	2.69E-02	7.96E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	4.76E-01	3.48E-03	3.47E-05	1.84E-03	8.85E-04	7.93E+00
TEENAGE	GROUND	8.71E-04	8.71E-04	8.71E-04	8.71E-04	8.71E-04	8.71E-04
TEENAGE	CLOUD	2.38E-02	2.38E-02	2.38E-02	2.38E-02	2.38E-02	2.38E-02
TEENAGE	VEG. ING	2.35E-04	2.72E-03	8.08E-04	8.08E-04	6.58E-04	0.00E+00
TEENAGE	MEAT ING	4.13E-05	4.77E-04	1.42E-04	1.42E-04	1.16E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	5.01E-01	3.14E-02	2.57E-02	2.79E-02	2.63E-02	7.96E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	4.76E-01	2.05E-03	2.89E-05	1.54E-03	7.38E-04	7.93E+00
ADULT	GROUND	8.71E-04	8.71E-04	8.71E-04	8.71E-04	8.71E-04	8.71E-04
ADULT	CLOUD	2.38E-02	2.38E-02	2.38E-02	2.38E-02	2.38E-02	2.38E-02
ADULT	VEG. ING	3.25E-04	3.76E-03	1.12E-03	1.12E-03	9.09E-04	0.00E+00
ADULT	MEAT ING	7.22E-05	8.34E-04	2.48E-04	2.48E-04	2.02E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	5.01E-01	3.13E-02	2.61E-02	2.76E-02	2.65E-02	7.96E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 9 NAME=S PB X= 0.0KM, Y= -2.8KM, Z= 0.0M, DIST= 2.8KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 9 NAME=S PB X= 0.9KM, Y= -2.8KM, Z= 0.0M, DIST= 2.8KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	4.64E-01	1.60E-03	1.49E-04	8.30E-03	3.22E-03	7.55E+00
INFANT	GROUND	8.32E-04	8.32E-04	8.32E-04	8.32E-04	8.32E-04	8.32E-04
INFANT	CLOUD	2.22E-02	2.22E-02	2.22E-02	2.22E-02	2.22E-02	2.22E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	4.77E-01	2.47E-02	2.32E-02	3.14E-02	2.63E-02	7.57E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	4.53E-01	1.21E-03	6.95E-05	3.69E-03	1.52E-03	7.55E+00
CHILD	GROUND	8.32E-04	8.32E-04	8.32E-04	8.32E-04	8.32E-04	8.32E-04
CHILD	CLOUD	2.22E-02	2.22E-02	2.22E-02	2.22E-02	2.22E-02	2.22E-02
CHILD	VEG. ING	1.23E-04	1.42E-03	4.21E-04	4.21E-04	3.43E-04	0.00E+00
CHILD	MEAT ING	2.18E-05	2.52E-04	7.50E-05	7.50E-05	6.11E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	4.76E-01	2.60E-02	2.36E-02	2.73E-02	2.50E-02	7.57E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	4.53E-01	2.99E-03	2.98E-05	1.58E-03	7.60E-04	7.55E+00
TEENAGE	GROUND	8.32E-04	8.32E-04	8.32E-04	8.32E-04	8.32E-04	8.32E-04
TEENAGE	CLOUD	2.22E-02	2.22E-02	2.22E-02	2.22E-02	2.22E-02	2.22E-02
TEENAGE	VEG. ING	2.02E-04	2.33E-03	6.93E-04	6.93E-04	5.65E-04	0.00E+00
TEENAGE	MEAT ING	3.54E-05	4.10E-04	1.22E-04	1.22E-04	9.91E-05	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	4.77E-01	2.88E-02	2.39E-02	2.55E-02	2.45E-02	7.57E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	4.53E-01	1.76E-03	2.48E-05	1.32E-03	6.33E-04	7.55E+00
ADULT	GROUND	8.32E-04	8.32E-04	8.32E-04	8.32E-04	8.32E-04	8.32E-04
ADULT	CLOUD	2.22E-02	2.22E-02	2.22E-02	2.22E-02	2.22E-02	2.22E-02
ADULT	VEG. ING	2.79E-04	3.22E-03	9.58E-04	9.58E-04	7.80E-04	0.00E+00
ADULT	MEAT ING	6.19E-05	7.16E-04	2.13E-04	2.13E-04	1.73E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	4.77E-01	2.88E-02	2.43E-02	2.56E-02	2.47E-02	7.57E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 10 NAME=SSW PB X= -1.5KM, Y= -3.6KM, Z= 0.0M, DIST= 3.9KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 10 NAME=SSW PB X= -1.5KM, Y= -3.6KM, Z= 0.0M, DIST= 3.9KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	2.00E-01	1.87E-03	1.75E-04	9.72E-03	3.78E-03	3.32E+00
INFANT	GROUND	3.86E-04	3.86E-04	3.86E-04	3.86E-04	3.86E-04	3.86E-04
INFANT	CLOUD	1.56E-02	1.56E-02	1.56E-02	1.56E-02	1.56E-02	1.56E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	2.16E-01	1.78E-02	1.61E-02	2.57E-02	1.97E-02	3.34E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	2.00E-01	1.42E-03	8.15E-05	4.32E-03	1.78E-03	3.32E+00
CHILD	GROUND	3.86E-04	3.86E-04	3.86E-04	3.86E-04	3.86E-04	3.86E-04
CHILD	CLOUD	1.56E-02	1.56E-02	1.56E-02	1.56E-02	1.56E-02	1.56E-02
CHILD	VEG. ING	1.43E-04	1.66E-03	4.93E-04	4.93E-04	4.01E-04	0.00E+00
CHILD	MEAT ING	2.56E-05	2.95E-04	8.78E-05	8.78E-05	7.15E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	2.16E-01	1.93E-02	1.66E-02	2.08E-02	1.82E-02	3.34E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	2.00E-01	3.50E-03	3.49E-05	1.85E-03	8.89E-04	3.32E+00
TEENAGE	GROUND	3.86E-04	3.86E-04	3.86E-04	3.86E-04	3.86E-04	3.86E-04
TEENAGE	CLOUD	1.56E-02	1.56E-02	1.56E-02	1.56E-02	1.56E-02	1.56E-02
TEENAGE	VEG. ING	2.36E-04	2.73E-03	8.11E-04	8.11E-04	6.61E-04	0.00E+00
TEENAGE	MEAT ING	4.15E-05	4.79E-04	1.42E-04	1.42E-04	1.16E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	2.16E-01	2.27E-02	1.69E-02	1.88E-02	1.76E-02	3.34E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	2.00E-01	2.06E-03	2.91E-05	1.54E-03	7.41E-04	3.32E+00
ADULT	GROUND	3.86E-04	3.86E-04	3.86E-04	3.86E-04	3.86E-04	3.86E-04
ADULT	CLOUD	1.56E-02	1.56E-02	1.56E-02	1.56E-02	1.56E-02	1.56E-02
ADULT	VEG. ING	3.26E-04	3.77E-03	1.12E-03	1.12E-03	9.13E-04	0.00E+00
ADULT	MEAT ING	7.25E-05	8.38E-04	2.49E-04	2.49E-04	2.03E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	2.16E-01	2.26E-02	1.73E-02	1.89E-02	1.78E-02	3.34E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 11 NAME=SW PR X= -2.8KM, Y= -2.8KM, Z= 0.0M, DIST= 4.0KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 11 NAME=SW PB X= -2.8KM, Y= -2.8KM, Z= 0.0M, DIST= 4.0KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	1.39E-01	1.77E-03	1.65E-04	9.20E-03	3.58E-03	2.31E+00
INFANT	GROUND	2.73E-04	2.73E-04	2.73E-04	2.73E-04	2.73E-04	2.73E-04
INFANT	CLOUD	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	1.52E-01	1.54E-02	1.37E-02	2.28E-02	1.72E-02	2.32E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	1.39E-01	1.24E-03	7.72E-05	4.09E-03	1.68E-03	2.31E+00
CHILD	GROUND	2.73E-04	2.73E-04	2.73E-04	2.73E-04	2.73E-04	2.73E-04
CHILD	CLOUD	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02
CHILD	VEG. ING	1.36E-04	1.57E-03	4.66E-04	4.66E-04	3.80E-04	0.00E+00
CHILD	MEAT ING	2.42E-05	2.79E-04	8.31E-05	8.31E-05	6.77E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	1.52E-01	1.66E-02	1.42E-02	1.82E-02	1.57E-02	2.32E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	1.39E-01	3.31E-03	3.31E-05	1.75E-03	8.41E-04	2.31E+00
TEENAGE	GROUND	2.73E-04	2.73E-04	2.73E-04	2.73E-04	2.73E-04	2.73E-04
TEENAGE	CLOUD	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02
TEENAGE	VEG. ING	2.24E-04	2.58E-03	7.68E-04	7.68E-04	6.26E-04	0.00E+00
TEENAGE	MEAT ING	3.93E-05	4.54E-04	1.35E-04	1.35E-04	1.10E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	1.52E-01	1.99E-02	1.45E-02	1.62E-02	1.52E-02	2.32E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	1.39E-01	1.95E-03	2.76E-05	1.46E-03	7.01E-04	2.31E+00
ADULT	GROUND	2.73E-04	2.73E-04	2.73E-04	2.73E-04	2.73E-04	2.73E-04
ADULT	CLOUD	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02
ADULT	VEG. ING	3.09E-04	3.57E-03	1.06E-03	1.06E-03	8.64E-04	0.00E+00
ADULT	MEAT ING	6.86E-05	7.93E-04	2.36E-04	2.36E-04	1.92E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	1.53E-01	1.99E-02	1.49E-02	1.63E-02	1.53E-02	2.32E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 12 NAME=WSW PB X= -3.0KM, Y= -1.3KM, Z= 0.0M, DIST= 3.3KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS 1S...100.0

NUMBER 12 NAME=WSW PB X= -3.0KM, Y= -1.3KM, Z= 0.0M, DIST= 3.3KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	2.02E-01	1.92E-03	1.79E-04	9.99E-03	3.88E-03	3.36E+00
INFANT	GROUND	3.94E-04	3.94E-04	3.94E-04	3.94E-04	3.94E-04	3.94E-04
INFANT	CLOUD	1.83E-02	1.83E-02	1.83E-02	1.83E-02	1.83E-02	1.83E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	2.21E-01	2.06E-02	1.89E-02	2.87E-02	2.26E-02	3.38E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	2.02E-01	1.46E-03	8.37E-05	4.44E-03	1.83E-03	3.36E+00
CHILD	GROUND	3.94E-04	3.94E-04	3.94E-04	3.94E-04	3.94E-04	3.94E-04
CHILD	CLOUD	1.83E-02	1.83E-02	1.83E-02	1.83E-02	1.83E-02	1.83E-02
CHILD	VEG. ING	1.47E-04	1.70E-03	5.06E-04	5.06E-04	4.12E-04	0.00E+00
CHILD	MEAT ING	2.63E-05	3.03E-04	9.02E-05	9.02E-05	7.35E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	2.21E-01	2.22E-02	1.94E-02	2.37E-02	2.10E-02	3.38E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	2.02E-01	3.59E-03	3.59E-05	1.90E-03	9.14E-04	3.36E+00
TEENAGE	GROUND	3.94E-04	3.94E-04	3.94E-04	3.94E-04	3.94E-04	3.94E-04
TEENAGE	CLOUD	1.83E-02	1.83E-02	1.83E-02	1.83E-02	1.83E-02	1.83E-02
TEENAGE	VEG. ING	2.43E-04	2.81E-03	8.34E-04	8.34E-04	6.79E-04	0.00E+00
TEENAGE	MEAT ING	4.26E-05	4.93E-04	1.46E-04	1.46E-04	1.19E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	2.21E-01	2.56E-02	1.97E-02	2.16E-02	2.04E-02	3.38E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	2.02E-01	2.11E-03	2.99E-05	1.59E-03	7.61E-04	3.36E+00
ADULT	GROUND	3.94E-04	3.94E-04	3.94E-04	3.94E-04	3.94E-04	3.94E-04
ADULT	CLOUD	1.83E-02	1.83E-02	1.83E-02	1.83E-02	1.83E-02	1.83E-02
ADULT	VEG. ING	3.35E-04	3.88E-03	1.15E-03	1.15E-03	9.38E-04	0.00E+00
ADULT	MEAT ING	7.45E-05	8.61E-04	2.56E-04	2.56E-04	2.08E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	2.21E-01	2.55E-02	2.01E-02	2.17E-02	2.06E-02	3.38E+00

TIME STEP NUMBER 1, DURATION IN YRS 15...100.0

NUMBER 13 NAME=W PB X= -2.8KM, Y= 0.0KM, Z= 0.0M, DIST= 2.8KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 13 NAME=W PB X= -2.8KM, Y= 0.0KM, Z= 0.0M, DIST= 2.8KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	3.83E-01	2.42E-03	2.25E-04	1.26E-02	4.88E-03	6.37E+00
INFANT	GROUND	7.34E-04	7.34E-04	7.34E-04	7.34E-04	7.34E-04	7.34E-04
INFANT	CLOUD	2.84E-02	2.84E-02	2.84E-02	2.84E-02	2.84E-02	2.84E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	4.12E-01	3.15E-02	2.93E-02	4.17E-02	3.40E-02	6.40E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	3.83E-01	1.83E-03	1.05E-04	5.58E-03	2.30E-03	6.37E+00
CHILD	GROUND	7.34E-04	7.34E-04	7.34E-04	7.34E-04	7.34E-04	7.34E-04
CHILD	CLOUD	2.84E-02	2.84E-02	2.84E-02	2.84E-02	2.84E-02	2.84E-02
CHILD	VEG. ING	1.85E-04	2.14E-03	6.36E-04	6.36E-04	5.18E-04	0.00E+00
CHILD	MEAT ING	3.30E-05	3.81E-04	1.13E-04	1.13E-04	9.23E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	4.12E-01	3.35E-02	3.00E-02	3.55E-02	3.20E-02	6.40E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	3.83E-01	4.52E-03	4.50E-05	2.39E-03	1.15E-03	6.37E+00
TEENAGE	GROUND	7.34E-04	7.34E-04	7.34E-04	7.34E-04	7.34E-04	7.34E-04
TEENAGE	CLOUD	2.84E-02	2.84E-02	2.84E-02	2.84E-02	2.84E-02	2.84E-02
TEENAGE	VEG. ING	3.05E-04	3.53E-03	1.05E-03	1.05E-03	8.54E-04	0.00E+00
TEENAGE	MEAT ING	5.36E-05	6.19E-04	1.84E-04	1.84E-04	1.50E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	4.12E-01	3.79E-02	3.04E-02	3.27E-02	3.13E-02	6.40E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	3.83E-01	2.66E-03	3.75E-05	1.99E-03	9.57E-04	6.37E+00
ADULT	GROUND	7.34E-04	7.34E-04	7.34E-04	7.34E-04	7.34E-04	7.34E-04
ADULT	CLOUD	2.84E-02	2.84E-02	2.84E-02	2.84E-02	2.84E-02	2.84E-02
ADULT	VEG. ING	4.21E-04	4.87E-03	1.45E-03	1.45E-03	1.18E-03	0.00E+00
ADULT	MEAT ING	9.36E-05	1.08E-03	3.22E-04	3.22E-04	2.62E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	4.12E-01	3.77E-02	3.09E-02	3.29E-02	3.15E-02	6.40E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 14 NAME=WNW PB X= -2.2KM, Y= 0.9KM, Z= 0.0M, DIST= 2.3KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 14 NAME=WNW PB X= -2.2KM, Y= 0.9KM, Z= 0.0M, DIST= 2.3KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	6.99E-01	2.60E-03	2.42E-04	1.35E-02	5.24E-03	1.16E+01
INFANT	GROUND	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03
INFANT	CLOUD	3.82E-02	3.82E-02	3.82E-02	3.82E-02	3.82E-02	3.82E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	7.38E-01	4.21E-02	3.97E-02	5.30E-02	4.47E-02	1.17E+01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	6.99E-01	1.97E-03	1.13E-04	5.99E-03	2.47E-03	1.16E+01
CHILD	GROUND	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03
CHILD	CLOUD	3.82E-02	3.82E-02	3.82E-02	3.82E-02	3.82E-02	3.82E-02
CHILD	VEG. ING	1.99E-04	2.30E-03	6.84E-04	6.84E-04	5.57E-04	0.00E+00
CHILD	MEAT ING	3.55E-05	4.10E-04	1.22E-04	1.22E-04	9.92E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	7.38E-01	4.42E-02	4.04E-02	4.63E-02	4.26E-02	1.17E+01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	6.99E-01	4.85E-03	4.83E-05	2.57E-03	1.23E-03	1.16E+01
TEENAGE	GROUND	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03
TEENAGE	CLOUD	3.82E-02	3.82E-02	3.82E-02	3.82E-02	3.82E-02	3.82E-02
TEENAGE	VEG. ING	3.28E-04	3.79E-03	1.13E-03	1.13E-03	9.17E-04	0.00E+00
TEENAGE	MEAT ING	5.76E-05	6.65E-04	1.98E-04	1.98E-04	1.61E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	7.38E-01	4.88E-02	4.09E-02	4.34E-02	4.18E-02	1.17E+01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	6.98E-01	2.85E-03	4.03E-05	2.14E-03	1.03E-03	1.16E+01
ADULT	GROUND	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03
ADULT	CLOUD	3.82E-02	3.82E-02	3.82E-02	3.82E-02	3.82E-02	3.82E-02
ADULT	VEG. ING	4.53E-04	5.23E-03	1.56E-03	1.56E-03	1.27E-03	0.00E+00
ADULT	MEAT ING	1.01E-04	1.16E-03	3.46E-04	3.46E-04	2.81E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	7.39E-01	4.87E-02	4.14E-02	4.35E-02	4.21E-02	1.17E+01

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 15 NAME=NW PB X= -1.4KM, Y= 1.4KM, Z= 0.0M, DIST= 2.0KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 16 NAME=NW PB X= -1.4KM, Y= 1.4KM, Z= 0.0M, DIST= 2.0KM, TRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	7.58E-01	2.04E-03	1.90E-04	1.06E-02	4.12E-03	1.26E+01
INFANT	GROUND	1.40E-03	1.40E-03	1.40E-03	1.40E-03	1.40E-03	1.40E-03
INFANT	CLOUD	3.58E-02	3.58E-02	3.58E-02	3.58E-02	3.58E-02	3.58E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	7.95E-01	3.92E-02	3.74E-02	4.78E-02	4.13E-02	1.27E+01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	7.57E-01	1.55E-03	8.87E-05	4.71E-03	1.94E-03	1.26E+01
CHILD	GROUND	1.40E-03	1.40E-03	1.40E-03	1.40E-03	1.40E-03	1.40E-03
CHILD	CLOUD	3.58E-02	3.58E-02	3.58E-02	3.58E-02	3.58E-02	3.58E-02
CHILD	VEG. ING	1.57E-04	1.81E-03	5.38E-04	5.38E-04	4.38E-04	0.00E+00
CHILD	MEAT ING	2.79E-05	3.22E-04	9.58E-05	9.58E-05	7.80E-05	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	7.95E-01	4.09E-02	3.79E-02	4.25E-02	3.97E-02	1.27E+01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	7.57E-01	3.82E-03	3.80E-05	2.02E-03	9.70E-04	1.26E+01
TEENAGE	GROUND	1.40E-03	1.40E-03	1.40E-03	1.40E-03	1.40E-03	1.40E-03
TEENAGE	CLOUD	3.58E-02	3.58E-02	3.58E-02	3.58E-02	3.58E-02	3.58E-02
TEENAGE	VEG. ING	2.58E-04	2.98E-03	8.86E-04	8.86E-04	7.21E-04	0.00E+00
TEENAGE	MEAT ING	4.53E-05	5.23E-04	1.55E-04	1.55E-04	1.27E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	7.95E-01	4.45E-02	3.83E-02	4.03E-02	3.90E-02	1.27E+01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	7.57E-01	2.24E-03	3.17E-05	1.68E-03	8.08E-04	1.26E+01
ADULT	GROUND	1.40E-03	1.40E-03	1.40E-03	1.40E-03	1.40E-03	1.40E-03
ADULT	CLOUD	3.58E-02	3.58E-02	3.58E-02	3.58E-02	3.58E-02	3.58E-02
ADULT	VEG. ING	3.56E-04	4.12E-03	1.22E-03	1.22E-03	9.96E-04	0.00E+00
ADULT	MEAT ING	7.91E-05	9.14E-04	2.72E-04	2.72E-04	2.21E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	7.95E-01	4.45E-02	3.87E-02	4.04E-02	3.92E-02	1.27E+01

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 16 NAME=NNW PR X= -1.1KM, Y= 2.6KM, Z= 0.0M, DIST= 2.8KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 16 NAME=NNW PB X= -1.1KM, Y= 2.0KM, Z= 0.0M, DIST= 2.8KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	4.28E-01	2.74E-03	2.55E-04	1.42E-02	5.53E-03	7.11E+00
INFANT	GROUND	8.17E-04	8.17E-04	8.17E-04	8.17E-04	8.17E-04	8.17E-04
INFANT	CLOUD	3.06E-02	3.06E-02	3.06E-02	3.06E-02	3.06E-02	3.06E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	4.59E-01	3.42E-02	3.17E-02	4.50E-02	3.69E-02	7.14E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	4.27E-01	2.08E-03	1.19E-04	6.33E-03	2.60E-03	7.11E+00
CHILD	GROUND	8.17E-04	8.17E-04	8.17E-04	8.17E-04	8.17E-04	8.17E-04
CHILD	CLOUD	3.06E-02	3.06E-02	3.06E-02	3.06E-02	3.06E-02	3.06E-02
CHILD	VEG. ING	2.10E-04	2.43E-03	7.22E-04	7.22E-04	5.88E-04	0.00E+00
CHILD	MEAT ING	3.74E-05	4.33E-04	1.29E-04	1.29E-04	1.05E-04	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	4.59E-01	3.64E-02	3.24E-02	3.86E-02	3.47E-02	7.14E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	4.27E-01	5.12E-03	5.11E-05	2.71E-03	1.30E-03	7.11E+00
TEENAGE	GROUND	8.17E-04	8.17E-04	8.17E-04	8.17E-04	8.17E-04	8.17E-04
TEENAGE	CLOUD	3.06E-02	3.06E-02	3.06E-02	3.06E-02	3.06E-02	3.06E-02
TEENAGE	VEG. ING	3.46E-04	4.00E-03	1.19E-03	1.19E-03	9.68E-04	0.00E+00
TEENAGE	MEAT ING	6.08E-05	7.02E-04	2.09E-04	2.09E-04	1.70E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	4.59E-01	4.12E-02	3.29E-02	3.55E-02	3.39E-02	7.14E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	4.27E-01	3.01E-03	4.26E-05	2.26E-03	1.09E-03	7.11E+00
ADULT	GROUND	8.17E-04	8.17E-04	8.17E-04	8.17E-04	8.17E-04	8.17E-04
ADULT	CLOUD	3.06E-02	3.06E-02	3.06E-02	3.06E-02	3.06E-02	3.06E-02
ADULT	VEG. ING	4.78E-04	5.52E-03	1.64E-03	1.64E-03	1.34E-03	0.00E+00
ADULT	MEAT ING	1.06E-04	1.23E-03	3.65E-04	3.65E-04	2.97E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	4.59E-01	4.12E-02	3.35E-02	3.57E-02	3.41E-02	7.14E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 17 NAME=Nearest Resident Ear X= 4.5KM, Y= 0.0KM, Z= 0.0M, DIST= 4.5KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 17 NAME=Nearest Resident Eas X= 4.5KM, Y= 0.0KM, Z= 0.0M, DIST= 4.5KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	6.41E-01	6.83E-03	6.38E-04	3.55E-02	1.38E-02	1.07E+01
INFANT	GROUND	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03
INFANT	CLOUD	4.93E-02	4.93E-02	4.93E-02	4.93E-02	4.93E-02	4.93E-02
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	6.92E-01	5.74E-02	5.12E-02	8.60E-02	6.44E-02	1.07E+01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	6.40E-01	5.18E-03	2.98E-04	1.58E-02	6.49E-03	1.07E+01
CHILD	GROUND	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03
CHILD	CLOUD	4.93E-02	4.93E-02	4.93E-02	4.93E-02	4.93E-02	4.93E-02
CHILD	VEG. ING	5.23E-04	6.05E-03	1.80E-03	1.80E-03	1.46E-03	0.00E+00
CHILD	MEAT ING	9.32E-05	1.08E-03	3.20E-04	3.20E-04	2.61E-04	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	6.91E-01	6.29E-02	5.30E-02	6.85E-02	5.88E-02	1.07E+01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	6.40E-01	1.28E-02	1.28E-04	6.75E-03	3.24E-03	1.07E+01
TEENAGE	GROUND	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03
TEENAGE	CLOUD	4.93E-02	4.93E-02	4.93E-02	4.93E-02	4.93E-02	4.93E-02
TEENAGE	VEG. ING	8.62E-04	9.96E-03	2.96E-03	2.96E-03	2.41E-03	0.00E+00
TEENAGE	MEAT ING	1.51E-04	1.75E-03	5.20E-04	5.20E-04	4.23E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	6.92E-01	7.50E-02	5.42E-02	6.08E-02	5.67E-02	1.07E+01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	6.40E-01	7.50E-03	1.06E-04	5.63E-03	2.70E-03	1.07E+01
ADULT	GROUND	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03
ADULT	CLOUD	4.93E-02	4.93E-02	4.93E-02	4.93E-02	4.93E-02	4.93E-02
ADULT	VEG. ING	1.19E-03	1.38E-02	4.09E-03	4.09E-03	3.33E-03	0.00E+00
ADULT	MEAT ING	2.64E-04	3.06E-03	9.08E-04	9.08E-04	7.40E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	6.92E-01	7.49E-02	5.57E-02	6.12E-02	5.74E-02	1.07E+01

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 16 NAME=Nearest Resident Son X= 0.0KM, Y= -13.4KM, Z= 0.0M, DIST= 13.4KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

NUMBER 18 NAME=Nearest Resident Sou X= 0.0KM, Y= -13.4KM, Z= 0.0M, DIST= 13.4KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	7.45E-02	4.13E-03	3.94E-04	2.14E-02	8.33E-03	1.22E+00
INFANT	GROUND	1.68E-04	1.68E-04	1.68E-04	1.68E-04	1.68E-04	1.68E-04
INFANT	CLOUD	8.09E-03	8.09E-03	8.09E-03	8.09E-03	8.09E-03	8.09E-03
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	8.27E-02	1.24E-02	8.65E-03	2.97E-02	1.66E-02	1.23E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	7.38E-02	3.13E-03	1.84E-04	9.53E-03	3.92E-03	1.22E+00
CHILD	GROUND	1.68E-04	1.68E-04	1.68E-04	1.68E-04	1.68E-04	1.68E-04
CHILD	CLOUD	8.09E-03	8.09E-03	8.09E-03	8.09E-03	8.09E-03	8.09E-03
CHILD	VEG. ING	3.16E-04	3.66E-03	1.09E-03	1.09E-03	8.85E-04	0.00E+00
CHILD	MEAT ING	5.64E-05	6.51E-04	1.94E-04	1.94E-04	1.58E-04	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	8.24E-02	1.57E-02	9.72E-03	1.91E-02	1.32E-02	1.23E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	7.38E-02	7.71E-03	7.88E-05	4.08E-03	1.96E-03	1.22E+00
TEENAGE	GROUND	1.68E-04	1.68E-04	1.68E-04	1.68E-04	1.68E-04	1.68E-04
TEENAGE	CLOUD	8.09E-03	8.09E-03	8.09E-03	8.09E-03	8.09E-03	8.09E-03
TEENAGE	VEG. ING	5.21E-04	6.02E-03	1.79E-03	1.79E-03	1.46E-03	0.00E+00
TEENAGE	MEAT ING	9.15E-05	1.06E-03	3.14E-04	3.14E-04	2.56E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	8.27E-02	2.30E-02	1.04E-02	1.44E-02	1.19E-02	1.23E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	7.37E-02	4.54E-03	6.56E-05	3.40E-03	1.63E-03	1.22E+00
ADULT	GROUND	1.68E-04	1.68E-04	1.68E-04	1.68E-04	1.68E-04	1.68E-04
ADULT	CLOUD	8.09E-03	8.09E-03	8.09E-03	8.09E-03	8.09E-03	8.09E-03
ADULT	VEG. ING	7.20E-04	8.32E-03	2.47E-03	2.47E-03	2.01E-03	0.00E+00
ADULT	MEAT ING	1.60E-04	1.85E-03	5.49E-04	5.49E-04	4.47E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	8.28E-02	2.30E-02	1.13E-02	1.47E-02	1.24E-02	1.23E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 19 NAME=Wright X= 26.0KM, Y= 18.9KM, Z= 0.0M, DIST= 32.2KM, IRTYPE=10

40CFR190 ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	CLOUD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TIME STEP NUMBER 1, DURATION IN YRS IS...100.0

NUMBER 19 NAME=Wright X= 26.0KM, Y= 18.9KM, Z= 0.0M, DIST= 32.2KM, IRTYPE=10

TOTAL ANNUAL DOSE COMMITMENTS COMPUTED FOR THIS LOCATION, MREM/YR

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
INFANT	INHAL.	2.72E-02	4.18E-03	4.18E-04	2.17E-02	8.43E-03	4.31E-01
INFANT	GROUND	7.90E-05	7.90E-05	7.90E-05	7.90E-05	7.90E-05	7.90E-05
INFANT	CLOUD	3.44E-03	3.44E-03	3.44E-03	3.44E-03	3.44E-03	3.44E-03
INFANT	VEG. ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MEAT ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
INFANT	TOTALS	3.07E-02	7.70E-03	3.94E-03	2.52E-02	1.20E-02	4.34E-01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
CHILD	INHAL.	2.65E-02	3.17E-03	1.95E-04	9.64E-03	3.97E-03	4.31E-01
CHILD	GROUND	7.90E-05	7.90E-05	7.90E-05	7.90E-05	7.90E-05	7.90E-05
CHILD	CLOUD	3.44E-03	3.44E-03	3.44E-03	3.44E-03	3.44E-03	3.44E-03
CHILD	VEG. ING	3.20E-04	3.70E-03	1.10E-03	1.10E-03	8.95E-04	0.00E+00
CHILD	MEAT ING	5.70E-05	6.50E-04	1.96E-04	1.96E-04	1.59E-04	0.00E+00
CHILD	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CHILD	TOTALS	3.04E-02	1.10E-02	5.01E-03	1.45E-02	8.54E-03	4.34E-01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
TEENAGE	INHAL.	2.65E-02	7.80E-03	8.34E-05	4.13E-03	1.98E-03	4.31E-01
TEENAGE	GROUND	7.90E-05	7.90E-05	7.90E-05	7.90E-05	7.90E-05	7.90E-05
TEENAGE	CLOUD	3.44E-03	3.44E-03	3.44E-03	3.44E-03	3.44E-03	3.44E-03
TEENAGE	VEG. ING	5.27E-04	6.09E-03	1.81E-03	1.81E-03	1.47E-03	0.00E+00
TEENAGE	MEAT ING	9.25E-05	1.07E-03	3.18E-04	3.18E-04	2.59E-04	0.00E+00
TEENAGE	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TEENAGE	TOTALS	3.07E-02	1.85E-02	5.73E-03	9.78E-03	7.24E-03	4.34E-01

AGE	PATHWAY	EFFECTIV	BONE	AVG.LUNG	LIVER	KIDNEY	BRONCHI
ADULT	INHAL.	2.64E-02	4.59E-03	6.95E-05	3.44E-03	1.65E-03	4.31E-01
ADULT	GROUND	7.90E-05	7.90E-05	7.90E-05	7.90E-05	7.90E-05	7.90E-05
ADULT	CLOUD	3.44E-03	3.44E-03	3.44E-03	3.44E-03	3.44E-03	3.44E-03
ADULT	VEG. ING	7.28E-04	8.41E-03	2.50E-03	2.50E-03	2.04E-03	0.00E+00
ADULT	MEAT ING	1.62E-04	1.87E-03	5.55E-04	5.55E-04	4.52E-04	0.00E+00
ADULT	MILK ING	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ADULT	TOTALS	3.08E-02	1.84E-02	6.65E-03	1.00E-02	7.66E-03	4.34E-01

Program execution time = 1.43 seconds

APPENDIX D-1

RESRAD Data Input Basis Parameters

RESRAD Data Input Basis

Parameters

This document summarizes the data input and modeling scenario that was used to determine the radium benchmark dose for the MRISR Project. The modeling was performed using RESRAD for Windows Version 6.3 developed by the Environmental Assessment Division at Argonne National Laboratory.

The resident farmer scenario was used since this is the most likely this is the most likely land use near the site. The following sections describe the data parameters that were used to model site-specific conditions.

The data input was based upon four principal sources:

1. The RESRAD Data Collection Handbook (ANL, 1993)
2. The RESRAD Users' Manual (ANL, 2003)
3. The NUREG-1569
4. Site specific information to be included in the MRISR license application

Soil Concentration

1. Lead 210: Used 5.0 pCi/g per the NUREG-1569.
2. Radium 226: Used 5.0 pCi/g regulatory limit as basis for determining benchmark.

Distribution Coefficient (K_d) (values based upon data in RESRAD Handbook)

1. Lead 210: Used a distribution coefficient of 270 cm^3/g for sandy soil based upon soil type at the mine. The RESRAD User's Manual specifies the following values:

    - Sand = 270
    - Loam = 16,000

Sensitivity analysis indicates with a multiple of 100, no appreciable impact on maximum dose for the external dose pathway using higher or lower K_d.. For the Plant (water independent) pathway, the lower K_d value resulted in a slightly lower maximum dose for this pathway. In this case, using the midrange value of 270 would result in a conservative maximum dose estimate. Used values of 2.7, 270 (mid range), and 27,000 which covers the range of potential values at the site based upon sandy and loamy soil types. Graph attached.

2. Radium 226: Used a distribution coefficient of 500 cm^3/g for sandy soil based upon soil type at the mine. The RESRAD User's Manual specifies the following values:

    - Sand = 500
    - Loam = 36,000

Sensitivity analysis indicates with a multiple of 100, no appreciable impact on maximum dose using higher K_d. Used values of 5, 500 (mid range), and 50,000 which covers the range of potential values at the site based upon sandy and loamy soil types. Graph attached.

Contaminated Zone

1. Area: Used default value of 10,000 square meters.

Sensitivity analysis was performed with a 2 multiple (5,000, 10,000 and 20,000 square meters). There was no impact on maximum dose for the External dose component. Graph attached.

2. Thickness: 15 cm (6 inches) based upon regulatory requirement (minimum in RESRAD Handbook)

3. Length parallel to aquifer flow: Default of 100 meters was used and is based upon the square root of a 10,000 square meter contaminated zone.

No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

Cover and Contaminated Zone

1. Cover depth: 0 inches (in accordance with NUREG-1569).

2. Density of contaminated zone: Used the default value of 1.5 g/cc, which corresponds to sandy soil in the RESRAD Handbook. This compares with the soil types at the MRISR and data in the MRISR license application.

   Because the RESRAD Data Collection Handbook considers this default value representative of the soil type, no sensitivity analysis was performed.

3. Contaminated zone erosion rate: Used the default value of 0.001 meters/year. NUREG-1569 states that the erosion rate should be lower at uranium recovery sites due to the semi-arid environment. The RESRAD Handbook states that this value should be adequate for screening purposes. It also states that, while water erosion is the primary factor, wind erosion can also be significant.

Sensitivity analysis was run using a multiple of 5 (i.e., 0.0002, 0.001 and 0.005). The lower erosion rate resulted in the total dose remaining at a higher level over a longer period of time for both the external and vegetation (water independent) pathways. However, there was no impact on the maximum dose.

4. Contaminated zone total porosity: Default value of 0.4 is based upon the soil types at MRISR.

No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

5. Contaminated zone field capacity: Default value of 0.2 was used. This value was used because it is at the midpoint of the range for the soil types at MRISR.

No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

6. Contaminated zone hydraulic conductivity: The range given in RESRAD handbook for silty sand is 1×10^1 to 1×10^4 m/yr. The soil types in the licensed area are principally Hiland fine sandy loam and Cushman loam. The hydraulic conductivity (K_{sat}) in m/yr. given in the RESRAD Manual for loamy sand is 4.93×10^3 m/yr. Very fine sand is given a K_{sat} of 3.0×10^3 m/yr in the RESRAD Handbook. To be conservative, a high value of 4.3×10^3 representative of Hiland fine sandy loam was chosen since site specific data is unavailable.

No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

7. Contaminated zone b parameter: Default parameter is 5.3 for silty loam. The RESRAD Handbook and RESRAD Manual specify the range from sand to loam is 4.05 to 5.39. Used default value.

No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

8. Evapotranspiration Coefficient: The RESRAD default value is 0.5. NUREG-1569 suggests that a value of 0.6 to 0.99 for uranium recovery sites is appropriate because they are located in a semiarid environment. For screening purposes, a mid-value (0.75) was used.

No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

9. Wind Speed: The RESRAD default is 2 m/s. The average for the MRISR is 5 m/s based on meteorological data from.
   No sensitivity analysis was performed since this is actual site data.

10. Precipitation: The RESRAD default is 1 m/yr. The average for the MRISR site is 0.3 m/yr. Site data was used. No sensitivity analysis was performed since this is actual site data as recommended in NUREG-1569.

11. Irrigation Rate: The RESRAD default is 0.2 m/yr. This default value is high for western states where irrigation may not be an option for some area.

    No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

12. Runoff Coefficient: The RESRAD default value is 0.2. This is the value for open rolling land in the RESRAD Handbook and was used for MRISR. The potential range in the RESRAD handbook for the site would be 0.1 to 0.4.

No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

13. Watershed Area for nearby stream or pond: The RESRAD default value is 1 x 10^6 m^2.

    No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

14. Accuracy: Used the default value of 0.001.

Saturated Zone

1. Density of saturated zone: Used the default value of 1.5 g/cc, which corresponds to sandy soil in the RESRAD Handbook. This compares with the first saturated zone at the MRISR.

   No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

2. Saturated zone total porosity: Value of 0.43 is based upon formation type and data for the RESRAD Handbook.

   No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

3. Saturated zone effective porosity: Value of 0.33 was used based upon formation type and data for the RESRAD Handbook.

   No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

4. Contaminated zone field capacity: Default value of 0.2 was used. This value was used because it is at the midpoint of the range for the soil types at MRISR.

   No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

5. Saturated zone hydraulic conductivity: A value of 5550 m/y was used based upon formation type and data for the RESRAD Handbook.

   No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

6. Saturated zone hydraulic gradient: The default value of 0.02 was used for screening purposes.

   No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

7. Saturated zone b parameter: Default parameter is 5.3 for silty loam was used. The RESRAD Handbook and RESRAD Manual specify a value of 4.38 for loamy sand, which corresponds to the soil classification used for the hydraulic conductivity. The range from sand to loam is 4.05 to 5.39.

   No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

8. Water Table Drop Rate: The default value of 0.001 m/yr. was used for screening purposes. The site specific drop rate should be similar because there is little consumptive use of groundwater in the immediate area other than ranches that use local wells for domestic and livestock.

No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

9. Well Pump Intake Depth: The RESRAD default is 10 m. Since the depth to saturated zone is 21 meters and this zone is relatively thin and intermittent, a value of 22 meters was chosen.

   No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

10. Model for Water Transport Parameters: Used non-dispersion per NUREG-1569.

11. Well Pumping Rate: Used default of 250 m^3/yr. (66,000 gal/yr.).

No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

Unsaturated Zone

1. Unsaturated zone thickness: Used 21 meters based on site specific data to top of first saturated zone..

2. Density of unsaturated zone: Used 1.5 g/cc, which is similar to the saturated zone as discussed in NUREG-1569.

3. Unsaturated zone total Porosity: The default value of 0.4 is the same as used for the saturated zone as discussed in NUREG-1569.

No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

4. Unsaturated zone effective porosity: The default value of 0.2 is the same as used for the saturated zone as discussed in NUREG-1569.

   No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

5. Unsaturated zone field capacity: Default value of 0.2 was used. This value was used because it is at the midpoint of the range for the soil types at MRISR.

   No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

6. Unsaturated zone hydraulic conductivity: The range given in RESRAD handbook for silty sand is 1×10^1 to 1×10^4 m/yr. The soil types in the licensed area are principally Hiland fine sandy loam and Cushman loam. The hydraulic conductivity (K_{sat}) in m/yr. given in the RESRAD Manual for loamy sand is 4.93×10^3 m/yr. Very fine sand is given a K_{sat} of 3.0×10^3 m/yr in the RESRAD Handbook. To be conservative, a high value of 4.3×10^3 representative of Hiland fine sandy loam was chosen since site specific data is unavailable.

   No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

7. Saturated zone b parameter: Used default parameter of 5.3. The RESRAD Handbook and RESRAD Manual specify a value of 4.38 for loamy sand, which corresponds to the soil classification used for the hydraulic conductivity. The range from sand to loam is 4.05 to 5.39.

No Sensitivity analysis was performed since water dependent pathways were not significant contributors to dose.

Occupancy

1. Inhalation Rate: Used default value of 8,400 m^3/yr.

2. Mass Loading for Inhalation: Default is 0.0001 g/m^3. Handbook gives a value of 0.0003 g/ m^3 for agricultural generated dust loading. Used 0.0003 g/ m^3

   No Sensitivity analysis was performed since inhalation pathways were not significant contributors to dose.

3. Exposure Duration: Used default value of 30 years.

4. Indoor dust filtration factor: Used default value of 0.4.

5. External gamma shielding factor: The RESRAD default is 0.7, which assumes that the indoor gamma radiation level is 30% lower than the outdoor gamma radiation level. NUREG-1569 requires that a value between 0.33 and 0.55 be used. The screening level was set at 0.55. This is a value suitable for a 7-inch thick concrete slab on grade house (NUREG/CR-5512 Vol.3, p 6-25). This is representative of the thickness of the local slab or basement floor thicknesses.

Sensitivity analysis using a 1.5 multiple (i.e., 0.367, 0.55 and 0.825 resulted in a change in the maximum dose. See graph. The low range (0.367) resulted in a maximum dose for the external exposure pathway of approximately 20 mrem/yr compared to a dose of 23 mrem/yr for a shielding factor of 0.55. Based upon the fact that most construction of rural homes in the local area includes a thick concrete basement floor or slab, a shielding factor of 0.55 for the MRISR area is justified.

6. Indoor/Outdoor Fractions: Used defaults of 0.5 indoors and 0.25 outdoors for farmer scenario. As discussed above, the resident farmer scenario was chosen as the most likely land use for the foreseeable future (i.e., 200 years).

7. Shape of contaminated zone: NUREG-1569 suggests use of actual shape. However, the shape is unknown at this time. Various shapes were assumed including a rectangle having a length of up to four times the width. The results were independent of these shapes as long as the receptor was centered. When the receptor was at the edge of the area, the dose was reduced significantly as expected. A circular shape was adopted for the modeling.

Ingestion: Dietary

1. Consumption Rates:

A. Fruit, vegetable and grain: RESRAD default is 160 kg/yr. This value was used based upon EPA estimated consumption. NRC Reg. Guide 1.109 has an estimated consumption for an adult of 190 kg/yr. Screening level set at default of 160 kg/yr. This amount is the total consumption. RESRAD adjusts for contaminated and uncontaminated fractions based upon the size of the contaminated area.

B. Leafy Vegetable: Used default value of 14 kg/yr. NRC Reg. Guide 1.109 has an estimated consumption for an adult of 64 kg/yr, while NRC estimates for dose from nuclear power plants uses a consumption rate of 30 kg/yr. Screening level for total set at default of 190 kg/yr (see above entry). This amount is the total consumption. RESRAD adjusts for contaminated and uncontaminated fractions based upon the size of the contaminated area.

C. Milk: No consumption of locally produced and consumed milk per NUREG-1569. Dairy operations are not prevalent in the area.

D. Meat and Poultry: Used RESRAD default value of 63 kg/yr. According to NRC Regulatory Guide 1.109 (NRC, 1977), the recommended average value for consumption of meat and poultry is 37 kg/yr for children, 59 kg/yr for teenagers, and 95 kg/yr. for adults.

E. Fish/Seafood: No consumption of locally produced and consumed fish or seafood products was considered as recommended by NUREG-1569.

F. Soil ingestion: Used the RESRAD default value of 36.5 g/yr..

G. Drinking water intake: Used the RESRAD default of 510 l/yr. (1.4 L/d) as a screening level. This value is based upon EPA estimates of drinking water intake. The EPA (1990) has suggested that the average adult drinking water consumption rate is 1.4 L/d; the reasonable worst-case value is 2.0 L/d. .

2. Contaminated Fractions:

NUREG-1569 states that for sites with over 25 acres (10,117 square meters) of contamination, the fraction of diet from contaminated area should be assumed to be 25% (0.25). A sensitivity analysis on these parameters was not performed based upon the guidance.

A. Water: Used the default value of 1 (i.e., 100% of consumption is from contaminated well water). All current water use in rural areas around the site is from private wells and will likely continue to be in the foreseeable future.

B. Livestock Water: Used default of 1 (i.e., 100% is from contaminated water). All current water use in rural areas around the site is from private wells and will likely continue to be in the foreseeable future.

C. Irrigation Water: Used the RESRAD default of 1 (i.e., 100% is from contaminated water). All current water use in rural areas around the site is from private wells and will likely continue to be in the foreseeable future.

D. Plant food: Used 0.25 as percentage of plant food that is contaminated.

E. Meat: Used 0.25 as percentage of meat that is contaminated.

Ingestion: Nondietary

1. Consumption Rates:

A. Livestock fodder intake for meat: Used the RESRAD default of 68 kg/day.

B. Livestock water intake for meat: Used the RESRAD default of 50 L/day. According to NRC Regulatory Guide 1.109 (NRC 1977), the water ingestion rate for beef cattle is 50 L/d.

C. Livestock intake of soil for meat: Used the RESRAD default of 0.5 g/day.

D. Mass loading for foliar deposition: Used the same value of 0.0003 g/m^3 for agricultural generated dust loading as the inhalation parameter discussed above.

Sensitivity analysis was run with a multiple of 100 (i.e., 0.000003, 0.0003, and 0.03 g/m^3). There was no impact on dose.

E. Depth of soil mixing layer: Used the RESRAD default of 0.15 meters.

F. Depth of roots: Used 0.3 meters as a screening level based upon NUREG-1569 instead of the RESRAD default of 0.9. The root depth varies for different plants. For some plants, such as beets, carrots, lettuce, and so forth, it does not extend below about 0.3 m, which is the basis of the NRC guidance. For others, such as fruit trees, the roots may extend 2 or 3 m below the surface. Tap roots for some crops (e.g., alfalfa) can extend to 5 m. Most of the plant roots from which nutrients are obtained, however, usually extend to less than 1 m below the surface. Due to the common use of grazing crops such as alfalfa in the immediate area surrounding the MRISR site, a sensitivity analysis was chosen that would determine the dose using the 0.3 m NRC guidance as the screening level as well as the 0.9 m RESRAD default.

Sensitivity analysis was run with a multiple of 2 (i.e., 0.15, 0.3, and 0.6 meters). There was a significant impact on the maximum dose. Assumption of a shallow root system increased the dose significantly. In a review of the exposure pathways, the plant pathway resulted in approximately 35% of the total maximum dose. The meat pathway, which would be the primary pathway affected by deeper roots such as alfalfa was insignificant.. Therefore, the root depth recommended in the NRC NUREG-1569 was chosen for this parameter.

G. Groundwater fractional usage:

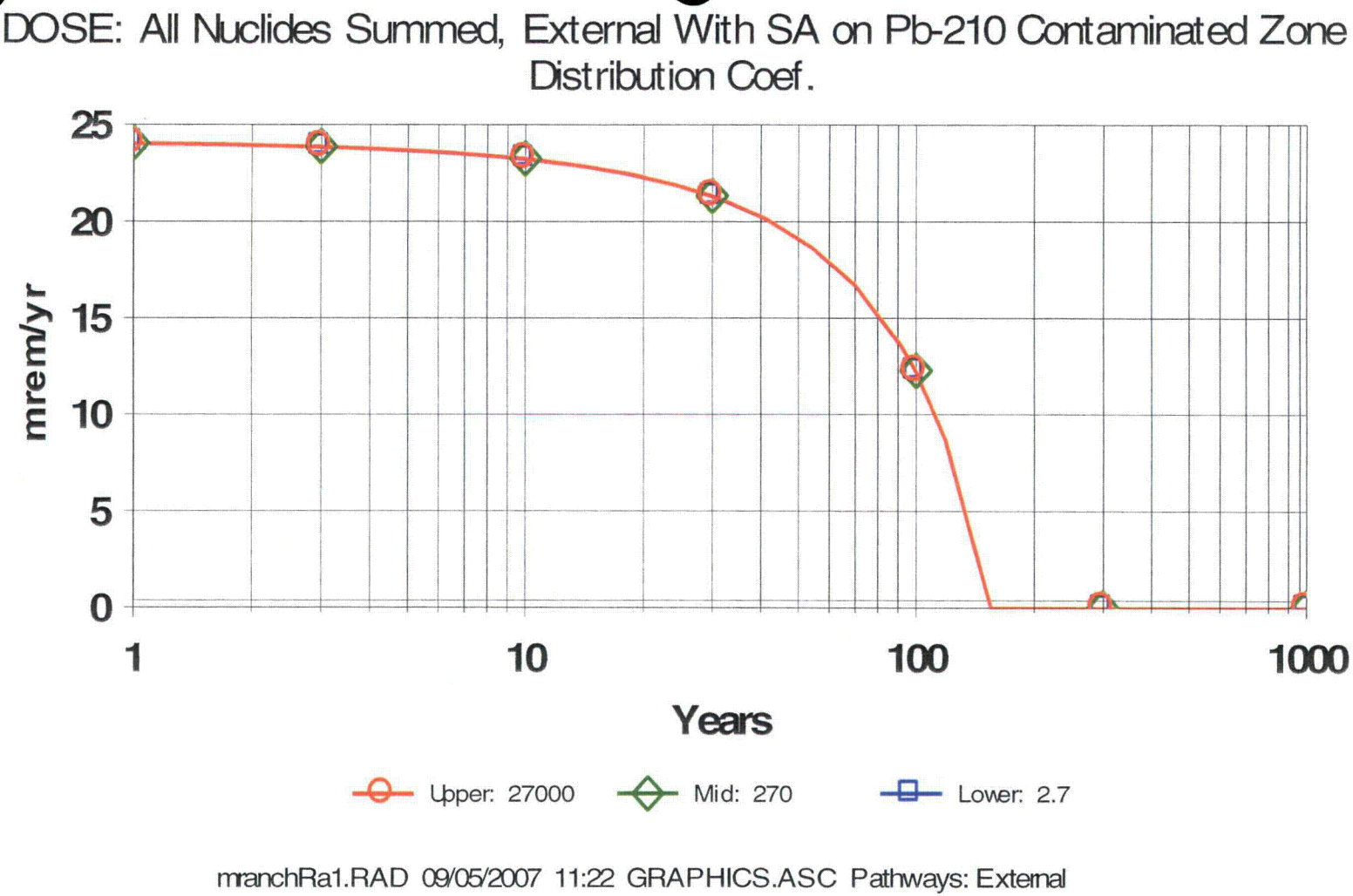
- Drinking water: Used the RESRAD default of 1 (i.e., 100% from well).
- Livestock water: Used the RESRAD default of 1 (i.e., 100% from well).
- Irrigation water: Used the RESRAD default of 1 (i.e., 100% from well).

Storage Times

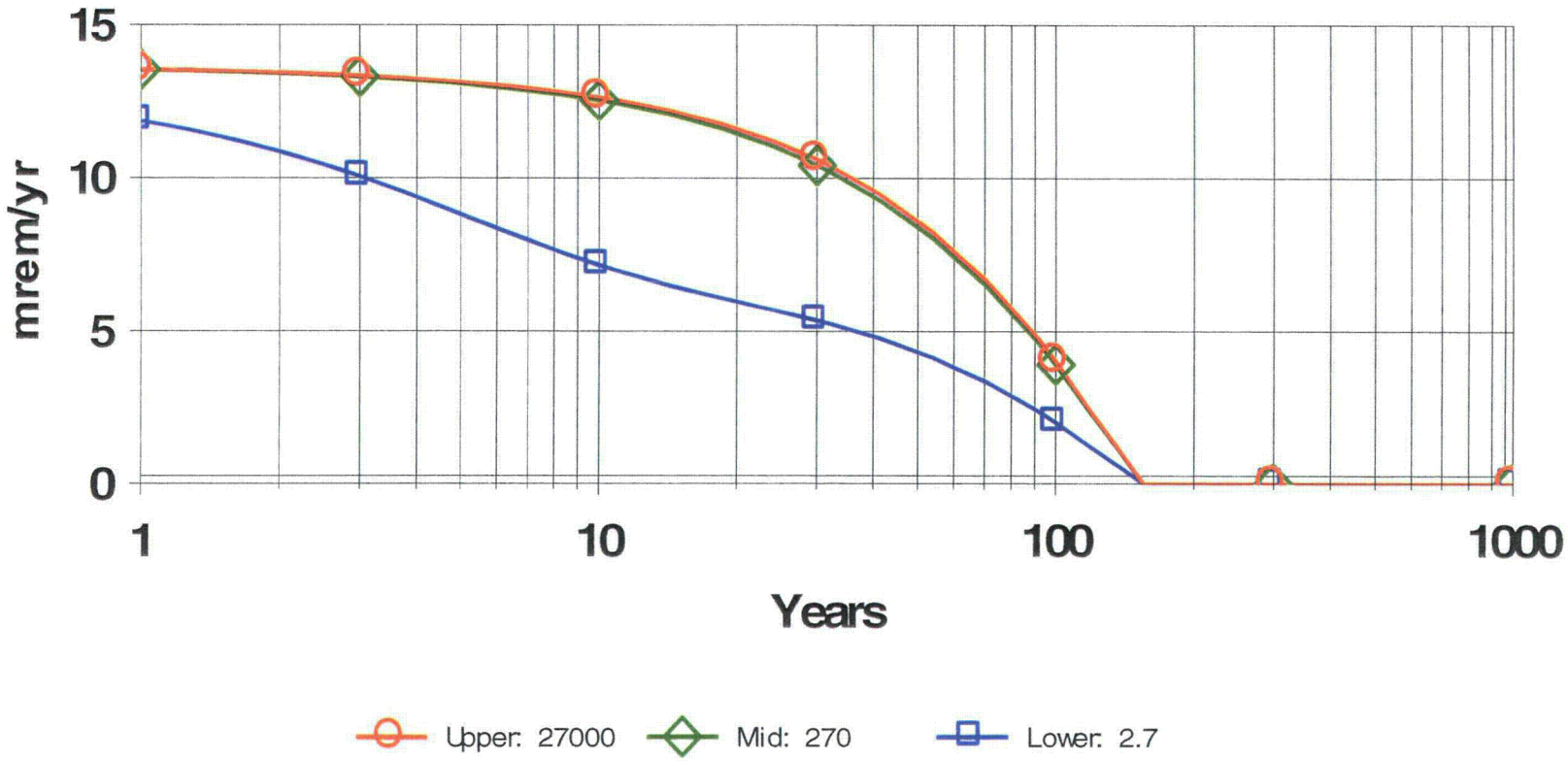
Used the RESRAD default values for all storage times (for vegetables, meats, fodder, etc.).

APPENDIX D-2

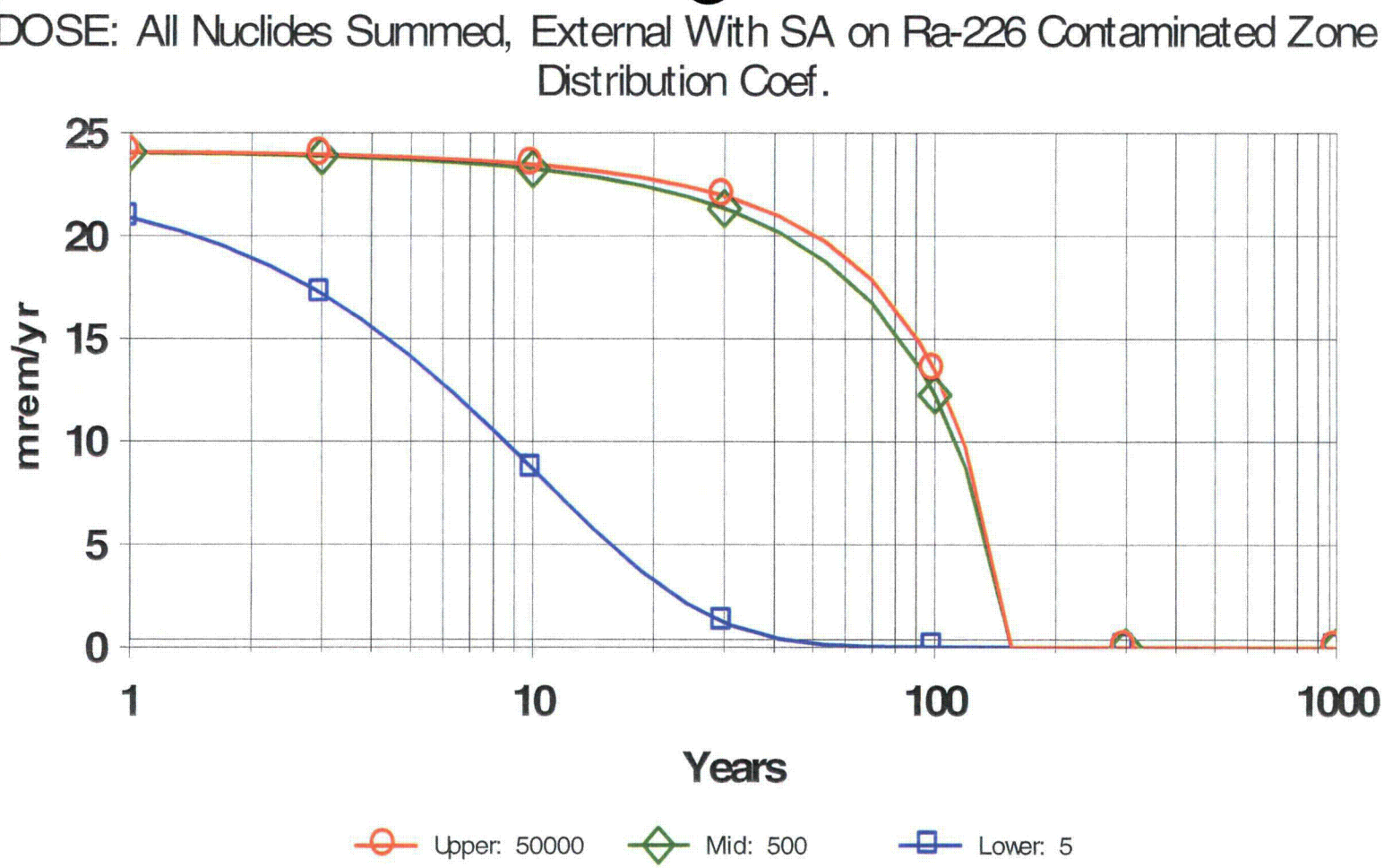
RESRAD Input Parameter Sensitivity Analysis


DOSE: All Nuclides Summed, External With SA on Pb-210 Contaminated Zone Distribution Coef.
mrem/yr
25
20
15
10
5
0
1
10
100
1000
Years
Upper: 27000
Mid: 270
Lower: 2.7
mranchRa1.RAD 09/05/2007 11:22 GRAPHICS.ASC Pathways: External

DOSE: All Nuclides Summed, Plant (Water Independent) With SA on Pb-210 Contaminated Zone Distribution Coef.

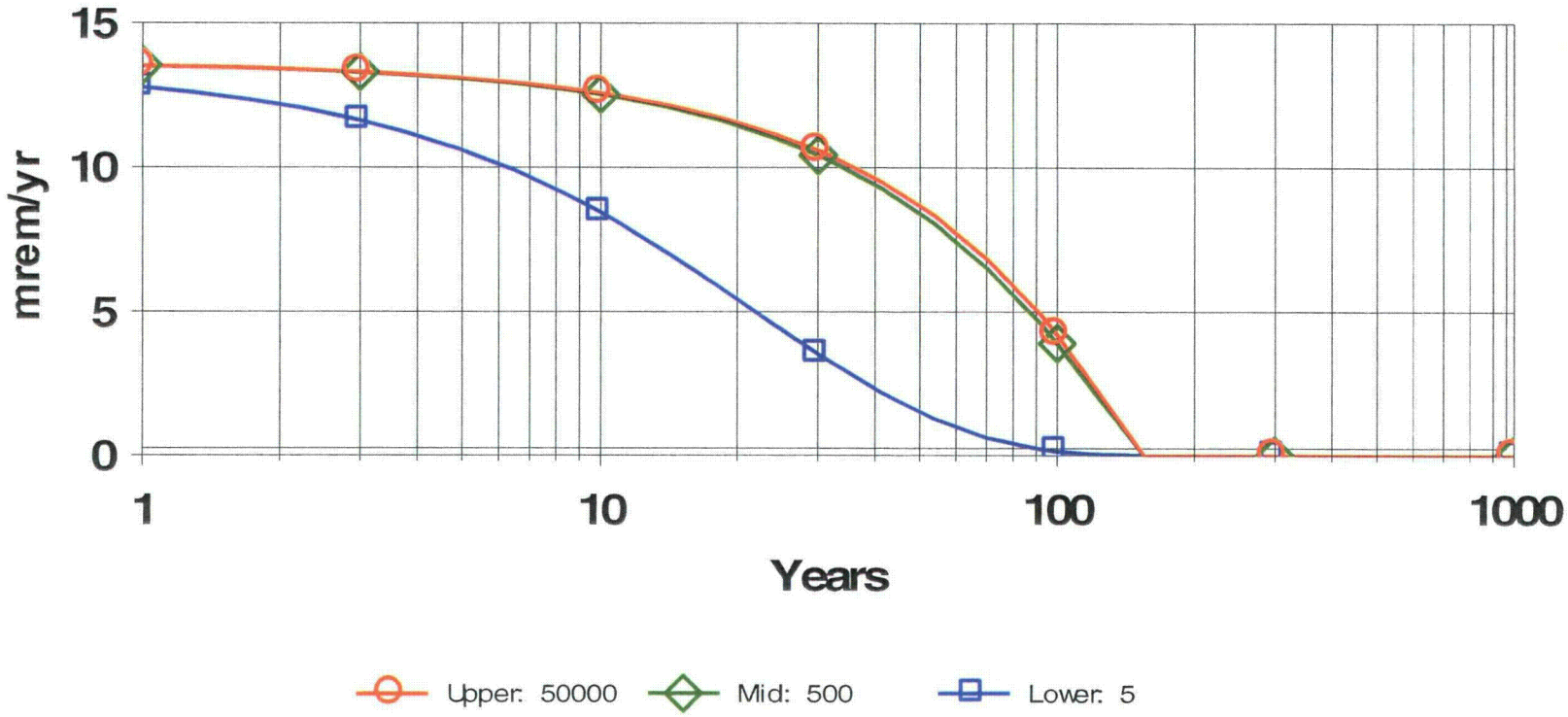


mranchRa1.RAD 09/05/2007 12:22 GRAPHICS.ASC Pathways: Plant (Water Independent)

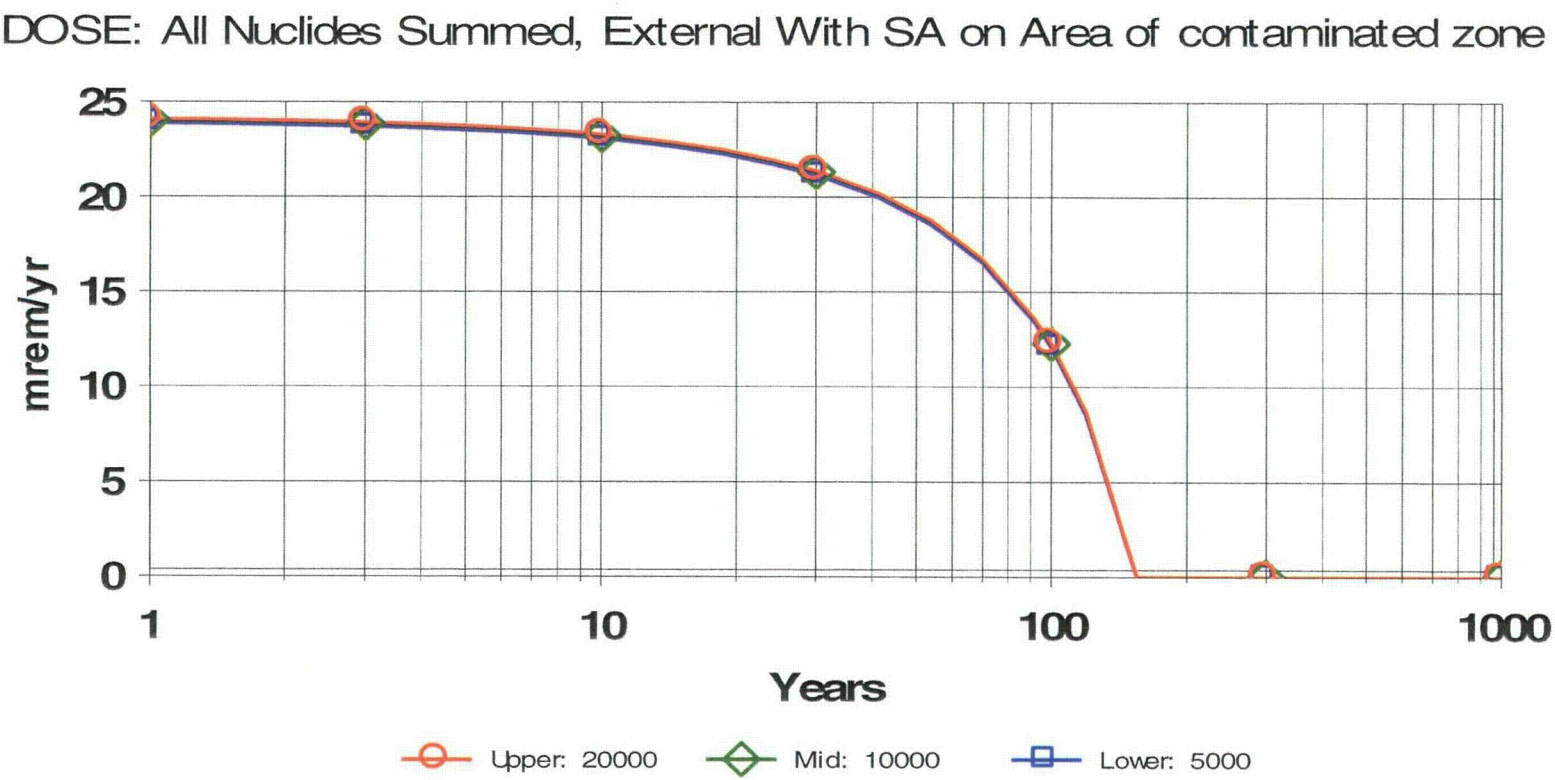


mranchRa1.RAD 09/05/2007 11:22 GRAPHICS.ASC Pathways: External

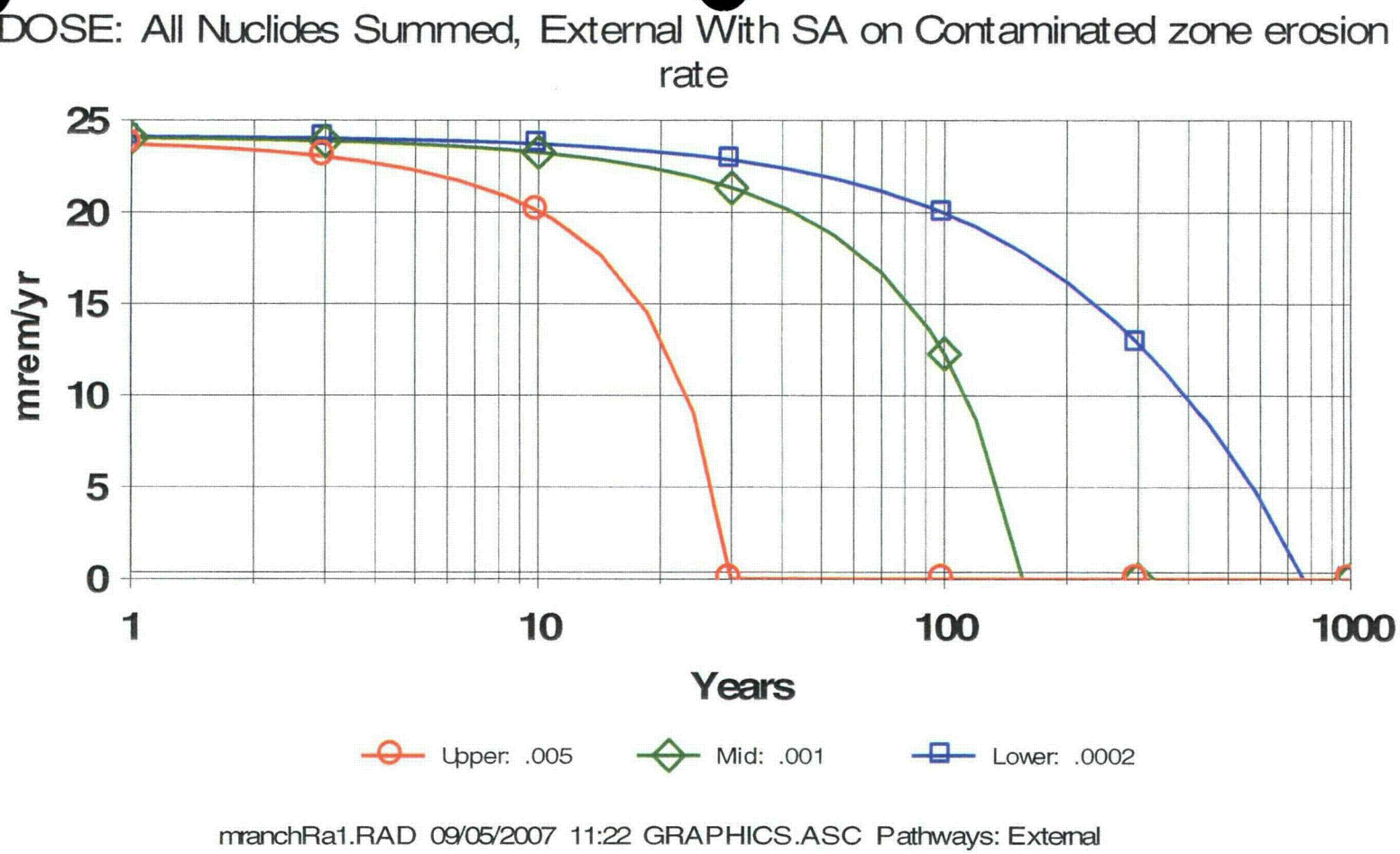
DOSE: All Nuclides Summed, Plant (Water Independent) With SA on Ra-226 Contaminated Zone Distribution Coef.



mranchRa1.RAD 09/05/2007 12:22 GRAPHICS.ASC Pathways: Plant (Water Independent)

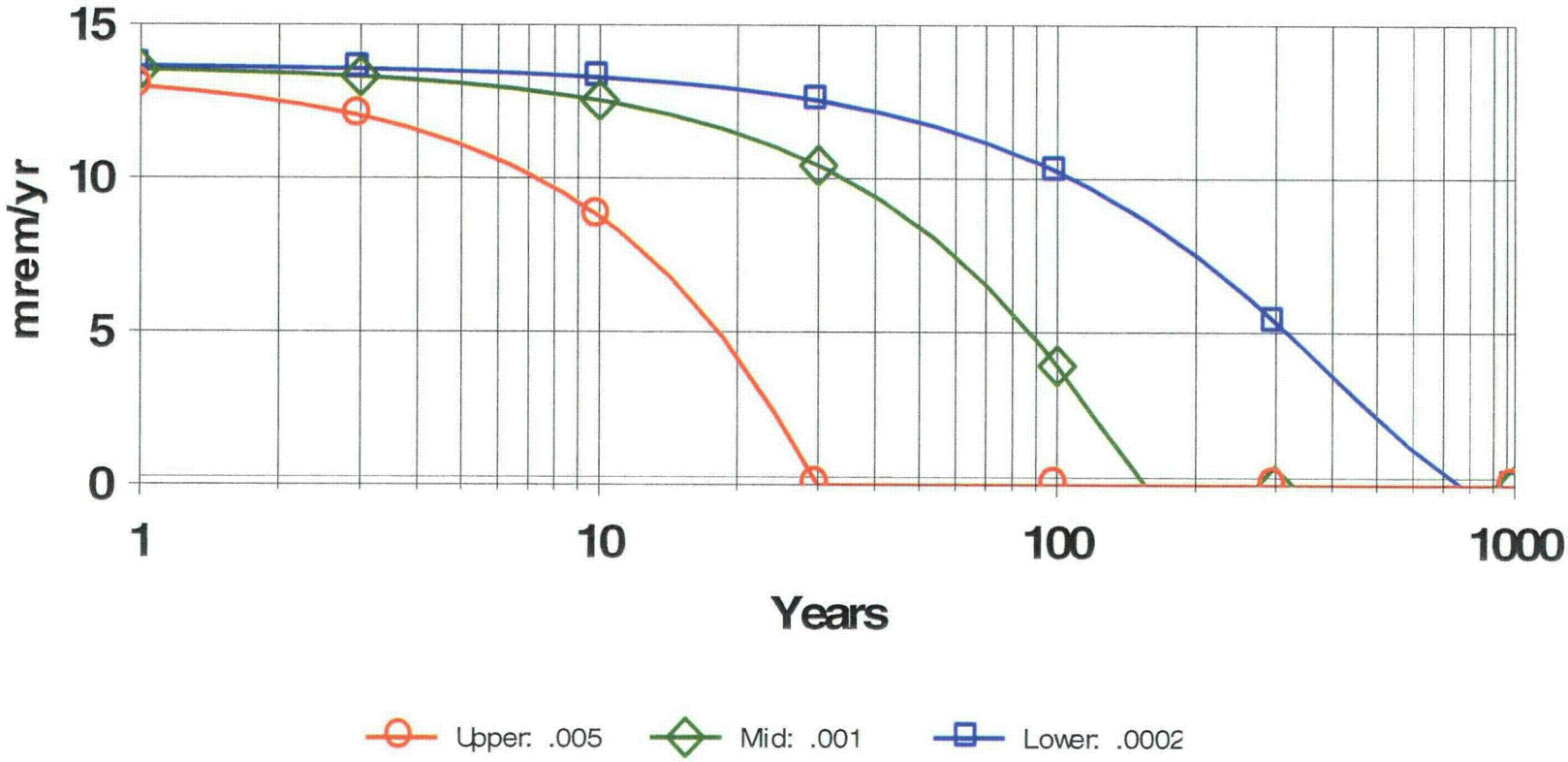


mranchRa1.RAD 09/05/2007 11:22 GRAPHICS.ASC Pathways: External



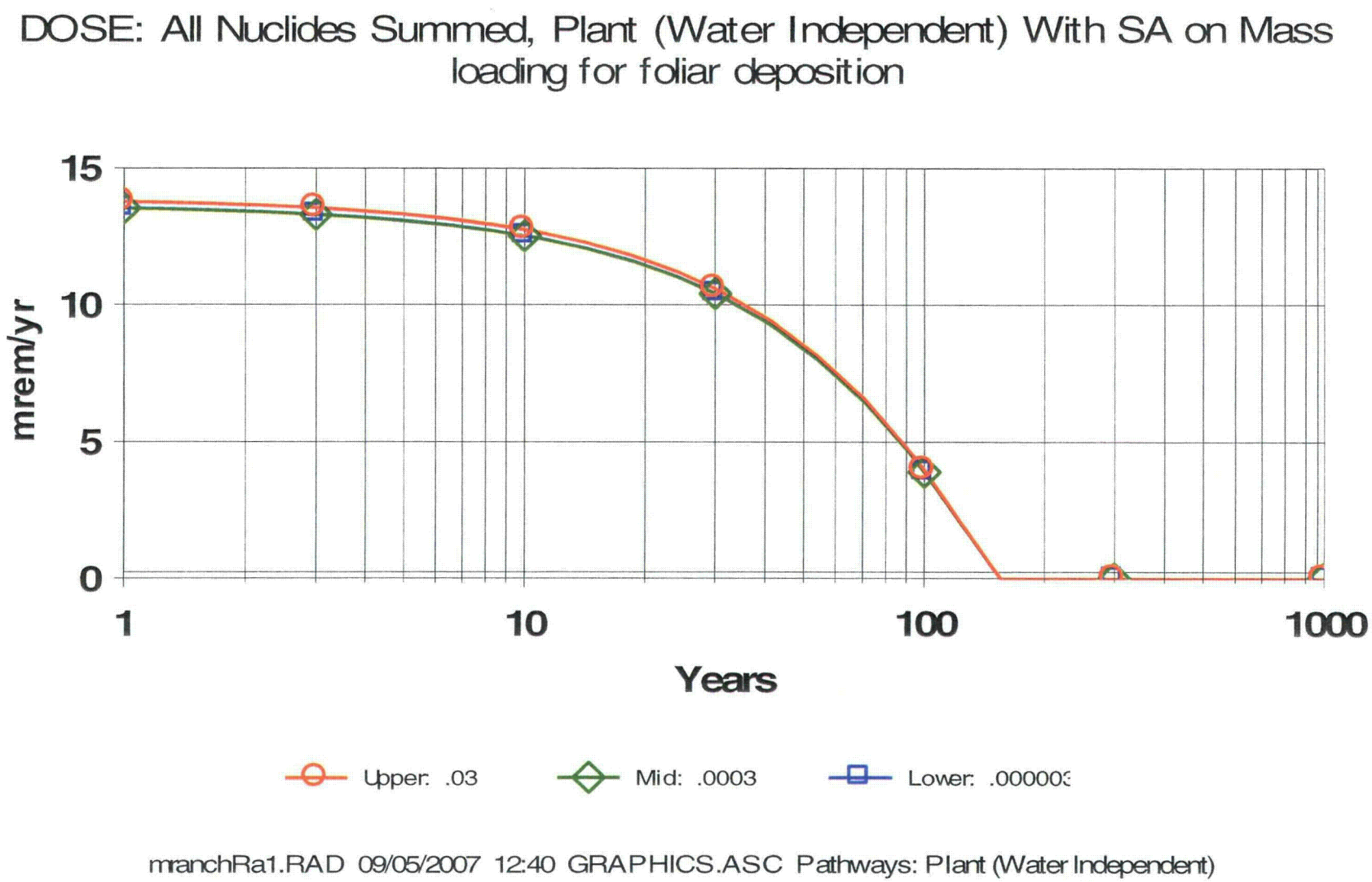
mranchRa1.RAD 09/05/2007 11:22 GRAPHICS.ASC Pathways: External

DOSE: All Nuclides Summed, Plant (Water Independent) With SA on Contaminated zone erosion rate

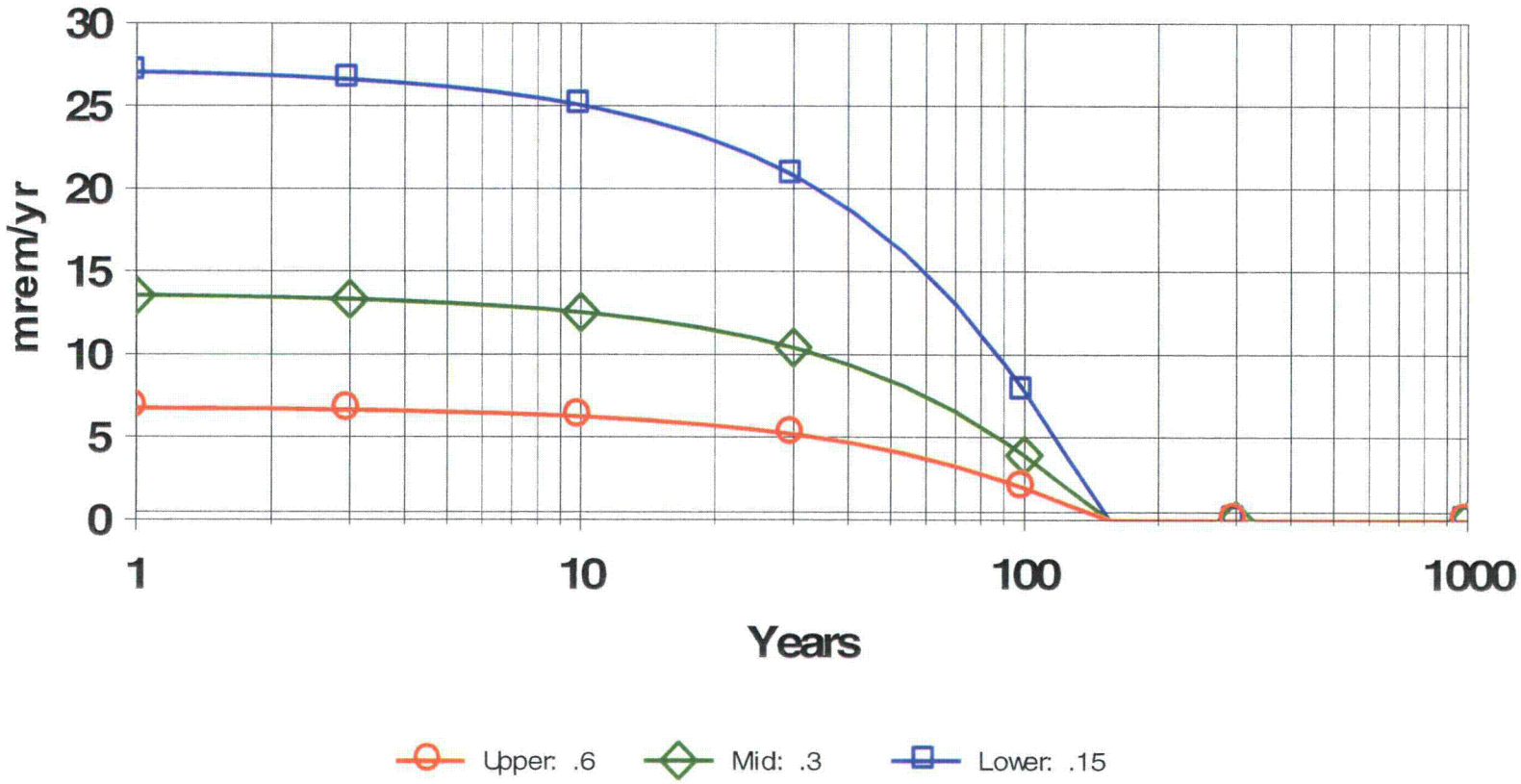


mranchRa1.RAD 09/05/2007 12:22 GRAPHICS.ASC Pathways: Plant (Water Independent)

mranchRa1.RAD 09/05/2007 11:22 GRAPHICS.ASC Pathways: External


DOSE: All Nuclides Summed, Plant (Water Independent) With SA on Mass loading for foliar deposition
15
10
5
0
mrem/yr
1
10
100
1000
Years
Upper: .03
Mid: .0003
Lower: .000003
mranchRa1.RAD 09/05/2007 12:40 GRAPHICS.ASC Pathways: Plant (Water Independent)

DOSE: All Nuclides Summed, Plant (Water Independent) With SA on Depth of roots



mranchRa1.RAD 09/05/2007 12:40 GRAPHICS.ASC Pathways: Plant (Water Independent)

APPENDIX D-3

RESRAD Model Output- Radium

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Dose Conversion Factor (And Related) Parameter Summary
File: FGR 13 HUMIDITY

Menu	Parameter	Current Value	Base Case*	Parameter Name
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Pb-210+D	2.320E-02	1.260E-02	DCF2(1)
B-1	Ra-226+D	8.594E-03	8.590E-03	DCF2(2)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Pb-210+D	7.276E-03	5.370E-03	DCF3(1)
D-1	Ra-226+D	1.321E-03	1.320E-03	DCF3(2)
D-34	Food transfer factors:			
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF(1,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	8.000E-04	RTF(1,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.000E-04	3.000E-04	RTF(1,3)
D-34				
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF(2,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(2,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF(2,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Pb-210+D , fish	3.000E+02	3.000E+02	BIOFAC(1,1)
D-5	Pb-210+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(1,2)
D-5				
D-5	Ra-226+D , fish	5.000E+01	5.000E+01	BIOFAC(2,1)
D-5	Ra-226+D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC(2,2)

*Base Case means Default.Lib w/o Associate Nuclide contributions.

Site-Specific Parameter Summary

	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	1.000E+04	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	1.500E-01	2.000E+00	---	THICK0
R011	Length parallel to aquifer flow (m)	1.000E+02	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	1.000E+02	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T(2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T(3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T(4)
R011	Times for calculations (yr)	3.000E+01	3.000E+01	---	T(5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T(6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T(7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T(8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(10)
R012	Initial principal radionuclide (pCi/g): Pb-210	5.000E+00	0.000E+00	---	S1(1)
R012	Initial principal radionuclide (pCi/g): Ra-226	5.000E+00	0.000E+00	---	S1(2)
R012	Concentration in groundwater (pCi/L): Pb-210	not used	0.000E+00	---	W1(1)
R012	Concentration in groundwater (pCi/L): Ra-226	not used	0.000E+00	---	W1(2)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVER0
R013	Density of cover material (g/cm**3)	not used	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	not used	1.00[illegible]E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.500E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.000E-03	1.000E-03	---	VCZ
R013	Contaminated zone total porosity	4.000E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	2.000E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	4.930E+03	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	5.300E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	5.000E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	7.500E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	3.000E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	2.000E-01	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	1.000E+06	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	1.000E-03	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	1.500E+00	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	4.300E-01	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	3.300E-01	2.000E-01	---	EPS2
R014	Saturated zone field capacity	2.000E-01	2.000E-01	---	FCS2
R014	Saturated zone hydraulic conductivity (m/yr)	5.000E+02	1.000E+02	---	HCS2
R014	Saturated zone hydraulic gradient	2.000E-02	2.000E-02	---	HGWT
R014	Saturated zone b parameter	5.300E+00	5.300E+00	---	BSZ
R014	Water table drop rate (m/yr)	1.000E-03	1.000E-03	---	VWT
R014	Well pump intake depth (m below water table)	2.000E+01	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	ND	ND	---	MODEL
R014	Well pumping rate (m**3/yr)	2.500E+02	2.500E+02	---	UW

Site-Specific Parameter Summary (continued)

	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R015	Number of unsaturated zone strata	1	1	---	NS
R015	Unsat. zone 1, thickness (m)	3.130E+01	4.000E+00	---	H(1)
R015	Unsat. zone 1, soil density (g/cm**3)	1.500E+00	1.500E+00	---	DENSUZ(1)
R015	Unsat. zone 1, total porosity	4.000E-01	4.000E-01	---	TPUZ(1)
R015	Unsat. zone 1, effective porosity	2.000E-01	2.000E-01	---	EPUZ(1)
R015	Unsat. zone 1, field capacity	2.000E-01	2.000E-01	---	FCUZ(1)
R015	Unsat. zone 1, soil-specific b parameter	5.300E+00	5.300E+00	---	BHZ(1)
R015	Unsat. zone 1, hydraulic conductivity (m/yr)	4.300E+03	1.000E+01	---	HCUZ(1)
R016	Distribution coefficients for Pb-210				
R016	Contaminated zone (cm**3/g)	2.700E+02	1.000E+02	---	DCNUCC(1)
R016	Unsaturated zone 1 (cm**3/g)	2.700E+02	1.000E+02	---	DCNUCU(1,1)
R016	Saturated zone (cm**3/g)	2.700E+02	1.000E+02	---	DCNUCS(1)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.810E-03	ALEACH(1)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBR(1)
R016	Distribution coefficients for Ra-226				
R016	Contaminated zone (cm**3/g)	5.000E+02	7.000E+01	---	DCNUCC(2)
R016	Unsaturated zone 1 (cm**3/g)	5.000E+02	7.000E+01	---	DCNUCU(2,1)
R016	Saturated zone (cm**3/g)	5.000E+02	7.000E+01	---	DCNUCS(2)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	9.775E-04	ALEACH(2)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBR(2)
R017	Inhalation rate (m**3/yr)	8.400E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	3.000E-04	1.000E-04	---	MLINH
R017	Exposure duration	3.000E+01	3.000E+01	---	ED
R017	Shielding factor, inhalation	4.000E-01	4.000E-01	---	SHF3
R017	Shielding factor, external gamma	5.500E-01	7.000E-01	---	SHF1
R017	Fraction of time spent indoors	5.000E-01	5.000E-01	---	FIND
R017	Fraction of time spent outdoors (on site)	2.500E-01	2.500E-01	---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00	>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):				
R017	Outer annular radius (m), ring 1:	not used	5.000E+01	---	RAD_SHAPE(1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01	---	RAD_SHAPE(2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00	---	RAD_SHAPE(3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00	---	RAD_SHAPE(4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00	---	RAD_SHAPE(5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00	---	RAD_SHAPE(6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00	---	RAD_SHAPE(7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00	---	RAD_SHAPE(8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00	---	RAD_SHAPE(9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00	---	RAD_SHAPE(10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00	---	RAD_SHAPE(11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00	---	RAD_SHAPE(12)

Site-Specific Parameter Summary (continued)

	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R017	Fractions of annular areas within AREA:				
R017	Ring 1	not used	1.000E+00	---	FRACA(1)
R017	Ring 2	not used	2.732E-01	---	FRACA(2)
R017	Ring 3	not used	0.000E+00	---	FRACA(3)
R017	Ring 4	not used	0.000E+00	---	FRACA(4)
R017	Ring 5	not used	0.000E+00	---	FRACA(5)
R017	Ring 6	not used	0.000E+00	---	FRACA(6)
R017	Ring 7	not used	0.000E+00	---	FRACA(7)
R017	Ring 8	not used	0.000E+00	---	FRACA(8)
R017	Ring 9	not used	0.000E+00	---	FRACA(9)
R017	Ring 10	not used	0.000E+00	---	FRACA(10)
R017	Ring 11	not used	0.000E+00	---	FRACA(11)
R017	Ring 12	not used	0.000E+00	---	FRACA(12)
R018	Fruits, vegetables and grain consumption (kg/yr)	1.60[illegible]E+02	1.600E+02	---	DIET(1)
R018	Leafy vegetable consumption (kg/yr)	1.400E+01	1.400E+01	---	DIET(2)
R018	Milk consumption (L/yr)	not used	9.200E+01	---	DIET(3)
R018	Meat and poultry consumption (kg/yr)	6.300E+01	6.300E+01	---	DIET(4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	3.650E-01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	5.100E+02	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	1.000E+00	1.000E+00	---	FDW
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	1.000E+00	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	1.000E+00	1.000E+00	---	FIRW
R018	Contamination fraction of aquatic food	not used	5.000E-01	---	FR9
R018	Contamination fraction of plant food	2.500E-01	-1	---	FPLANT
R018	Contamination fraction of meat	2.500E-01	-1	---	FMEAT
R018	Contamination fraction of milk	not used	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	6.800E+01	6.800E+01	---	LFI5
R019	Livestock fodder intake for milk (kg/day)	not used	5.500E+01	---	LFI6
R019	Livestock water intake for meat (L/day)	5.000E+01	5.000E+01	---	LWI5
R019	Livestock water intake for milk (L/day)	not used	1.700E+02	---	LWI6
R019	Livestock soil intake (kg/day)	5.000E-01	5.000E-01	---	LSI
R019	Mass loading for foliar deposition (g/m**3)	3.000E-04	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Depth of roots (m)	3.000E-01	9.000E-01	---	DROOT
R019	Drinking water fraction from ground water	1.000E+00	1.000E+00	---	FGWDW
R019	Household water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Livestock water fraction from ground water	1.000E+00	1.000E+00	---	FGWLW
R019	Irrigation fraction from ground water	1.000E+00	1.000E+00	---	FGWIR
R19B	Wet weight crop yield for Non-Leafy (kg/m**2)	7.000E-01	7.000E-01	---	YV(1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	1.500E+00	1.500E+00	---	YV(2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	1.100E+00	1.100E+00	---	YV(3)
R19B	Growing Season for Non-Leafy (years)	1.700E-01	1.700E-01	---	TE(1)
R19B	Growing Season for Leafy (years)	2.500E-01	2.500E-01	---	TE(2)
R19B	Growing Season for Fodder (years)	8.000E-02	8.000E-02	---	TE(3)
R19B	Translocation Factor for Non-Leafy	1.000E-01	1.000E-01	---	TIV(1)

Site-Specific Parameter Summary (continued)

	Parameter	User Input	Default	Used by RESRAD (if different from user input)	Parameter Name
R19B	Translocation Factor for Leafy	1.000E+00	1.000E+00	---	TIV(2)
R19B	Translocation Factor for Fodder	1.000E+00	1.000E+00	---	TIV(3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	2.500E-01	2.500E-01	---	RDRY(1)
R19B	Dry Foliar Interception Fraction for Leafy	2.500E-01	2.500E-01	---	RDRY(2)
R19B	Dry Foliar Interception Fraction for Fodder	2.500E-01	2.500E-01	---	RDRY(3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	2.500E-01	2.500E-01	---	RWET(1)
R19B	Wet Foliar Interception Fraction for Leafy	2.500E-01	2.500E-01	---	RWET(2)
R19B	Wet Foliar Interception Fraction for Fodder	2.500E-01	2.500E-01	---	RWET(3)
R19B	Weathering Removal Constant for Vegetation	2.000E+01	2.000E+01	---	WLAM
C14	C-12 concentration in water (g/cm**3)	not used	2.000E-05	---	C12WTR
C14	C-12 concentration in contaminated soil (g/g)	not used	3.000E-02	---	C12CZ
C14	Fraction of vegetation carbon from soil	not used	2.000E-02	---	CSOIL
C14	Fraction of vegetation carbon from air	not used	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	not used	3.000E-01	---	DMC
C14	C-14 evasion flux rate from soil (1/sec)	not used	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	not used	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	not used	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	not used	2.000E-01	---	AVFG5
C14	DCF correction factor for gaseous forms of C14	not used	8.000E+00	---	CDRF
STOR	Storage times of contaminated foodstuffs (days):				
STOR	Fruits, non-leafy vegetables, and grain	1.400E+01	1.400E+01	---	STOR_T(1)
STOR	Leafy vegetables	1.000E+00	1.000E+00	---	STOR_T(2)
STOR	Milk	1.000E+00	1.000E+00	---	STOR_T(3)
STOR	Meat and poultry	2.000E+01	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)
STOR	Well water	1.000E+00	1.000E+00	---	STOR_T(7)
STOR	Surface water	1.000E+00	1.000E+00	---	STOR_T(8)
STOR	Livestock fodder	4.500E+01	4.500E+01	---	STOR_T(9)
R021	Thickness of building foundation (m)	not used	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	not used	2.400E+00	---	DENSFL
R021	Total porosity of the cover material	not used	4.000E-01	---	TPCV
R021	Total porosity of the building foundation	not used	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	not used	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	3.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMIX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FAI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TIME	Number of graphical time points	32	---	---	NPTS
TIME	Maximum number of integration points for dose	17	---	---	IDMAX

Site-Specific Parameter Summary (continued)

	Parameter	User Input	Default	Used by RESRAD (if different from user input)	Parameter Name
TITL	Maximum number of integration points for risk	257	---	---	KYMAX

Summary of Pathway Selections

Pathway	User Selection
1 -- external gamma	active
2 -- inhalation (w/o radon)	active
3 -- plant ingestion	active
4 -- meat ingestion	active
5 -- milk ingestion	suppressed
6 -- aquatic foods	suppressed
7 -- drinking water	active
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	10000.00 square meters	Pb-210	5.000E+00
Thickness:	0.15 meters	Ra-226	5.000E+00
Cover Depth:	0.00 meters		

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 1.000E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
TDOSE(t):	3.952E+01	3.931E+01	3.889E+01	3.738E+01	3.305E+01	1.666E+01	0.000E+00	0.000E+00
M(t):	3.952E-01	3.931E-01	3.889E-01	3.738E-01	3.305E-01	1.666E-01	0.000E+00	0.000E+00

Maximum TDOSE(t): 3.952E+01 mrem/yr at t = 0.000E+00 years

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	1.501E-03	0.0004	8.679E-03	0.0002	0.000E+00	0.0000	7.703E-00	0.1964	3.780E-01	0.0096	0.000E+00	0.0000	8.765E-01	0.02
Ra-226	2.411E+01	0.6101	3.402E-03	0.0001	0.000E+00	0.0000	5.608E+00	0.1485	1.013E-01	0.0051	0.000E+00	0.0000	1.953E-01	0.01
Total	2.413E+01	0.6105	1.208E-02	0.0001	0.000E+00	0.0000	1.303E+01	0.3449	5.793E-01	0.0147	0.000E+00	0.0000	1.172E+00	0.07

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.141E-00	0.23
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.038E+01	0.76
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.952E+01	1.00

* [illegible] all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	3.442E-02	0.0014	8.342E-03	0.0003	0.000E+00	0.0000	7.462E+00	0.1996	3.034E-01	0.0082	0.000E+00	0.0000	0.386E-01	0.02
Ra-226	2.402E+01	0.6112	3.638E-03	0.0001	0.000E+00	0.0000	6.060E+00	0.1541	2.116E-01	0.0054	0.000E+00	0.0000	2.234E-01	0.06
Total	2.404E+01	0.6116	1.198E-02	0.0003	0.000E+00	0.0000	1.352E+01	0.3439	5.750E-01	0.0146	0.000E+00	0.0000	1.160E+00	0.02

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.787E+00	0.22
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.053E+01	0.77
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.931E+01	1.00

* [illegible] of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	1.358E-02	0.0003	7.706E-03	0.0002	0.000E+00	0.0000	6.893E+00	0.1773	3.357E-01	0.0086	0.000E+00	0.0000	5.670E-01	0.02
Ra-226	2.386E+01	0.6135	4.073E-03	0.0001	0.000E+00	0.0000	6.404E+00	0.1647	2.297E-01	0.0059	0.000E+00	0.0000	2.754E-01	0.01
Total	2.387E+01	0.6138	1.178E-02	0.0003	0.000E+00	0.0000	1.330E+01	0.3419	5.654E-01	0.0145	0.000E+00	0.0000	1.142E+00	0.02

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.117E+00	0.20
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.077E+01	0.79
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.889E+01	1.00

*S[illegible] all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	1.075E-02	0.0003	5.829E-03	0.0002	0.000E+00	0.0000	5.213E+00	0.1396	2.539E-01	0.0068	0.000E+00	0.0000	6.559E-01	0.01
Ra-226	2.324E+01	0.6215	5.259E-03	0.0001	0.000E+00	0.0000	7.307E+00	0.1955	2.784E-01	0.0074	0.000E+00	0.0000	4.193E-01	0.01
Total	2.325E+01	0.6218	1.109E-02	0.0003	0.000E+00	0.0000	1.252E+01	0.3349	5.323E-01	0.0142	0.000E+00	0.0000	1.075E+00	0.02

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.140E+00	0.16
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.125E+01	0.83
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.738E+01	1.00

* [illegible]f all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	5.481E-03	0.0002	2.596E-03	0.0001	0.000E+00	0.0000	2.313E+00	0.0699	1.127E-01	0.0034	0.000E+00	0.0000	2.910E-01	0.00
Ra-226	2.132E+01	0.6447	6.219E-03	0.0002	0.000E+00	0.0000	8.088E+00	0.2445	3.295E-01	0.0100	0.000E+00	0.0000	6.011E-01	0.01
Total	2.133E+01	0.6449	9.205E-03	0.0003	0.000E+00	0.0000	1.040E+01	0.3145	4.421E-01	0.0134	0.000E+00	0.0000	8.921E-01	0.02

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+01 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.725E+00	0.08
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.035E+01	0.91
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.308E+01	1.00

[illegible] of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	4.412E-04	0.0000	1.071E-04	0.0000	0.000E+00	0.0000	9.588E-02	0.0050	4.674E-05	0.0003	0.000E+00	0.0000	1.205E-02	0.00
Ra-226	1.226E+01	0.7359	3.336E-03	0.0002	0.000E+00	0.0000	3.800E+00	0.2281	1.613E-01	0.0097	0.000E+00	0.0000	3.215E-01	0.01
Total	1.226E+01	0.7360	3.444E-03	0.0002	0.000E+00	0.0000	3.885E+00	0.2339	1.657E-01	0.0099	0.000E+00	0.0000	3.335E-01	0.02

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.132E-01	0.00
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.654E+01	0.99
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.666E+01	1.00

* [illegible]f all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00

* [illegible] of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00

[illegible] of all water independent and dependent pathways.

Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g) 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pb-210+D	Pb-210+D	1.000E+00	1.828E+00	1.757E+00	1.633E+00	1.228E+00	5.450E-01	2.263E-02	0.000E+00	0.000E+00
Ra-226+D	Ra-226+D	1.000E+00	6.043E+00	6.016E+00	5.961E+00	5.788E+00	5.198E+00	3.501E+00	0.000E+00	0.000E+00
Ra-226+D	Pb-210+D	1.000E+00	3.347E-02	8.954E-02	1.922E-01	4.507E-01	8.715E-01	5.681E-01	0.000E+00	0.000E+00
Ra-226+D	ΣDSR(j)		6.076E+00	6.105E+00	6.154E+00	6.249E+00	6.070E+00	3.505E+00	0.000E+00	0.000E+00

The DSR includes contributions from associated (half-life ≤ 180 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g
Basic Radiation Dose Limit = 1.000E+00 mrem/yr

Nuclide (i)	t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pb-210	5.470E+01	5.691E+01	6.160E+01	8.144E+01	1.835E+02	4.418E-03	*7.634E+13	*7.634E+13
Ra-226	1.646E+01	1.638E+01	1.625E+01	1.600E+01	1.547E+01	3.023E-01	*5.835E+11	*5.835E+11

*At specific activity limit

Summed Dose/Source Ratios DSR(i,t) in (mrem/yr)/(pCi/g)
and Single Radionuclide Soil Guidelines G(i,t) in pCi/g
at tmin = time of minimum single radionuclide soil guideline
and at tmax = time of maximum total dose = 0.000E+00 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin)	G(i,tmin) (pCi/g)	DSR(i,tmax)	G(i,tmax) (pCi/g)
Pb-210	5.000E+00	0.000E+00	1.828E+00	5.470E+01	1.828E+00	5.470E+01
Ra-226	5.000E+00	13.52 ± 0.03	6.260E+00	1.597E+01	6.076E+00	1.646E+01

Individual Nuclide Dose Summed Over All Pathways
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	DOSE(j,t), mrem/yr t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pb-210	Pb-210	1.000E+00	9.141E+00	8.787E+00	8.117E+00	6.140E+00	2.725E+00	1.132E-01	0.000E+00	0.000E+00
Pb-210	Ra-226	1.000E+00	1.674E-01	4.477E-01	9.612E-01	2.401E+00	4.359E+00	2.540E+00	0.000E+00	0.000E+00
Pb-210	∑DOSE(j)		9.308E+00	9.234E+00	9.078E+00	8.541E+00	7.084E+00	2.654E+00	0.000E+00	0.000E+00
Ra-226	Ra-226	1.000E+00	3.027E+01	3.006E+01	2.981E+01	2.864E+01	2.596E+01	1.400E+01	0.000E+00	0.000E+00

THF(i) is the thread fraction of the parent nuclide.

Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pb-210	Pb-210	1.000E+00	5.000E+00	4.835E+00	4.530E+00	3.596E+00	1.864E+00	1.864E-01	2.591E-04	2.593E-14
Pb-210	Ra-226	1.000E+00	0.000E+00	1.52EE-01	4.430E-01	1.315E+00	2.892E+00	4.103E+00	3.233E+00	1.204E+00
Pb-210	∑S(j):		5.000E+00	4.991E+00	4.973E+00	4.913E+00	4.756E+00	4.289E+00	3.233E+00	1.204E+00
Ra-226	Ra-226	1.000E+00	5.000E+00	4.993E+00	4.979E+00	4.930E+00	4.793E+00	4.343E+00	3.278E+00	1.220E+00

THF(i) is the thread fraction of the parent nuclide.

RESCALC.EXE execution time = 22.18 seconds

APPENDIX D-4

RESRAD Model Output- Uranium

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Dose Conversion Factor (and Related) Parameter Summary
File: FGR 13 MORBIDITY

Menu	Parameter	Current Value	Base Case*	Parameter Name
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Ac-227+D	6.724E+00	6.700E+00	DCF2(1)
B-1	Pa-231	1.280E+00	1.280E+00	DCF2(2)
B-1	Pb-210+D	2.300E-02	1.360E-02	DCF2(3)
B-1	Ra-226+D	8.564E-03	8.580E-03	DCF2(4)
B-1	Th-230	3.260E-01	3.260E-01	DCF2(5)
B-1	U-234	1.320E-01	1.320E-01	DCF2(6)
B-1	U-235+D	1.230E-01	1.230E-01	DCF2(7)
B-1	U-238	1.180E-01	1.180E-01	DCF2(8)
B-1	U-238+D	1.180E-01	1.180E-01	DCF2(9)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Ac-227+D	1.480E-02	1.410E-02	DCF3(1)
D-1	Pa-231	1.060E-02	1.060E-02	DCF3(2)
D-1	Pb-210+D	7.276E-03	5.370E-03	DCF3(3)
D-1	Ra-226+D	1.321E-03	1.320E-03	DCF3(4)
D-1	Th-230	5.480E-04	5.480E-04	DCF3(5)
D-1	U-234	2.830E-04	2.830E-04	DCF3(6)
D-1	U-235+D	2.673E-04	2.660E-04	DCF3(7)
D-1	U-238	2.550E-04	2.550E-04	DCF3(8)
D-1	U-238+D	2.687E-04	2.550E-04	DCF3(9)
D-34	Food transfer factors:			
D-34	Ac-227+D , plant/soil concentration ratio, dimensionless	2.500E-03	2.500E-03	RTF(1,1)
D-34	Ac-227+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	2.000E-05	2.000E-05	RTF(1,2)
D-34	Ac-227+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.000E-05	2.000E-05	RTF(1,3)
D-34				
D-34	Pa-231 , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF(2,1)
D-34	Pa-231 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.000E-03	5.000E-03	RTF(2,2)
D-34	Pa-231 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-06	5.000E-06	RTF(2,3)
D-34				
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF(3,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	3.000E-04	3.000E-04	RTF(3,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.000E-04	3.000E-04	RTF(3,3)
D-34				
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF(4,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(4,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF(4,3)
D-34				
D-34	Th-230 , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-03	RTF(5,1)
D-34	Th-230 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-04	1.000E-04	RTF(5,2)
D-34	Th-230 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-06	5.000E-06	RTF(5,3)
D-34				
D-34	U-234 , plant/soil concentration ratio, dimensionless	2.500E-03	2.500E-03	RTF(6,1)
D-34	U-234 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	3.400E-04	3.400E-04	RTF(6,2)
D-34	U-234 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-04	6.000E-04	RTF(6,3)
D-34				
D-34	U-235+D , plant/soil concentration ratio, dimensionless	2.500E-03	2.500E-03	RTF(7,1)
D-34	U-235+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	3.400E-04	3.400E-04	RTF(7,2)
D-34	U-235+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-04	6.000E-04	RTF(7,3)
D-34				

Dose Conversion Factor (and Related) Parameter Summary (continued)
File: FGR 13 MORBIDITY

Menu	Parameter	Current Value	Base Case*	Parameter Name
D-34	U-238 , plant/soil concentration ratio, dimensionless	2.500E-03	2.500E-03	RTF(8,1)
D-34	U-238 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	3.400E-04	3.400E-04	RTF(8,2)
D-34	U-238 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-04	6.000E-04	RTF(8,3)
D-34				
D-34	U-238+D , plant/soil concentration ratio, dimensionless	2.500E-03	2.500E-03	RTF(9,1)
D-34	U-238+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	3.400E-04	3.400E-04	RTF(9,2)
D-34	U-238+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-04	6.000E-04	RTF(9,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Ac-227+D , fish	1.500E+01	1.500E+01	BIOFAC(1,1)
D-5	Ac-227+D , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(1,2)
D-5				
D-5	Pa-231 , fish	1.000E+01	1.000E+01	BIOFAC(2,1)
D-5	Pa-231 , crustacea and mollusks	1.100E+02	1.100E+02	BIOFAC(2,2)
D-5				
D-5	Pb-210+D , fish	3.000E+02	3.000E+02	BIOFAC(3,1)
D-5	Pb-210+D , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(3,2)
D-5				
D-5	Ra-226+D , fish	5.000E+01	5.000E+01	BIOFAC(4,1)
D-5	Ra-226+D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC(4,2)
D-5				
D-5	Th-230 , fish	1.000E+02	1.000E+02	BIOFAC(5,1)
D-5	Th-230 , crustacea and mollusks	5.000E+02	5.000E+02	BIOFAC(5,2)
D-5				
D-5	U-234 , fish	1.000E+01	1.000E+01	BIOFAC(6,1)
D-5	U-234 , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(6,2)
D-5				
D-5	U-235+D , fish	1.000E+01	1.000E+01	BIOFAC(7,1)
D-5	U-235+D , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(7,2)
D-5				
D-5	U-238 , fish	1.000E+01	1.000E+01	BIOFAC(8,1)
D-5	U-238 , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(8,2)
D-5				
D-5	U-238+D , fish	1.000E+01	1.000E+01	BIOFAC(9,1)
D-5	U-238+D , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(9,2)

*Base Case means Default.Lib w/o Associate Nuclide contributions.

Site-Specific Parameter Summary

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	1.000E+04	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	1.500E-01	2.000E+00	---	THICK0
R011	Length parallel to aquifer flow (m)	1.000E+02	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	1.000E+02	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	T1
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T(2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T(3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T(4)
R011	Times for calculations (yr)	3.000E+01	3.000E+01	---	T(5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T(6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T(7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T(8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(10)
R012	Initial principal radionuclide (pCi/g): U-234	4.880E+01	0.000E+00	---	S1(6)
R012	Initial principal radionuclide (pCi/g): U-235	2.200E+00	0.000E+00	---	S1(7)
R012	Initial principal radionuclide (pCi/g): U-238	4.880E+01	0.000E+00	---	S1(8)
R012	Concentration in groundwater (pCi/L): U-234	not used	0.000E+00	---	W1(6)
R012	Concentration in groundwater (pCi/L): U-235	not used	0.000E+00	---	W1(7)
R012	Concentration in groundwater (pCi/L): U-238	not used	0.000E+00	---	W1(8)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVER0
R013	Density of cover material (g/cm**3)	not used	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	not used	1.000E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.500E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.000E-03	1.000E-03	---	VCZ
R013	Contaminated zone total porosity	4.000E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	2.000E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	4.980E+03	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	5.300E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	5.000E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	7.500E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	3.000E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	2.000E-01	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	1.000E+06	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	1.000E-03	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	1.500E+00	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	4.300E-01	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	3.300E-01	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	2.000E-01	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	5.550E+03	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	2.000E-02	2.000E-02	---	HGWT
R014	Saturated zone b parameter	5.300E+00	5.300E+00	---	BSZ
R014	Water table drop rate (m/yr)	1.000E-03	1.000E-03	---	VWT
R014	Well pump intake depth (m below water table)	3.200E+01	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	ND	ND	---	MODEL

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (if different from user input)	Parameter Name
R014	Well pumping rate (m**3/yr)	2.500E+02	2.500E+02	---	UW
R015	Number of unsaturated zone strata	1	1	---	NS
R015	Unsat. zone 1, thickness (m)	2.130E+01	4.000E+00	---	H(1)
R015	Unsat. zone 1, soil density (g/cm**3)	1.500E+00	1.500E+00	---	DENSUZ(1)
R015	Unsat. zone 1, total porosity	4.000E-01	4.000E-01	---	TPUZ(1)
R015	Unsat. zone 1, effective porosity	2.000E-01	2.000E-01	---	EPUZ(1)
R015	Unsat. zone 1, field capacity	2.000E-01	2.000E-01	---	FCUZ(1)
R015	Unsat. zone 1, soil-specific b parameter	5.300E+00	5.300E+00	---	BUZ(1)
R015	Unsat. zone 1, hydraulic conductivity (m/yr)	4.930E+03	1.000E+01	---	HCUZ(1)
R016	Distribution coefficients for U-234				
R016	Contaminated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCC(6)
R016	Unsaturated zone 1 (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCU(6,1)
R016	Saturated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCS(6)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	9.752E-03	ALEACH(6)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(6)
R016	Distribution coefficients for U-235				
R016	Contaminated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCC(7)
R016	Unsaturated zone 1 (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCU(7,1)
R016	Saturated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCS(7)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	9.752E-03	ALEACH(7)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(7)
R016	Distribution coefficients for U-238				
R016	Contaminated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCC(8)
R016	Unsaturated zone 1 (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCU(8,1)
R016	Saturated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCS(8)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	9.752E-03	ALEACH(8)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(8)
R016	Distribution coefficients for daughter Ac-227				
R016	Contaminated zone (cm**3/g)	2.000E+01	2.000E+01	---	DCNUCC(1)
R016	Unsaturated zone 1 (cm**3/g)	2.000E+01	2.000E+01	---	DCNUCU(1,1)
R016	Saturated zone (cm**3/g)	2.000E+01	2.000E+01	---	DCNUCS(1)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.428E-02	ALEACH(1)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(1)
R016	Distribution coefficients for daughter Pa-231				
R016	Contaminated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCC(2)
R016	Unsaturated zone 1 (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCU(2,1)
R016	Saturated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCS(2)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	9.752E-03	ALEACH(2)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(2)
R016	Distribution coefficients for daughter Pb-210				
R016	Contaminated zone (cm**3/g)	1.000E+02	1.000E+02	---	DCNUCC(3)
R016	Unsaturated zone 1 (cm**3/g)	1.000E+02	1.000E+02	---	DCNUCU(3,1)
R016	Saturated zone (cm**3/g)	1.000E+02	1.000E+02	---	DCNUCS(3)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	4.882E-03	ALEACH(3)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(3)

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (if different from user input)	Parameter Name
R016	Distribution coefficients for daughter Ra-226				
R016	Contaminated zone (cm**3/g)	7.000E+01	7.000E+01	---	DCNUCC(4)
R016	Unsaturated zone 1 (cm**3/g)	7.000E+01	7.000E+01	---	DCNUCU(4,1)
R016	Saturated zone (cm**3/g)	7.000E+01	7.000E+01	---	DCNUCS(4)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	6.971E-03	ALEACH(4)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(4)
R016	Distribution coefficients for daughter Th-230				
R016	Contaminated zone (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCC(5)
R016	Unsaturated zone 1 (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCU(5,1)
R016	Saturated zone (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCS(5)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	8.148E-06	ALEACH(5)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(5)
R017	Inhalation rate (m**3/yr)	8.400E+02	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	3.000E-04	1.000E-04	---	MLINH
R017	Exposure duration	3.000E+01	3.000E+01	---	ED
R017	Shielding factor, inhalation	4.000E-01	4.000E-01	---	SHF3
R017	Shielding factor, external gamma	5.500E-01	7.000E-01	---	SHF1
R017	Fraction of time spent indoors	5.000E-01	5.000E-01	---	FIND
R017	Fraction of time spent outdoors (on site)	2.500E-01	2.500E-01	---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00	>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):				
R017	Outer annular radius (m), ring 1:	not used	5.000E+01	---	RAD_SHAPE(1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01	---	RAD_SHAPE(2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00	---	RAD_SHAPE(3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00	---	RAD_SHAPE(4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00	---	RAD_SHAPE(5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00	---	RAD_SHAPE(6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00	---	RAD_SHAPE(7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00	---	RAD_SHAPE(8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00	---	RAD_SHAPE(9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00	---	RAD_SHAPE(10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00	---	RAD_SHAPE(11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00	---	RAD_SHAPE(12)
R017	Fractions of annular areas within AREA:				
R017	Ring 1	not used	1.000E+00	---	FRACA(1)
R017	Ring 2	not used	2.732E-01	---	FRACA(2)
R017	Ring 3	not used	0.000E+00	---	FRACA(3)
R017	Ring 4	not used	0.000E+00	---	FRACA(4)
R017	Ring 5	not used	0.000E+00	---	FRACA(5)
R017	Ring 6	not used	0.000E+00	---	FRACA(6)
R017	Ring 7	not used	0.000E+00	---	FRACA(7)
R017	Ring 8	not used	0.000E+00	---	FRACA(8)
R017	Ring 9	not used	0.000E+00	---	FRACA(9)
R017	Ring 10	not used	0.000E+00	---	FRACA(10)
R017	Ring 11	not used	0.000E+00	---	FRACA(11)
R017	Ring 12	not used	0.000E+00	---	FRACA(12)
R017	Fruits, vegetables and grain consumption (kg/yr)	1.600E+02	1.600E+02	---	DIET(1)

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R018	Leafy vegetable consumption (kg/yr)	1.400E+01	1.400E+01	---	DIET(2)
R018	Milk consumption (L/yr)	not used	9.200E+01	---	DIET(3)
R018	Meat and poultry consumption (kg/yr)	6.300E+01	6.300E+01	---	DIET(4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	3.650E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	5.100E+02	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	1.000E+00	1.000E+00	---	FDW
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	1.000E+00	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	1.000E+00	1.000E+00	---	FIRW
R018	Contamination fraction of aquatic food	not used	5.000E-01	---	FR9
R018	Contamination fraction of plant food	2.500E-01	-1	---	FPLANT
R018	Contamination fraction of meat	2.500E-01	-1	---	FMEAT
R018	Contamination fraction of milk	not used	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	6.800E+01	6.800E+01	---	LFI5
R019	Livestock fodder intake for milk (kg/day)	not used	8.500E+01	---	LFI6
R019	Livestock water intake for meat (L/day)	5.000E+01	5.000E+01	---	LWI5
R019	Livestock water intake for milk (L/day)	not used	1.600E+02	---	LWI6
R019	Livestock soil intake (kg/day)	5.000E-01	5.000E-01	---	LSI
R019	Mass loading for foliar deposition (g/m**3)	8.000E-04	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Depth of roots (m)	3.000E-01	9.000E-01	---	DROOT
R019	Drinking water fraction from ground water	1.000E+00	1.000E+00	---	FGWDW
R019	Household water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Livestock water fraction from ground water	1.000E+00	1.000E+00	---	FGWLW
R019	Irrigation fraction from ground water	1.000E+00	1.000E+00	---	FGWIR
R19B	Wet weight crop yield for Non-Leafy (kg/m**2)	7.000E-01	7.000E-01	---	YV(1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	1.500E+00	1.500E+00	---	YV(2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	1.100E+00	1.100E+00	---	YV(3)
R19B	Growing Season for Non-Leafy (years)	1.700E-01	1.700E-01	---	TE(1)
R19B	Growing Season for Leafy (years)	2.500E-01	2.500E-01	---	TE(2)
R19B	Growing Season for Fodder (years)	8.000E-02	8.000E-02	---	TE(3)
R19B	Translocation Factor for Non-Leafy	1.000E-01	1.000E-01	---	TIV(1)
R19B	Translocation Factor for Leafy	1.000E+00	1.000E+00	---	TIV(2)
R19B	Translocation Factor for Fodder	1.000E+00	1.000E+00	---	TIV(3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	2.500E-01	2.500E-01	---	RDRY(1)
R19B	Dry Foliar Interception Fraction for Leafy	2.500E-01	2.500E-01	---	RDRY(2)
R19B	Dry Foliar Interception Fraction for Fodder	2.500E-01	2.500E-01	---	RDRY(3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	2.500E-01	2.500E-01	---	RWET(1)
R19B	Wet Foliar Interception Fraction for Leafy	2.500E-01	2.500E-01	---	RWET(2)
R19B	Wet Foliar Interception Fraction for Fodder	2.500E-01	2.500E-01	---	RWET(3)
R19B	Weathering Removal Constant for Vegetation	2.000E+01	2.000E+01	---	WLAM
C14	C-12 concentration in water (g/cm**3)	not used	2.000E-05	---	C12WTR
C14	C-12 concentration in contaminated soil (g/g)	not used	3.000E-02	---	C12CZ
C14	Fraction of vegetation carbon from soil	not used	2.000E-02	---	CSOIL
C14	Fraction of vegetation carbon from air	not used	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	not used	3.000E-01	---	DMC

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
C14	C-14 evasion flux rate from soil (1/sec)	not used	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	not used	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	not used	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	not used	2.000E-01	---	AVFG5
C14	DCF correction factor for gaseous forms of C14	not used	8.000E+00	---	CO2F
STOR	Storage times of contaminated foodstuffs (days):				
STOR	Fruits, non-leafy vegetables, and grain	1.400E+01	1.400E+01	---	STOR_T(1)
STOR	Leafy vegetables	1.000E+00	1.000E+00	---	STOR_T(2)
STOR	Milk	1.000E+00	1.000E+00	---	STOR_T(3)
STOR	Meat and poultry	2.000E+01	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)
STOR	Well water	1.000E+00	1.000E+00	---	STOR_T(7)
STOR	Surface water	1.000E+00	1.000E+00	---	STOR_T(8)
STOR	Livestock fodder	4.500E+01	4.500E+01	---	STOR_T(9)
R021	Thickness of building foundation (m)	not used	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	not used	2.400E+00	---	DENSFL
R021	Total porosity of the cover material	not used	4.000E-01	---	TPCV
R021	Total porosity of the building foundation	not used	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	not used	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	2.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMIX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FAI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TITL	Number of graphical time points	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	LYMAX
TITL	Maximum number of integration points for risk	257	---	---	KYMAX

Summary of Pathway Selections

Pathway	User Selection
1 -- external gamma	active
2 -- inhalation (w/o radon)	active
3 -- plant ingestion	active
4 -- meat ingestion	active
5 -- milk ingestion	suppressed
6 -- aquatic foods	suppressed
7 -- drinking water	active
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	10000.00 square meters	U-234	4.890E+01
Thickness:	0.15 meters	U-238	2.000E+00
Cover Depth:	0.00 meters	U-235	4.890E+01

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 1.000E+02 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
TDOSE(t):	7.486E+00	7.386E+00	7.190E+00	6.537E+00	4.936E+00	1.461E+00	0.000E+00	0.000E+00
M(t):	7.486E-02	7.386E-02	7.190E-02	6.537E-02	4.936E-02	1.461E-02	0.000E+00	0.000E+00

Maximum TDOSE(t): 7.486E+00 mrem/yr at t = 0.000E+00 years

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	9.922E-02	0.0013	4.586E-01	0.0653	0.000E+00	0.0000	7.476E-01	0.0999	4.307E-02	0.0058	0.000E+00	0.0000	3.757E-01	0.05
U-235	5.140E-01	0.1069	2.049E-01	0.0427	0.000E+00	0.0000	3.182E-02	0.0043	1.344E-02	0.0002	0.000E+00	0.0000	1.599E-02	0.00
U-238	3.392E+00	0.4551	4.369E-01	0.0584	0.000E+00	0.0000	7.098E-01	0.0948	4.090E-02	0.0055	0.000E+00	0.0000	3.568E-01	0.04
Total	4.216E+00	0.5632	9.461E-01	0.1264	0.000E+00	0.0000	1.489E+00	0.1989	8.581E-02	0.0115	0.000E+00	0.0000	7.485E-01	0.10

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.865E+00	0.22
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.944E-01	0.11
U-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.937E+00	0.6
T[illegible]	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.486E-00	1.00

*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	9.820E-03	0.0013	4.807E-01	0.0651	0.000E+00	0.0000	7.354E-01	0.0996	4.238E-02	0.0057	0.000E+00	0.0000	3.696E-01	0.05
U-235	8.067E-01	0.1091	2.016E-02	0.0027	0.000E+00	0.0000	3.141E-02	0.0043	1.846E-03	0.0003	0.000E+00	0.0000	1.575E-01	0.02
U-238	3.354E+00	0.4541	4.298E-01	0.0582	0.000E+00	0.0000	6.983E-01	0.0945	4.023E-02	0.0054	0.000E+00	0.0000	2.509E-01	0.04
Total	4.170E+00	0.5645	9.306E-01	0.1260	0.000E+00	0.0000	1.465E+00	0.1984	8.446E-02	0.0114	0.000E+00	0.0000	7.363E-01	0.05

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.638E+00	0.22
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.749E-01	0.11
U-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.873E+00	0.65
T[illegible]	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.386E+00	1.00

*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	9.637E-03	0.0013	4.651E-01	0.3647	0.000E+00	0.0000	7.115E-01	0.0930	4.100E-02	0.0057	0.000E+00	0.0000	3.576E-01	0.04
U-235	7.689E-01	0.1097	1.951E-02	0.0027	0.000E+00	0.0000	3.060E-02	0.0043	1.548E-03	0.0003	0.000E+00	0.0000	1.525E-02	0.00
U-238	3.279E+00	0.4561	4.158E-01	0.0579	0.000E+00	0.0000	6.756E-01	0.0940	3.893E-02	0.0054	0.000E+00	0.0000	3.395E-01	0.04
Total	4.077E+00	0.5671	9.004E-01	0.1252	0.000E+00	0.0000	1.418E+00	0.1972	8.177E-02	0.0114	0.000E+00	0.0000	7.124E-01	0.09

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.585E+00	0.22
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.561E-01	0.11
U-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.749E+00	0.66
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.190E+00	1.00

*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	9.041E-03	0.0014	4.137E-01	0.0653	0.000E+00	0.0000	6.329E-01	0.0998	3.646E-02	0.0056	0.000E+00	0.0000	3.161E-01	0.04
U-235	7.323E-01	0.1120	1.741E-02	0.0027	0.000E+00	0.0000	2.789E-02	0.0043	1.836E-03	0.0003	0.000E+00	0.0000	1.366E-02	0.00
U-238	3.026E+00	0.4630	3.698E-01	0.0566	0.000E+00	0.0000	6.009E-01	0.0919	3.460E-02	0.0053	0.000E+00	0.0000	3.020E-01	0.04
Total	3.768E+00	0.5764	8.009E-01	0.1225	0.000E+00	0.0000	1.262E+00	0.1930	7.292E-02	0.0112	0.000E+00	0.0000	6.337E-01	0.09

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.410E+00	0.21
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.951E-01	0.12
U-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.334E+00	0.66
*	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.537E+00	1.00

*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	7.674E-03	0.0016	2.917E-01	0.0591	0.000E+00	0.0000	4.462E-01	0.0904	2.571E-02	0.0052	0.000E+00	0.0000	2.243E-01	0.04
U-235	5.877E-01	0.1191	1.244E-02	0.0025	0.000E+00	0.0000	2.112E-02	0.0043	1.693E-03	0.0003	0.000E+00	0.0000	9.879E-03	0.00
U-238	2.386E+00	0.4834	2.607E-01	0.0528	0.000E+00	0.0000	4.236E-01	0.0858	2.441E-02	0.0045	0.000E+00	0.0000	2.129E-01	0.04
Total	3.981E+00	0.5040	5.645E-01	0.1144	0.000E+00	0.0000	8.909E-01	0.1805	5.180E-02	0.0105	0.000E+00	0.0000	4.470E-01	0.09

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+01 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.956E-01	0.20
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.328E-01	0.13
U-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.307E+00	0.67
*	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.936E+00	1.00

*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	4.748E-03	0.0033	6.123E-02	0.0419	0.000E+00	0.0000	9.386E-02	0.0643	5.402E-03	0.0037	0.000E+00	0.0000	4.707E-02	0.03
U-235	2.180E-01	0.1493	2.775E-03	0.0019	0.000E+00	0.0000	5.559E-03	0.0038	6.376E-04	0.0004	0.000E+00	0.0000	2.289E-03	0.00
U-238	8.260E-01	0.5655	5.458E-02	0.0374	0.000E+00	0.0000	8.871E-02	0.0607	5.114E-03	0.0035	0.000E+00	0.0000	4.456E-02	0.03
Total	1.049E+00	0.7181	1.186E-01	0.0812	0.000E+00	0.0000	1.881E-01	0.1288	1.115E-02	0.0076	0.000E+00	0.0000	9.392E-02	0.06

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.123E-01	0.14
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.293E-01	0.15
U-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.019E+00	0.69
*	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.461E+00	1.00

*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
U-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) And Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
U-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00
[illegible]	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.00

*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0
U-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	frac
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0
U-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0
T[illegible]	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0

*Sum of all water independent and dependent pathways.

Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g) 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
U-234	U-234	1.000E+00	3.405E-02	3.349E-02	3.241E-02	3.883E-02	2.034E-02	4.291E-03	0.000E+00	0.000E+00
U-234	Th-230	1.000E+00	2.417E-07	7.080E-07	1.607E-06	4.428E-06	1.094E-05	1.023E-05	0.000E+00	0.000E+00
U-234	Ra-226+D	1.000E+00	3.830E-09	8.692E-08	1.406E-07	1.185E-06	5.280E-06	3.656E-05	0.000E+00	0.000E+00
U-234	Pb-210+D	1.000E+00	1.242E-11	1.608E-10	1.665E-09	3.650E-08	5.847E-07	3.936E-06	0.000E+00	0.000E+00
U-234	∑DSR(j)		3.405E-02	3.349E-02	3.241E-02	2.884E-02	2.036E-02	4.342E-03	0.000E+00	0.000E+00
U-235+D	U-235+D	1.000E+00	4.020E-01	3.976E-01	3.889E-01	3.598E-01	2.860E-01	1.028E-01	0.000E+00	0.000E+00
U-235+D	Pa-231	1.000E+00	3.429E-05	1.054E-04	2.434E-04	6.494E-04	1.337E-03	9.418E-04	0.000E+00	0.000E+00
U-235+D	Ac-227+D	1.000E+00	3.259E-07	2.145E-06	1.035E-05	7.409E-05	3.520E-04	5.221E-04	0.000E+00	0.000E+00
U-235+D	∑DSR(j)		4.020E-01	3.977E-01	3.891E-01	3.605E-01	2.876E-01	1.042E-01	0.000E+00	0.000E+00
U-238	U-238	5.400E-05	1.646E-06	1.619E-06	1.566E-06	1.393E-06	9.824E-07	2.063E-07	0.000E+00	0.000E+00
U-238+D	U-238+D	9.999E-01	1.009E-01	9.966E-02	9.711E-02	8.862E-02	6.763E-02	2.084E-02	0.000E+00	0.000E+00
U-238+D	U-234	9.999E-01	4.813E-08	1.423E-07	3.214E-07	8.581E-07	1.759E-06	1.223E-06	0.000E+00	0.000E+00
U-238+D	Th-230	9.999E-01	2.319E-13	1.568E-12	8.006E-12	6.491E-11	4.127E-10	1.223E-09	0.000E+00	0.000E+00
U-238+D	Ra-226+D	9.999E-01	2.693E-15	4.063E-14	4.695E-13	1.164E-11	2.313E-10	3.120E-09	0.000E+00	0.000E+00
U-238+D	Pb-210+D	9.999E-01	7.367E-18	1.955E-16	4.317E-15	2.765E-13	1.289E-11	2.863E-10	0.000E+00	0.000E+00
U-238+D	∑DSR(j)		1.009E-01	9.966E-02	9.711E-02	8.862E-02	6.764E-02	2.084E-02	0.000E+00	0.000E+00

The DSR includes contributions from associated (half-life ≤ 180 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g
Basic Radiation Dose Limit = 1.000E+02 mrem/yr

Nuclide (i)	t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
U-234	2.937E+03	2.986E+03	3.086E+03	3.468E+03	4.912E+03	2.303E+04	*6.247E+05	*6.247E+05
U-235	2.488E+02	2.515E+02	2.570E+02	2.774E+02	3.476E+02	9.594E+02	*2.161E+06	*2.161E+06
U-238	9.906E+02	1.003E+03	1.030E+03	1.128E+03	1.478E+03	4.799E+03	*3.361E+05	*3.361E+05

*At specific activity limit

Summed Dose/Source Ratios DSR(i,t) in (mrem/yr)/(pCi/g)
and Single Radionuclide Soil Guidelines G(i,t) in pCi/g
at tmin = time of minimum single radionuclide soil guideline
and at tmax = time of maximum total dose = 0.000E+00 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin)	G(i,tmin) (pCi/g)	DSR(i,tmax)	G(i,tmax) (pCi/g)
U-234	4.890E+01	0.000E+00	3.405E-02	2.937E+03	3.405E-02	2.937E+03
U-235	2.200E+00	0.000E+00	4.020E-01	2.488E+02	4.020E-01	2.488E+02
U-238	4.890E+01	0.000E+00	1.010E-01	9.906E+02	1.010E-01	9.906E+02

Individual Nuclide Dose Summed Over All Pathways
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	DOSE(j,t), mrem/yr t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
U-234	U-234	1.000E+00	1.665E+00	1.638E+00	1.585E+00	1.410E+00	9.947E-01	2.098E-01	0.000E+00	0.000E+00
U-234	U-238	9.999E-01	2.353E-06	6.958E-06	1.572E-05	4.196E-05	8.600E-05	5.979E-05	0.000E+00	0.000E+00
U-234	∑DOSE(j)		1.665E+00	1.638E+00	1.585E+00	1.410E+00	9.948E-01	2.098E-01	0.000E+00	0.000E+00
Th-230	U-234	1.000E+00	1.182E-05	3.462E-05	7.856E-05	2.166E-04	4.909E-04	5.001E-04	0.000E+00	0.000E+00
Th-230	U-238	9.999E-01	1.131E-11	3.470E-11	8.915E-10	3.174E-09	2.018E-08	5.581E-08	0.000E+00	0.000E+00
Th-230	∑DOSE(j)		1.182E-05	3.462E-05	7.856E-05	2.166E-04	4.909E-04	5.001E-04	0.000E+00	0.000E+00
Ra-226	U-234	1.000E+00	1.873E-07	1.316E-06	6.874E-06	5.793E-05	4.049E-04	1.788E-03	0.000E+00	0.000E+00
Ra-226	U-238	9.999E-01	1.317E-13	1.987E-12	2.291E-11	5.691E-10	1.131E-08	1.526E-07	0.000E+00	0.000E+00
Ra-226	∑DOSE(j)		1.873E-07	1.316E-06	6.874E-06	5.793E-05	4.049E-04	1.788E-03	0.000E+00	0.000E+00
Pb-210	U-234	1.000E+00	6.071E-10	7.862E-09	8.140E-08	1.795E-06	2.859E-05	1.925E-04	0.000E+00	0.000E+00
Pb-210	U-238	9.999E-01	3.603E-15	9.562E-15	2.111E-13	1.352E-11	6.303E-10	1.399E-08	0.000E+00	0.000E+00
Pb-210	∑DOSE(j)		6.071E-10	7.862E-09	8.140E-08	1.795E-06	2.859E-05	1.925E-04	0.000E+00	0.000E+00
U-235	U-235	1.000E+00	8.843E-01	8.746E-01	8.555E-01	7.915E-01	6.291E-01	2.261E-01	0.000E+00	0.000E+00
Pa-231	U-235	1.000E+00	7.543E-05	2.319E-04	5.311E-04	1.439E-03	2.942E-03	2.072E-03	0.000E+00	0.000E+00
Ac-227	U-235	1.000E+00	7.390E-07	4.720E-06	2.277E-05	1.630E-04	7.744E-04	1.149E-03	0.000E+00	0.000E+00
U-238	U-238	5.400E-05	8.048E-05	7.917E-05	7.660E-05	6.813E-05	4.804E-05	1.009E-05	0.000E+00	0.000E+00
U-238	U-238	9.999E-01	4.936E+00	4.873E+00	4.749E+00	4.333E+00	3.307E+00	1.019E+00	0.000E+00	0.000E+00
U-238	∑DOSE(j)		4.937E+00	4.873E+00	4.749E+00	4.334E+00	3.307E+00	1.019E+00	0.000E+00	0.000E+00

THF(i) is the thread fraction of the parent nuclide.

Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

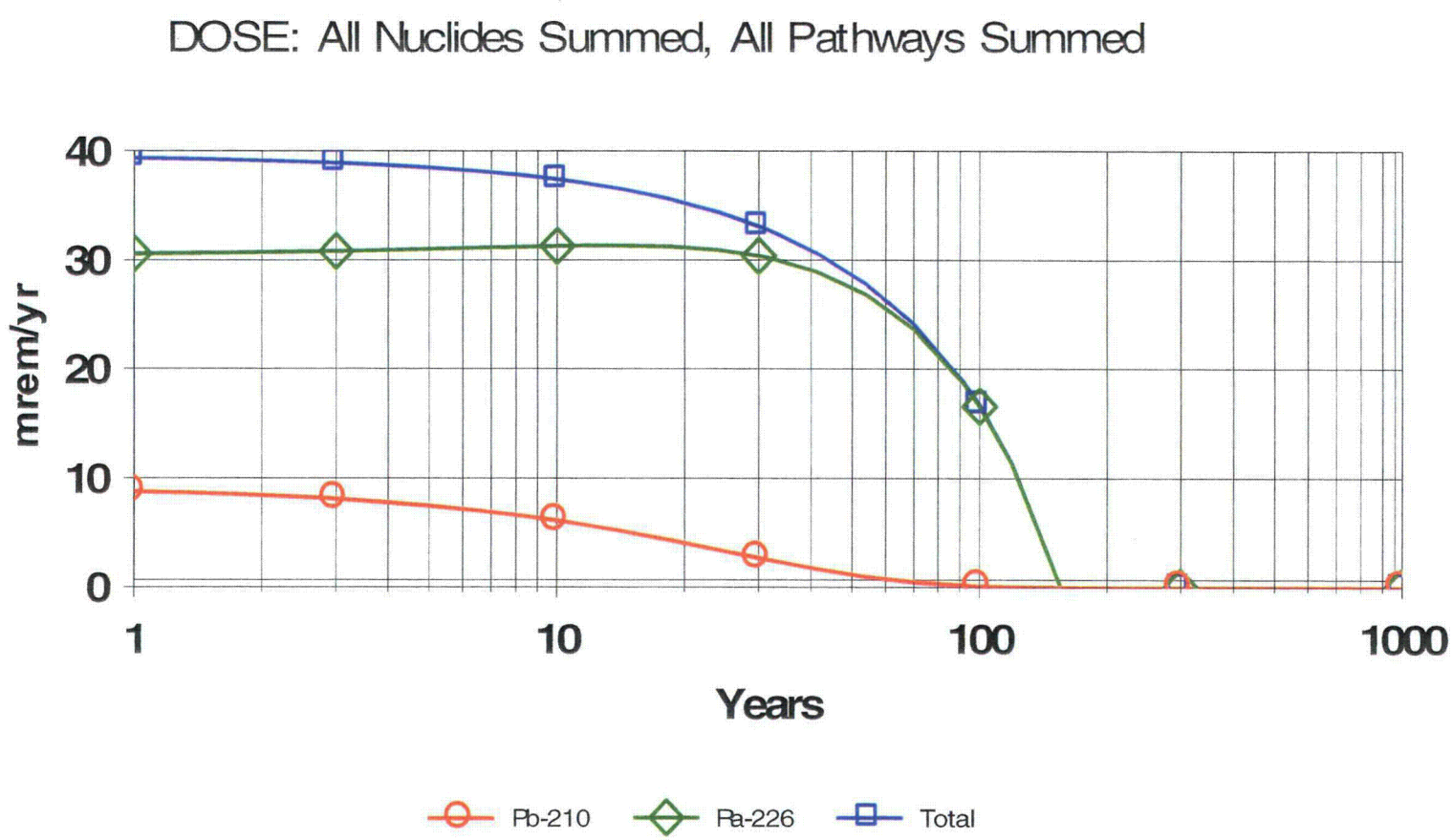
Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
U-234	U-234	1.000E+00	4.890E+01	4.843E+01	4.749E+01	4.436E+01	3.649E+01	1.844E+01	2.621E+00	2.838E-03
U-234	U-238	9.999E-01	0.000E+00	1.373E-04	4.029E-04	1.257E-03	3.104E-03	5.227E-03	3.230E-03	8.055E-06
U-234	∑S(j):		4.890E+01	4.843E+01	4.749E+01	4.436E+01	3.650E+01	1.844E+01	2.623E+00	2.846E-03
Th-230	U-234	1.000E+00	0.000E+00	4.380E-04	1.301E-03	4.194E-03	1.145E-02	2.809E-02	4.256E-02	4.443E-02
Th-230	U-238	9.999E-01	0.000E+00	6.199E-10	5.507E-09	5.848E-08	4.531E-07	3.345E-06	1.033E-05	1.293E-05
Th-230	∑S(j):		0.000E+00	4.381E-04	1.301E-03	4.194E-03	1.145E-02	2.809E-02	4.256E-02	4.445E-02
Ra-226	U-234	1.000E+00	0.000E+00	9.481E-08	8.435E-07	9.006E-06	7.241E-05	5.499E-04	1.893E-03	2.600E-03
Ra-226	U-238	9.999E-01	0.000E+00	5.949E-14	2.384E-12	8.425E-11	1.991E-09	4.673E-08	3.793E-07	7.529E-07
Ra-226	∑S(j):		0.000E+00	9.481E-08	8.435E-07	9.006E-06	7.241E-05	5.499E-04	1.893E-03	2.601E-03
Pb-210	U-234	1.000E+00	0.000E+00	9.749E-10	2.564E-08	8.666E-07	1.819E-05	3.071E-04	1.514E-03	2.247E-03
Pb-210	U-238	9.999E-01	0.000E+00	6.914E-16	5.462E-14	6.181E-12	3.931E-10	2.220E-08	2.861E-07	6.498E-07
Pb-210	∑S(j):		0.000E+00	9.749E-10	2.564E-08	8.666E-07	1.819E-05	3.071E-04	1.514E-03	2.247E-03
U-235	U-235	1.000E+00	2.200E+00	2.179E+00	2.137E+00	1.996E+00	1.642E+00	8.297E-01	1.180E-01	1.280E-04
Pa-231	U-235	1.000E+00	0.000E+00	4.610E-05	1.356E-04	4.322E-04	1.042E-03	1.754E-03	7.466E-04	2.680E-06
Ac-227	U-235	1.000E+00	0.000E+00	7.225E-07	6.186E-06	5.792E-05	3.291E-04	9.470E-04	4.756E-04	1.801E-06
[illegible]	U-238	5.400E-03	2.641E-03	2.610E-03	2.564E-03	2.395E-03	1.971E-03	9.958E-04	1.416E-04	1.537E-07
U-238	U-238	9.999E-01	4.890E+01	4.843E+01	4.749E+01	4.435E+01	3.649E+01	1.844E+01	2.623E+00	2.845E-03
U-238	∑S(j):		4.890E+01	4.843E+01	4.749E+01	4.436E+01	3.650E+01	1.844E+01	2.623E+00	2.846E-03

THF(i) is the thread fraction of the parent nuclide.

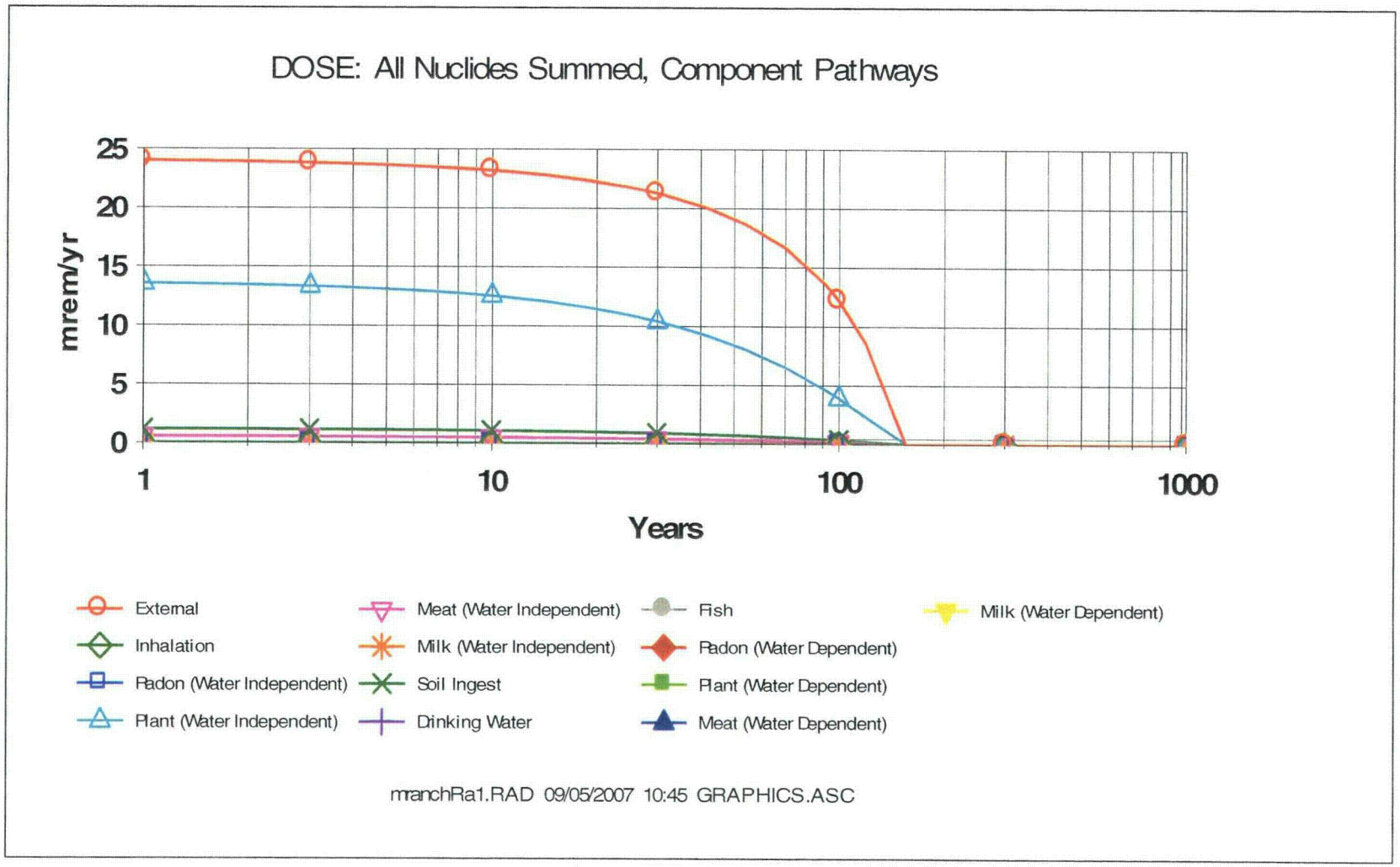
RESCALC.EXE execution time = 115.09 seconds

APPENDIX D-5

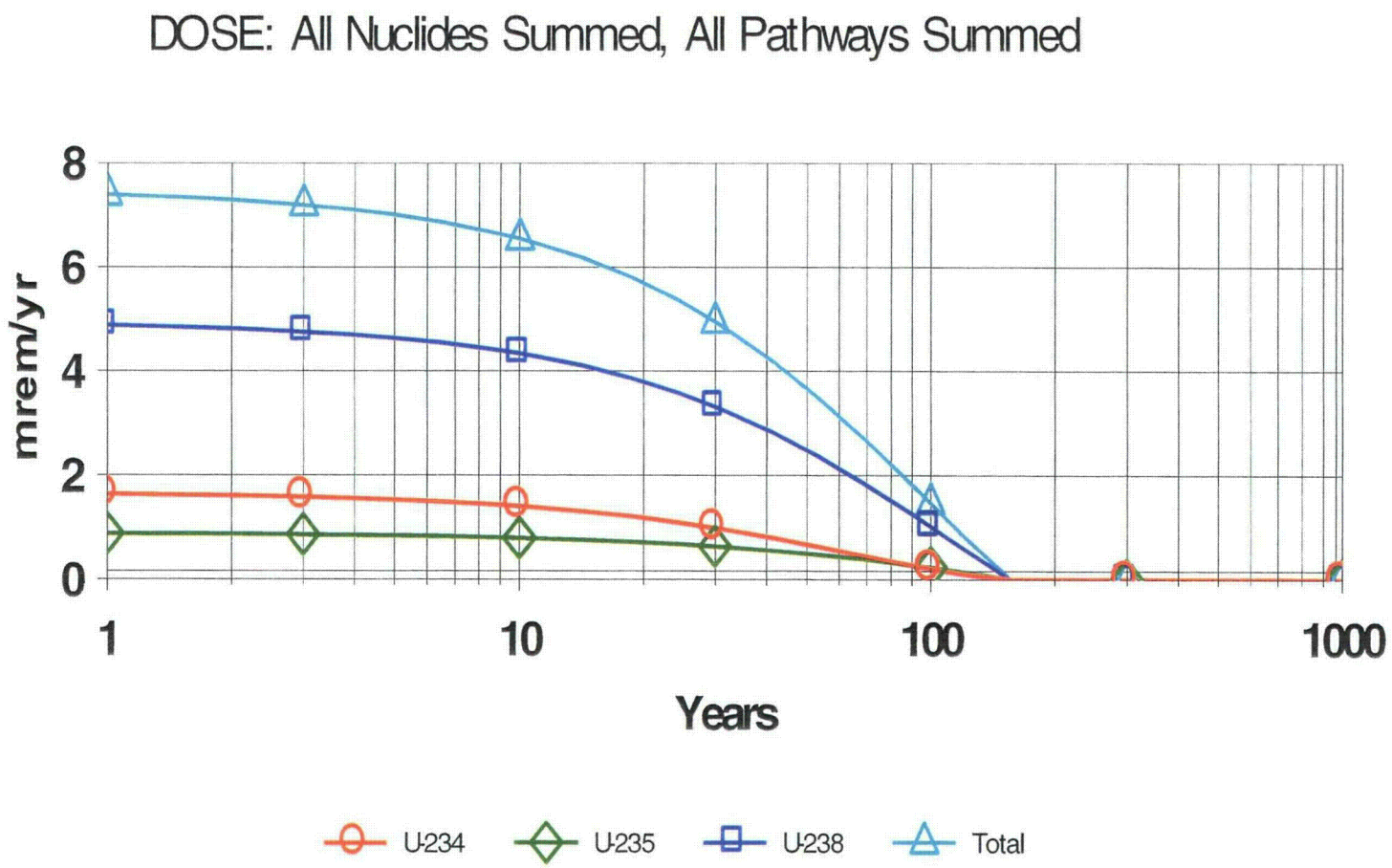
Standard Graphics for Radium and Uranium Dose Modeling



nranchRa1.RAD 09/05/2007 11:22 GRAPHICS.ASC Includes All Pathways

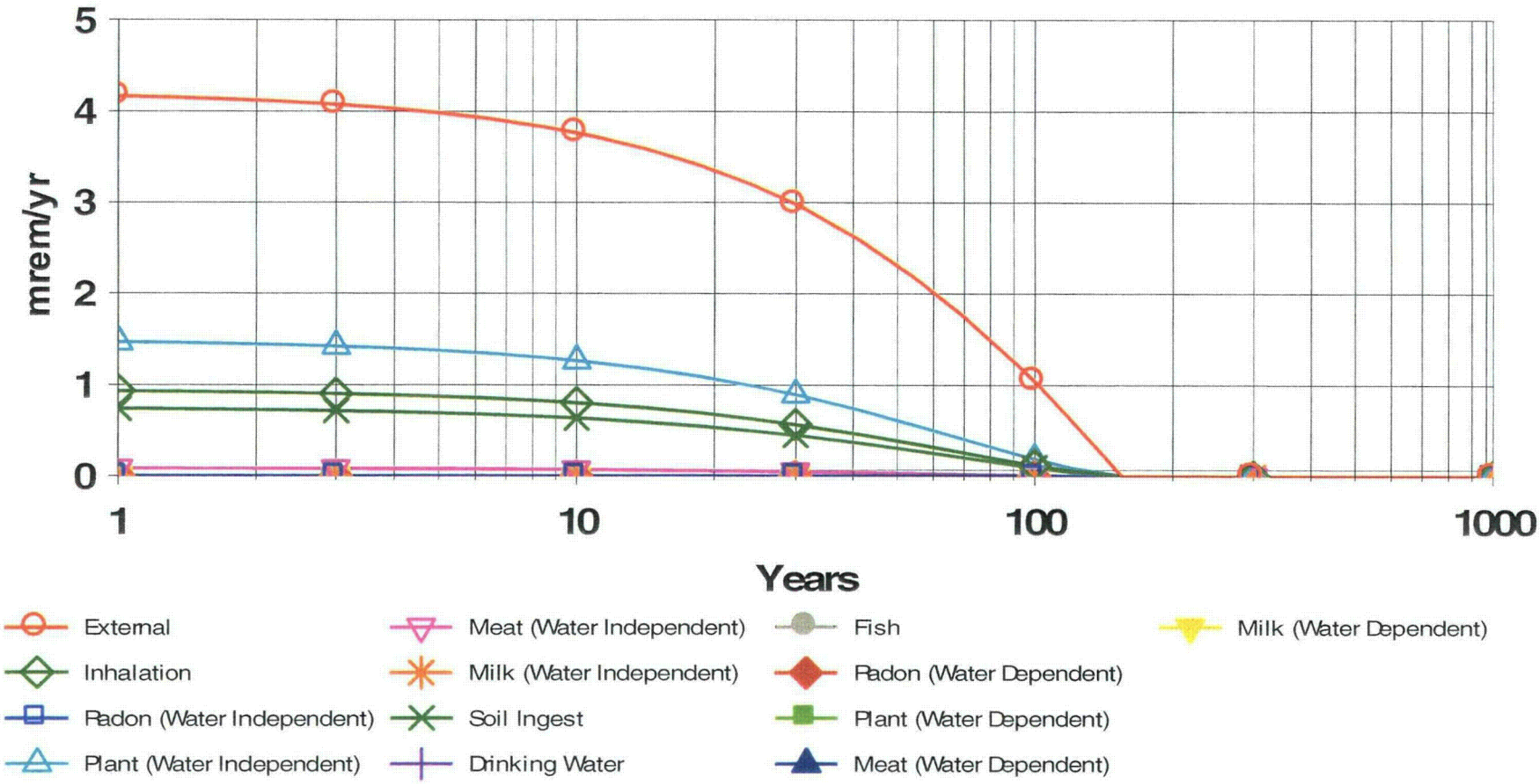

DOSE: All Nuclides Summed, Component Pathways
mrem/yr
25
20
15
10
5
0
1
10
100
1000
Years
External
Inhalation
Radon (Water Independent)
Plant (Water Independent)
Meat (Water Independent)
Milk (Water Independent)
Soil Ingest
Drinking Water
Fish
Radon (Water Dependent)
Plant (Water Dependent)
Meat (Water Dependent)
Milk (Water Dependent)
mranchRa1.RAD 09/05/2007 10:45 GRAPHICS.ASC

Natural Uranium Dose Graphics



mranchU1.RAD 09/05/2007 13:47 GRAPHICS.ASC Includes All Pathways

DOSE: All Nuclides Summed, Component Pathways



mranchU1.RAD 09/05/2007 13:47 GRAPHICS.ASC