APPENDICES A,C,D AND E
for
SITE ASSESSMENT REPORT AND
REMEDIAL ACTION PLAN
October 10, 1997

Mobil Jalk Fee Property
10607 Norwalk Boulevard
Santa Fe Springs, California

Alton Project No. 23-0134

Prepared For:

MOBIL OIL CORPORATION
3700 West 190th Street, TPT-2
Torrance, California 90509-2929

APPENDIX A

GENERAL FIELD PROCEDURES, BORING LOGS

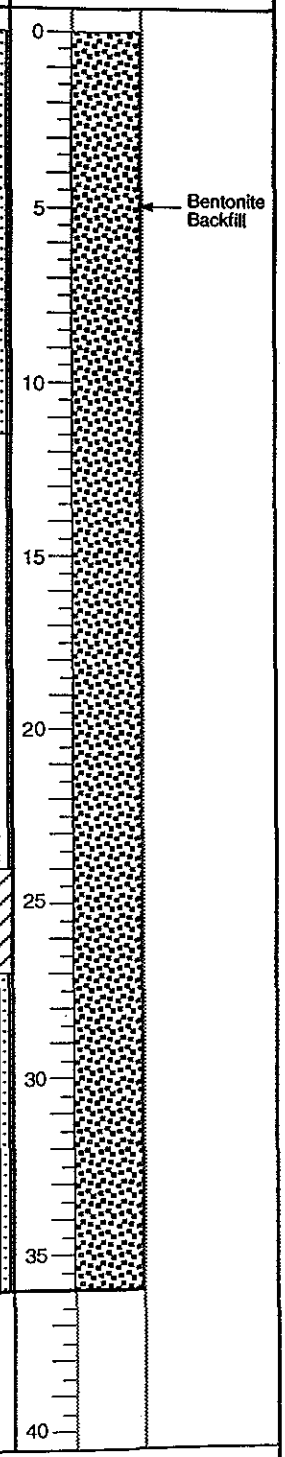
PROJECT NO.: 23-0134	DATE DRILLED: June 18, 1997
LOCATION: Mobil Jalk Fee Property	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 36 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		1,400		0–5	SILTY SAND: olive gray, loose, slightly moist, fine-grained sand, trace clay.	SM
		2,000		5–10	Grayish olive.	
		85		10–15	SANDY SILT: grayish olive, medium dense, slightly moist, fine-grained sand.	ML
		215		15–20	SILT: light olive gray, medium dense, slightly moist, some very fine-grained sand.	
		250		20–25	CLAY: light olive gray, stiff, slightly moist, some very fine-grained sand.	CL
		85		25–30	SILTY SAND: dark yellowish brown, medium dense, slightly moist, very fine-grained sand.	SM
		85		30–35	Olive gray.	
				35–40	Total boring depth = 36 feet below grade.	

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-25

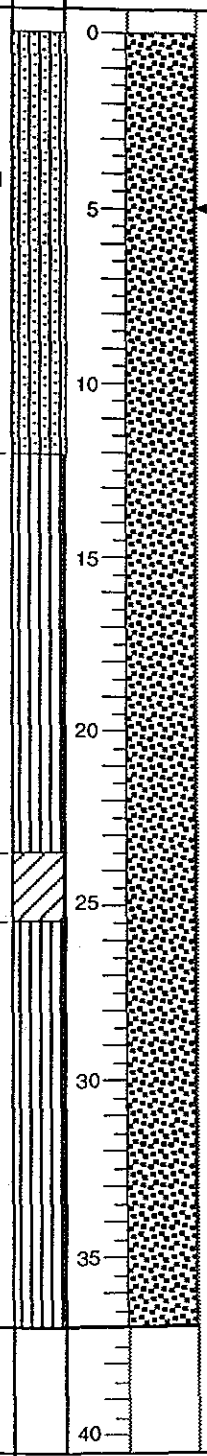
23-0134 6/27/97 jrw

PROJECT NO.: 23-0134	DATE DRILLED: June 18, 1997
LOCATION: Mobil Jalk Fee Property	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 37 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		14		0–5	SILTY SAND: moderate brown, medium dense, slightly moist, fine-grained sand, trace clay.	SM
		69		5–10	Olive gray, trace coarse grains.	
		59		10–15	SANDY SILT: light olive gray, medium dense, slightly moist, very fine-grained sand.	ML
		248		15–20	SILT: light olive gray, medium dense, slightly moist, very fine-grained sand.	
		69		20–25	CLAY: moderate yellowish brown, stiff, slightly moist, very fine-grained sand.	CL
		150		25–30	SILT: moderate yellowish brown, dense, slightly moist, some very fine-grained sand, trace clay.	ML
		35		30–35		
				35–40	Total boring depth = 37 feet below grade.	

GRAPHIC LOG



BOREHOLE DETAIL

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-26

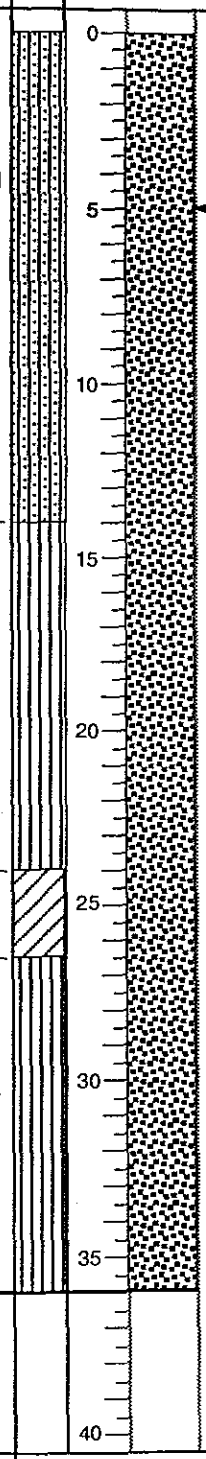
23-0134 6/27/97 jrw

PROJECT NO.: 23-0134	DATE DRILLED: June 18, 1997
LOCATION: Mobil Jalk Fee Property	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 36 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				0		
		14		5	SILTY SAND: moderate brown, loose, slightly moist, fine-grained sand, trace clay.	SM
		85		10		
		65		15	SANDY SILT: light olive gray, medium dense, slightly moist, trace very fine-grained sand.	ML
		185		20	SILT: light olive gray, medium dense, slightly moist, very fine-grained sand.	
		123		25	CLAY: dark yellowish brown, stiff, slightly moist, trace coarse-grained sand.	CL
		130		30	SILT: dark yellowish brown, dense, slightly moist, very fine-grained sand.	ML
		110		35	SANDY SILT: dark yellowish brown, dense, slightly moist, very fine-grained sand.	
					Total boring depth = 36 feet below grade.	
				40		

GRAPHIC LOG



BOREHOLE DETAIL

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-27

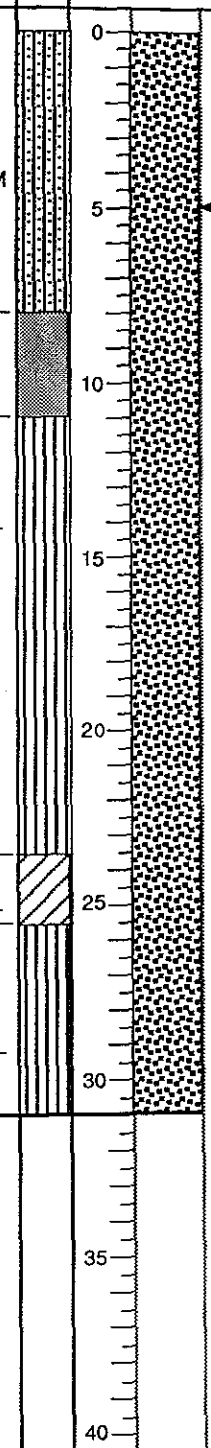
23-0134 6/27/97 jrw

PROJECT NO.:	23-0134	DATE DRILLED:	June 18, 1997
LOCATION:	Mobil Jalk Fee Property	LOGGED BY:	C. Cullum
	10607 Norwalk Boulevard	APPROVED BY:	K. Keenan, RG
	Santa Fe Springs, California	DRILLING CO.:	Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 31 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		0		0–5	SILTY SAND: moderate yellowish brown, loose, slightly moist, fine-grained sand, trace clay.	SM
		28		5–10	SAND: moderate yellowish brown, loose, slightly moist, some silt.	SP
		53		10–15	SANDY SILT: olive gray, medium dense, slightly moist, very fine-grained.	ML
		30		15–20		
		71		20–25	CLAY: moderate yellowish brown, stiff, slightly moist, some very fine-grained sand.	CL
		95		25–30	SANDY SILT: moderate yellowish brown, dense, slightly moist, very fine-grained sand, trace clay.	ML
				30–40	Total boring depth = 31 feet below grade.	

GRAPHIC LOG



BOREHOLE DETAIL

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-28

23-0134 6/27/97 jcw

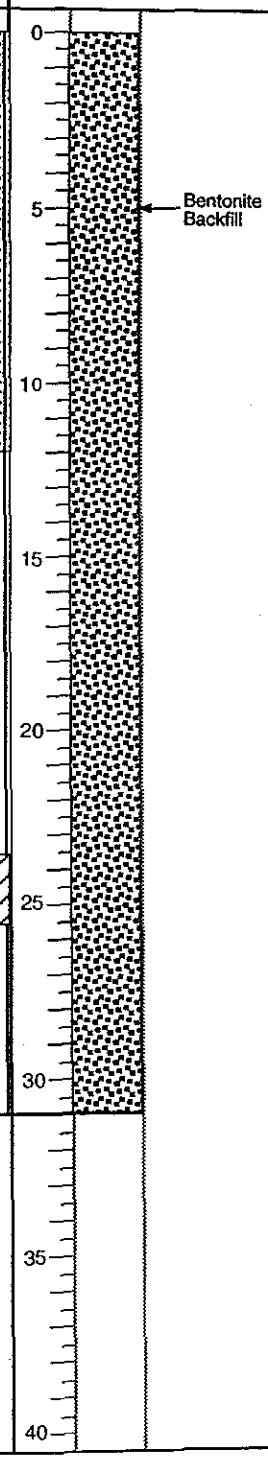
PROJECT NO.:	23-0134	DATE DRILLED:	June 19, 1997
LOCATION:	Mobil Jalk Fee Property	LOGGED BY:	C. Cullum
	10607 Norwalk Boulevard	APPROVED BY:	K. Keenan, RG
	Santa Fe Springs, California	DRILLING CO.:	Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 31 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		10		0–5	SILTY SAND: moderate yellowish brown, medium dense, dry, fine-grained sand.	SM
		20		5–10		
		104		10–15	SANDY SILT: dark yellowish brown, dense, dry, very fine-grained sand.	ML
		10		15–20	SILT: dusky yellow, medium dense, slightly moist, trace fine-grained sand.	
		98		20–25	CLAY: dark yellowish brown, stiff, slightly moist, some very fine-grained sand.	CL
		70		25–30	SILT: dusky yellow, medium dense, slightly moist, trace fine-grained sand.	ML
				30–40	Total boring depth = 31 feet below grade.	

GRAPHIC LOG

BOREHOLE DETAIL



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Irvine, California

LOG OF EXPLORATORY BORING

GP-29

23-0134 6/27/97 jrw

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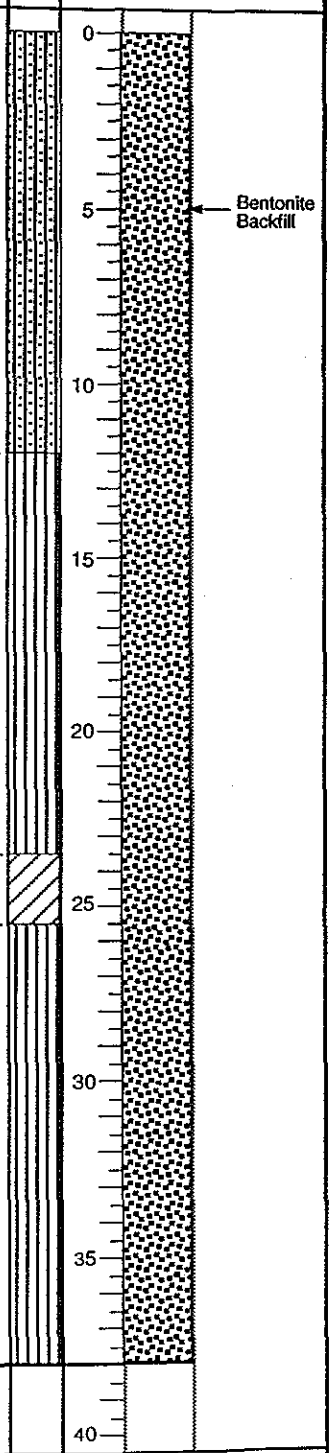
	10607 Norwalk Boulevard	APPROVED BY:	K. Keenan, RG
	Santa Fe Springs, California	DRILLING CO.:	Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 38 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		80		0–5	SILTY SAND: moderate brown, loose, slightly moist, fine-grained sand, trace clay.	SM
		200		5–10		
		500		10–15	SANDY SILT: moderate yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
		37		15–20	SILT: dusky brown, medium dense, slightly moist, trace fine-grained sand.	
		450		20–25	CLAY: dark yellowish brown, stiff, slightly moist, some very fine-grained sand.	CL
		90		25–30	SILT: dark yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
		140		30–35		
				35–40	Total boring depth = 38 feet below grade.	

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-30

23-0134 6/27/97 jrw

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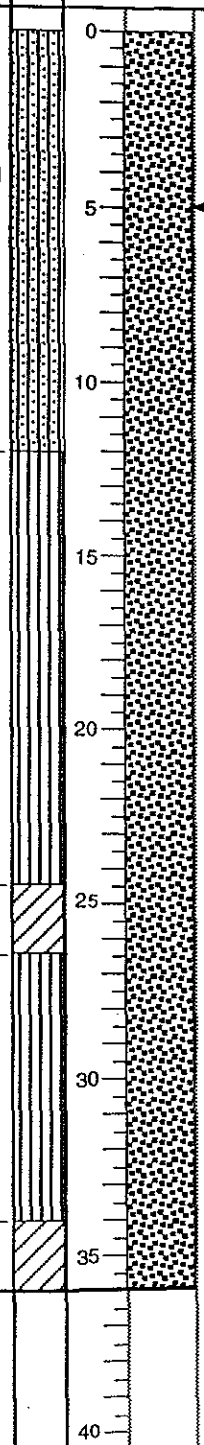
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 36 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		121		0–5	SILTY SAND: moderate brown, loose, slightly moist, fine-grained sand, trace clay.	SM
		420		5–10		
		805		10–15	SANDY SILT: moderate yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
		10		15–20	SILT: dusky yellow, dense, slightly moist, some very fine-grained sand.	
		165		20–25	CLAY: dark yellowish brown, dense, slightly moist, some very fine-grained sand.	CL
		480		25–30	SANDY SILT: dark yellowish brown, medium dense, slightly moist, some very fine-grained sand.	ML
		300		30–35	CLAY: moderate yellowish brown, medium dense, slightly moist, very fine-grained sand.	CL
				35–40	Total boring depth = 36 feet below grade.	

GRAPHIC LOG



BOREHOLE DETAIL

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-31

23-0134 6/27/97 jrw

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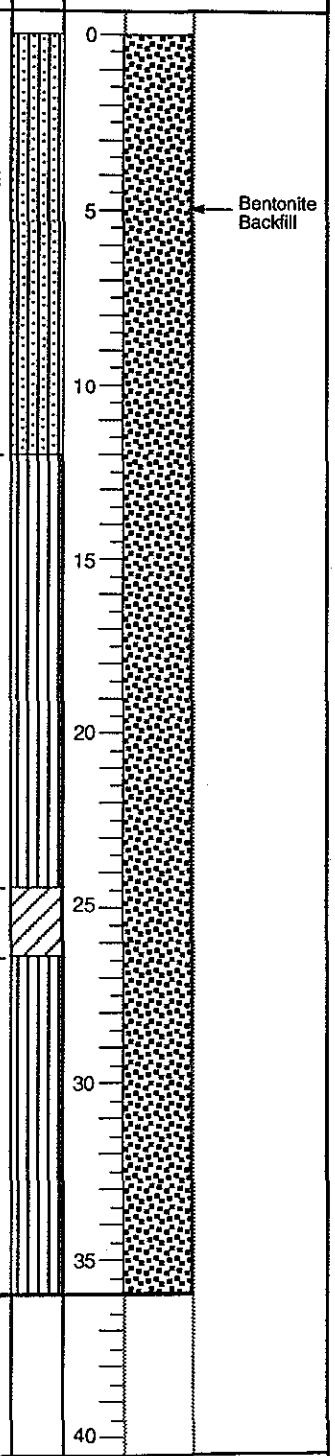
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 36 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		170		0–5	SILTY SAND: moderate brown, loose, slightly moist, fine-grained sand, trace clay.	SM
		230		5–10		
		850		10–15	SANDY SILT: moderate yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
		15		15–20	SILT: dusky yellow, very dense, slightly moist, some very fine-grained sand.	
		830		20–25	CLAY: dark yellowish brown, stiff, slightly moist, some very fine-grained sand.	CL
		112		25–30	SANDY SILT: dark yellowish brown, medium dense, slightly moist, some very fine-grained sand, trace clay.	ML
		560		30–35		
				35–40	Total boring depth = 36 feet below grade.	

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-32

23-0134 6/27/97 jrw

PROJECT NO.: 23-0134	DATE DRILLED: June 19, 1997
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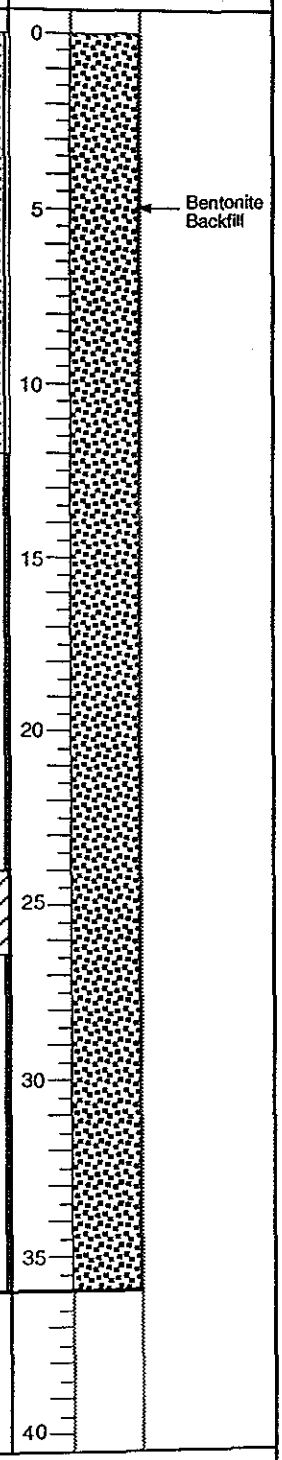
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 36 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		20		0–5	SILTY SAND: moderate brown, loose, slightly moist, fine-grained sand, trace clay.	SM
		90		5–10		
		158		10–15	SANDY SILT: moderate yellowish brown, medium dense, slightly moist, fine-grained sand.	ML
		10		15–20	SILT: dusky yellow, very dense, slightly moist, very fine-grained sand.	
		225		20–25	CLAY: dark yellowish brown, stiff, slightly moist, some very fine-grained sand.	CL
		390		25–30	SILT: dusky yellow, very dense, slightly moist, very fine-grained sand.	ML
		460		30–35		
				35–40	Total boring depth = 36 feet below grade.	

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-33

23-0134 6/27/97 jrw

PROJECT NO.: 23-0134	DATE DRILLED: June 20, 1997
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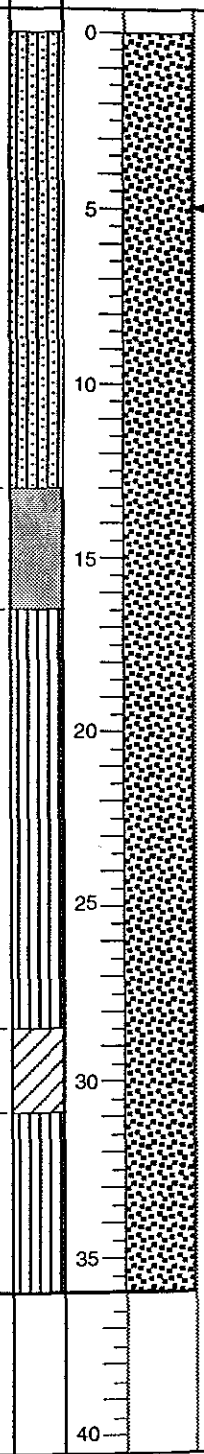
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 36 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		12		0–5	SILTY SAND: moderate brown, loose, slightly moist, fine-grained sand, trace clay.	SM
		70		5–10	Olive gray.	
		10		10–15	SAND: grayish olive, medium dense, slightly moist, fine-grained sand, some silt.	SP
		20		15–20	SILT: moderate yellowish brown, medium dense, slightly moist, some very fine-grained sand.	ML
		5		20–25		
		375		25–30	CLAY: dark yellowish brown, stiff, slightly moist, some very fine-grained sand.	CL
		240		30–35	SILT: dark yellowish brown, medium dense, slightly moist, some clay and very fine-grained sand.	ML
				35–40	Total boring depth = 36 feet below grade.	

GRAPHIC LOG



BOREHOLE DETAIL

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-34

23-0134 6/27/97 jrw

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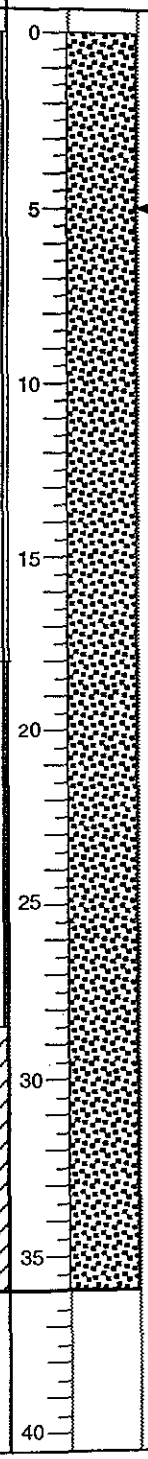
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 36 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		2,000		0–5	SILTY SAND: olive gray, loose, slightly moist, fine-grained sand, trace clay.	SM
		2,000		5–10		
		2,000		10–15	Grayish olive, medium dense, very fine-grained sand.	
		2,000		15–20	SILT: light olive gray, medium dense, slightly moist, some very fine-grained sand.	ML
		2,000		20–25	Moderate yellowish brown.	
		2,000		25–30	SANDY CLAY: moderate yellowish brown, stiff, slightly moist, fine-grained sand.	CL
		2,000		30–35		
				35–40	Total boring depth = 36 feet below grade.	

GRAPHIC LOG

BOREHOLE DETAIL



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Irvine, California

LOG OF EXPLORATORY BORING

GP-35

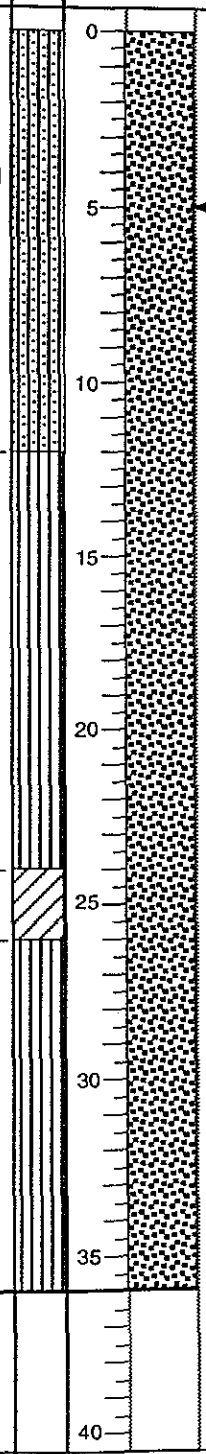
23-0134 6/27/97 jrw

PROJECT NO.:	23-0134	DATE DRILLED:	June 20, 1997
LOCATION:	Mobil Jalk Fee Property	LOGGED BY:	C. Cullum
	10607 Norwalk Boulevard	APPROVED BY:	K. Keenan, RG
	Santa Fe Springs, California	DRILLING CO.:	Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 36 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		2,000		0–5	SILTY SAND: olive gray, loose, slightly moist, fine-grained sand, trace clay.	SM
		2,000		5–10	Grayish olive green.	
		2,000		10–15	SANDY SILT: grayish olive green, medium dense, slightly moist, fine-grained sand.	ML
		2,000		15–20	SILT: light olive gray, very dense, slightly moist.	
		2,000		20–25	CLAY: moderate yellowish brown, dense, slightly moist, some very fine-grained sand.	CL
		2,000		25–30	SILT: moderate yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
		2,000		30–35	Light olive gray.	
				35–40	Total boring depth = 36 feet below grade.	

GRAPHIC LOG



BOREHOLE DETAIL

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-36

23-0134 6/27/97 jrw

PROJECT NO.: 23-0134	DATE DRILLED: June 20, 1997
LOCATION: Mobil Jalk Fee Property	LOGGED BY: C. Cullum
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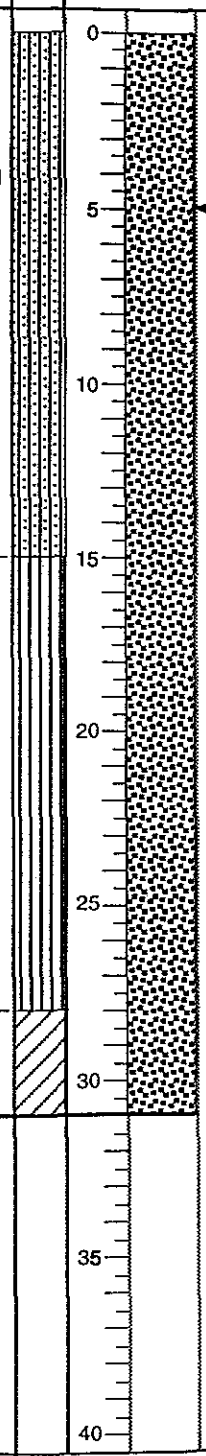
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 31 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		2,000		0–5	SILTY SAND: moderate brown, loose, slightly moist, fine-grained sand.	SM
		120		5–10	Olive gray, moist.	
		300		10–15	Not enough recovery for sample: very loose.	
		2,000		15–20	SANDY SILT: olive gray, very loose, slightly moist, fine-grained sand.	ML
		880		20–25	SILT: grayish olive, medium dense, slightly moist, fine-grained sand.	
		2,000		25–30	CLAY: dark yellowish brown, stiff, slightly moist.	CL
				30–40	Total boring depth = 31 feet below grade.	

GRAPHIC LOG



BOREHOLE DETAIL

ALTON GEOSCIENCE
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LOG OF EXPLORATORY BORING

GP-37

23-0134 6/27/97 jrw

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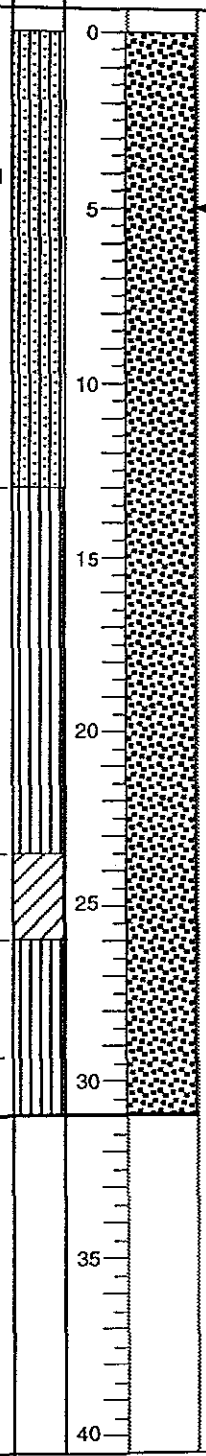
DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 31 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		15		0–5	SILTY SAND: dusky brown, loose, slightly moist, very fine-grained sand.	SM
		50		5–10	Moist.	
				10–15	No recovery 14-16'.	
		10			SANDY SILT: moderate olive brown, loose, slightly moist, fine-grained sand.	ML
		7		15–20		
		10		20–25	CLAY: moderate yellowish brown, medium dense, slightly moist, some fine-grained sand.	CL
		20		25–30	SILT: dark yellowish brown, medium dense, slightly moist, some very fine-grained sand and clay.	ML
				30–40	Total boring depth = 31 feet below grade.	

GRAPHIC LOG



BOREHOLE DETAIL

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LOG OF EXPLORATORY BORING

GP-38

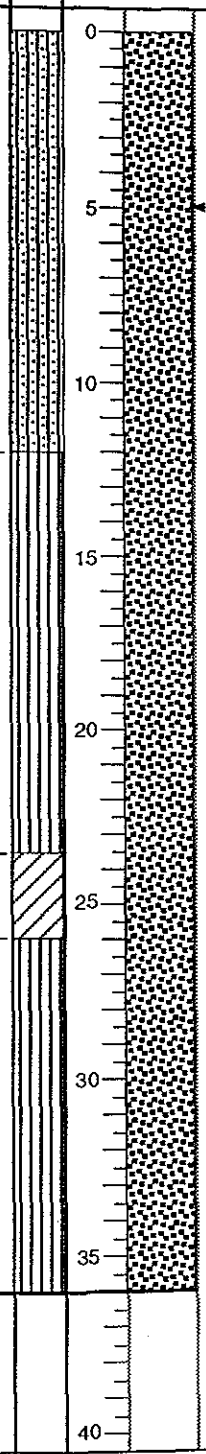
23-0134 6/27/97 jrw

PROJECT NO.: 23-0134	DATE DRILLED: June 23, 1997
LOCATION: Mobil Jalk Fee Property	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 36 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		30		0–5	SILTY SAND: moderate brown, loose, slightly moist, fine-grained sand.	SM
		110		5–10		
		131		10–15	SILT: moderate yellowish brown, loose, slightly moist, very fine-grained sand.	ML
		10		15–20		
		145		20–25	CLAY: moderate yellowish brown, stiff, slightly moist, trace very fine-grained sand.	CL
		89		25–30	SILT: dark yellowish brown, medium dense, slightly moist, fine-grained sand.	ML
		124		30–35	SANDY SILT: dark yellowish brown, medium dense, moist, fine-grained sand.	
				35–40	Total boring depth = 36 feet below grade.	

GRAPHIC LOG



BOREHOLE DETAIL

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-39

23-0134 6/30/97 jrw

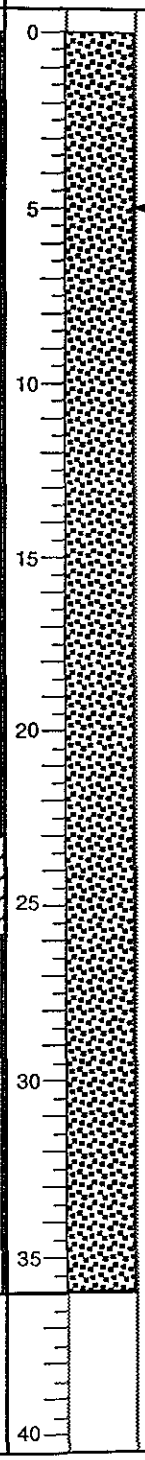
PROJECT NO.: 23-0134	DATE DRILLED: June 23, 1997
LOCATION: Mobil Jalk Fee Property	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 36 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		140		0–5	SILTY SAND: moderate brown, loose, slightly moist, fine-grained sand.	SM
		242		5–10	Moist, trace clay and coarse grains.	
		340		10–15	SILT: moderate yellowish brown, medium dense, slightly moist, some very fine-grained sand.	ML
		13		15–20		
		162		20–25	CLAY: moderate yellowish brown, stiff, slightly moist, some very fine-grained sand.	CL
		135		25–30	SILT: dark yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
		141		30–35		
				35–40	Total boring depth = 36 feet below grade.	

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-40

23-0134 6/30/97 jrw

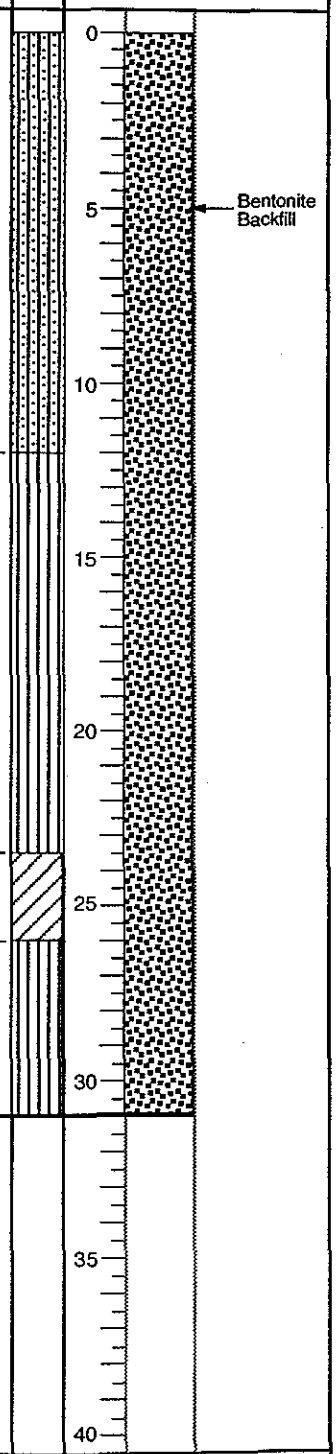
PROJECT NO.:	23-0134	DATE DRILLED:	June 23, 1997
LOCATION:	Mobil Jalk Fee Property	LOGGED BY:	C. Cullum
	10607 Norwalk Boulevard	APPROVED BY:	K. Keenan, RG
	Santa Fe Springs, California	DRILLING CO.:	Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 31 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		6		5	SILTY SAND: moderate brown, very dense, slightly moist, fine-grained sand.	SM
		17		10	Moist.	
		70		15	SANDY SILT: dark yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
		39		20	SILT: moderate yellowish brown, medium dense, slightly moist, trace very fine-grained sand.	
		30		25	CLAY: moderate yellowish brown, medium dense, slightly moist, very fine-grained sand.	CL
		6		30	SANDY SILT: dark yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
				35	Total boring depth = 31 feet below grade.	
				40		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-41

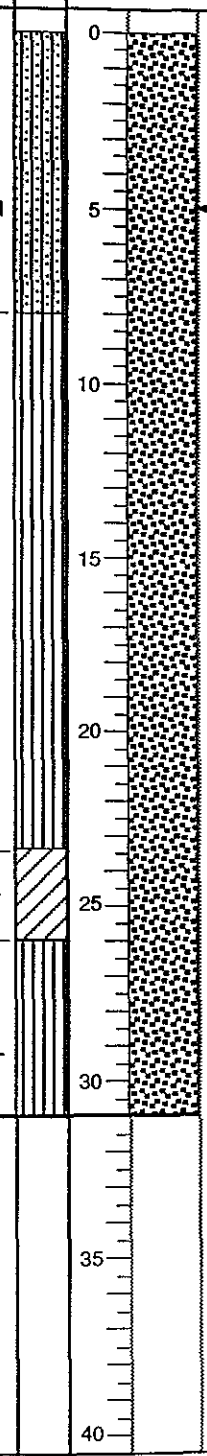
23-0134 6/30/97

PROJECT NO.:	23-0134	DATE DRILLED:	June 23, 1997
LOCATION:	Mobil Jalk Fee Property	LOGGED BY:	C. Cullum
	10607 Norwalk Boulevard	APPROVED BY:	K. Keenan, RG
	Santa Fe Springs, California	DRILLING CO.:	Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 31 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		0		0–5	SILTY SAND: moderate brown, loose, slightly moist, fine-grained sand.	SM
		3		5–10	SANDY SILT: olive gray, loose, moist.	ML
		3		10–15	Medium dense, slightly moist, very fine-grained sand.	
		2		15–20	Light olive gray.	
		7		20–25	CLAY: moderate yellowish brown, stiff, slightly moist, very fine-grained sand.	CL
		3		25–30	SANDY SILT: dark yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
				30–40	Total boring depth = 31 feet below grade.	

GRAPHIC LOG



BOREHOLE DETAIL

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-42

23-0134 6/30/97 jrw

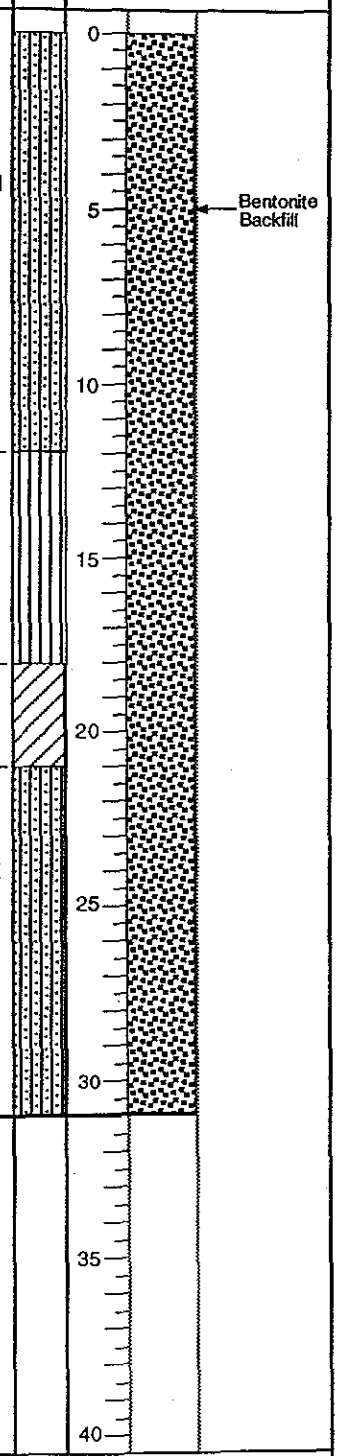
PROJECT NO.: 23-0134	DATE DRILLED: June 24, 1997
LOCATION: Mobil Jalk Fee Property	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 31 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		0		0–5	SILTY SAND: moderate brown, loose, slightly moist, fine-grained sand.	SM
		5		5–10		
		3		10–15	SANDY SILT: light olive gray, loose, slightly moist, very fine-grained sand.	ML
		30		15–20	CLAY: light olive gray, stiff, slightly moist, very fine-grained sand.	CL
		13		20–25	SILTY SAND: dark yellowish brown, medium dense, slightly moist, very fine-grained sand.	SM
		2		25–30		
				30–40	Total boring depth = 31 feet below grade.	

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-43

23-0134 6/30/97 irw

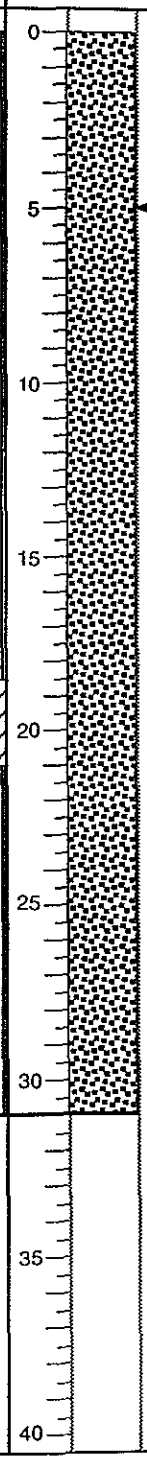
PROJECT NO.:	23-0134	DATE DRILLED:	June 24, 1997
LOCATION:	Mobil Jalk Fee Property	LOGGED BY:	C. Cullum
	10607 Norwalk Boulevard	APPROVED BY:	K. Keenan, RG
	Santa Fe Springs, California	DRILLING CO.:	Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 31 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		150		0–5	SILTY SAND: olive gray, loose, slightly moist, fine-grained sand.	SM
		220		5–10		
		30		10–15	SANDY SILT: light olive gray, medium dense, slightly moist. very fine-grained sand.	ML
		20		15–20	CLAY: light olive gray, medium stiff, slightly moist, trace very fine-grained sand.	CL
		3		20–25	SANDY SILT: dark yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
		24		25–30		
				30–40	Total boring depth = 31 feet below grade.	

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-44

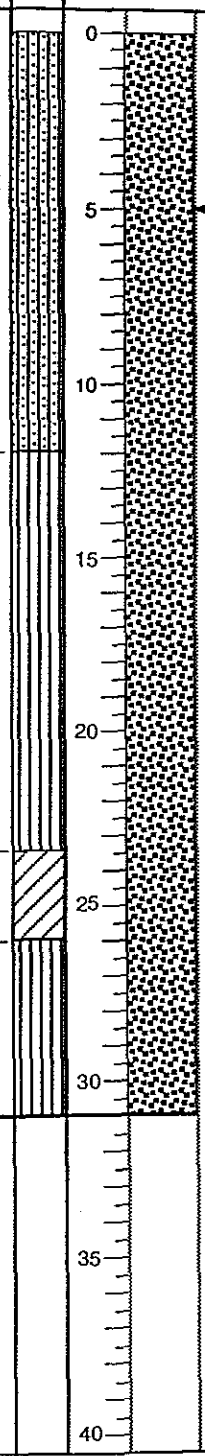
23-0134 6/30/97 jrw

PROJECT NO.:	23-0134	DATE DRILLED:	June 24, 1997
LOCATION:	Mobil Jalk Fee Property	LOGGED BY:	C. Cullum
	10607 Norwalk Boulevard	APPROVED BY:	K. Keenan, RG
	Santa Fe Springs, California	DRILLING CO.:	Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 31 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		2		0–5	SILTY SAND: dark yellowish brown, loose, slightly moist, fine-grained sand, iron oxide staining.	SM
		115		5–10		
		4		10–15	SANDY SILT: dark yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
		3		15–20	Dense	
		6		20–25	CLAY: light olive gray, stiff, slightly moist, trace very fine-grained sand.	CL
		6		25–30	SANDY SILT: dark yellowish brown, medium dense, moist, very fine-grained sand.	ML
				30–40	Total boring depth = 31 feet below grade.	

GRAPHIC LOG



BOREHOLE DETAIL

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-45

23-0134 6/30/97 jrw

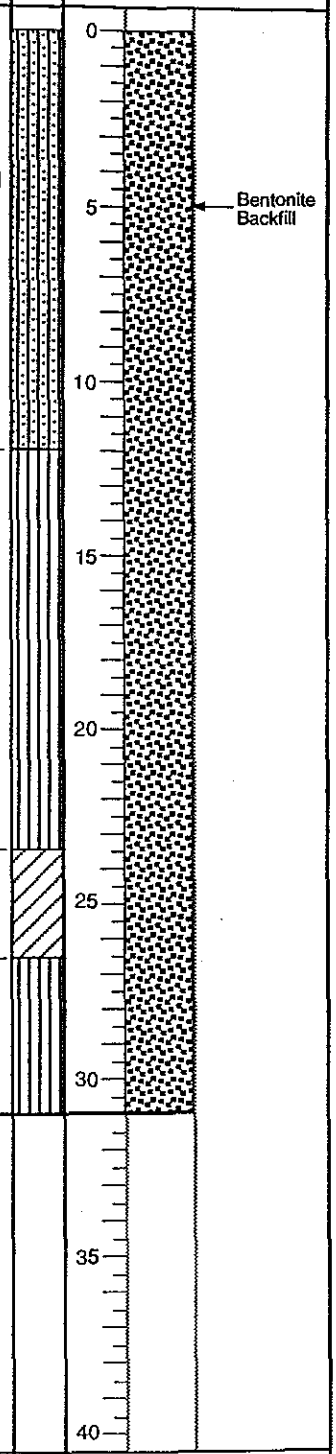
PROJECT NO.: 23-0134	DATE DRILLED: June 24, 1997
LOCATION: Mobil Jalk Fee Property	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: Maness - Geoprobe

DRILLING METHOD: 1" diameter Direct Push
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 31 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
		135		0–5	SILTY SAND: olive gray, loose, slightly moist, fine-grained sand.	SM
		35		5–10		
		6		10–15	SANDY SILT: grayish olive, medium dense, slightly moist, very fine-grained sand.	ML
		35		15–20	SILT: grayish olive, medium dense, slightly moist, very fine-grained sand.	
		10		20–25	CLAY: light olive gray, stiff, slightly moist, very fine-grained sand.	CL
		10		25–30	SANDY SILT: dark yellowish brown, medium dense, slightly moist, very fine-grained sand.	ML
				30–40	Total boring depth = 31 feet below grade.	

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

GP-46

23-0134 6/30/97 jrw

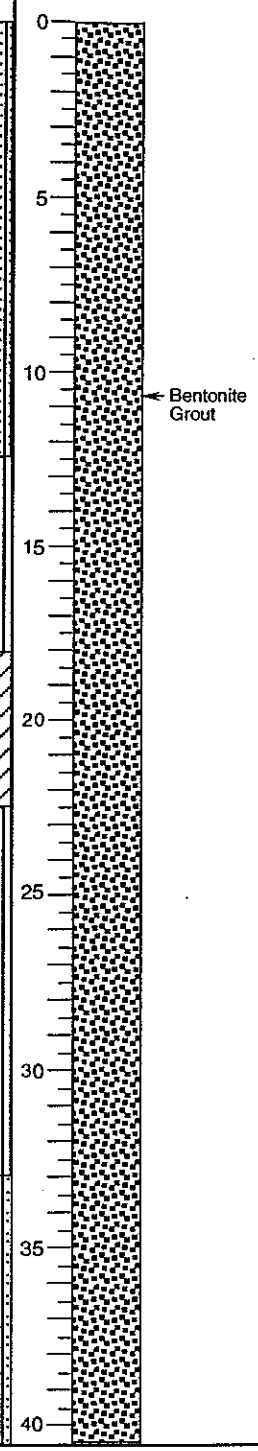
PROJECT NO.: 23-0134-50	DATE DRILLED: July 13, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 61.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
12/17/23	2,000			5	SILTY SAND: moderate yellowish brown, medium dense, moist, fine-grained sand, trace clay.	SM
10/12/13	2,000			10		
15/19/22	31			15	SANDY SILT: moderate brown, very stiff, slightly moist, fine-grained sand.	ML
12/16/16	37			20	CLAY: pale yellowish brown, very stiff, slightly moist.	CL
19/24/29	83			25	SILT: moderate brown, very stiff, slightly moist, very fine-grained sand.	ML
25/50	45			30	SANDY SILT: moderate brown, hard, slightly moist, very fine-grained.	
16/22/28	10			35	SILTY SAND: dark yellowish brown, medium dense, slightly moist, fine-grained sand.	SM

SYMBOL

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

HS-1

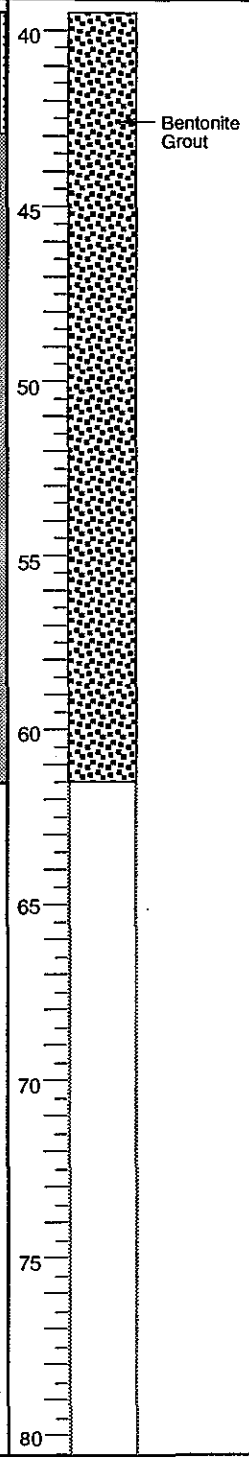
PROJECT NO.: 23-0134-50	DATE DRILLED: July 13, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 61.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
25/50	5			40	SILTY SAND: dark yellowish brown, medium dense, slightly moist, fine-grained sand.	SM
28/50	28			45	SAND: moderate yellow, medium dense, moist, fine-grained.	SP
26/48	13			50	Fine- to coarse-grained, with gravel.	
60	5			55	Trace clay.	
18/24				60	Light olive gray, fine- to medium-grained.	
				65		
				70		
				75		
				80		

SYMBOL

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

HS-1

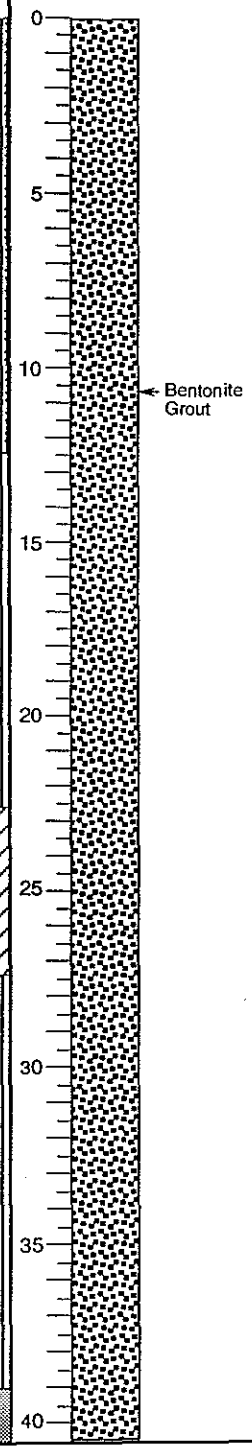
PROJECT NO.: 23-0134-50	DATE DRILLED: July 12, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 61.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
12/14/18	2,000			5	SILTY SAND: moderate yellowish brown, medium dense, moist, fine-grained sand, trace clay.	SM
10/14/17	350			10		
13/15/18	1,500			15	SANDY SILT: light olive gray, very stiff, slightly moist, fine-grained sand.	ML
16/17/25	2,000			20	Very fine-grained sand.	
12/17/19	750			25	CLAY: moderate yellowish brown, stiff, slightly moist.	CL
25/30	600			30	SILT: moderate yellowish brown, hard, slightly moist, very fine-grained sand.	ML
15/21/28	2,000			35	SANDY SILT: moderate olive brown, slightly moist, very fine-grained sand.	
				40		SP

SYMBOL

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

HS-2
PAGE 1 OF 2

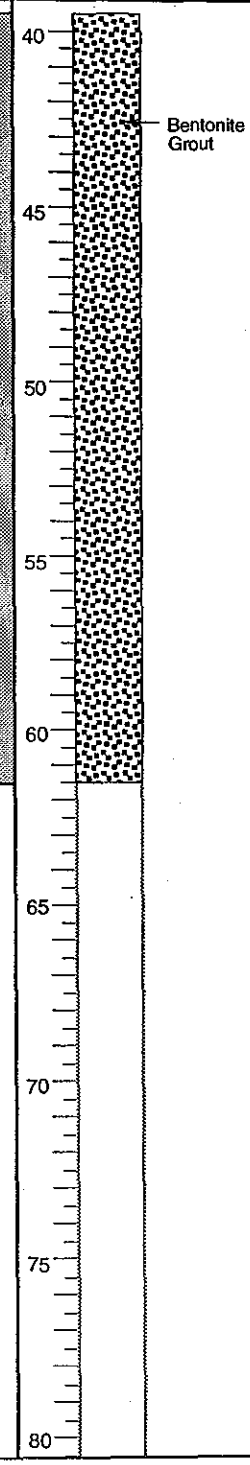
PROJECT NO.: 23-0134-50	DATE DRILLED: July 12, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 61.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
14/16/24	1,600			40	SAND: grayish olive, medium dense, slightly moist, fine-grained sand, some silt and gravel.	SP
10/13/15	1,900			45	Fine- to medium-grained.	
12/17/21	1,000			50		
25/50	250			55	Fine- to coarse-grained.	
14/16/18	2,000			60		
				65		
				70		
				75		
				80		

SYMBOL

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

HS-2

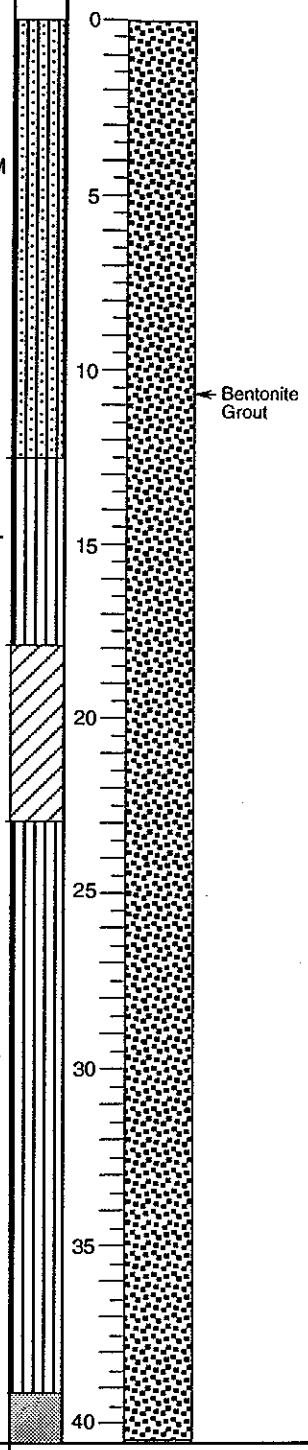
PROJECT NO.: 23-0134-50	DATE DRILLED: July 13, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 61.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
5/7/9	2,000			5	SILTY SAND: olive gray, loose, slightly moist, fine-grained sand.	SM
9/17/20	2,000			10	Medium dense.	
14/20/24	1,500			15	SANDY SILT: olive gray, very stiff, slightly moist, fine-grained sand.	ML
17/21/27	830			20	CLAY: pale olive, very stiff, slightly moist, very fine-grained sand.	CL
16/21/24	900			25	SILT: moderate yellowish brown, very stiff, slightly moist, very fine-grained sand.	ML
18/24/32	850			30		
19/26/26	2,000			35	SANDY SILT: moderate yellowish brown, very stiff, slightly moist,very fine-grained sand.	
				40		SP

SYMBOL

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

HS-3

PROJECT NO.: 23-0134-50	DATE DRILLED: July 13, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 61.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	SYMBOL	WELL CONSTRUCTION DETAIL
16/23/27	2,000			40	SAND: light olive gray, medium dense, moist, fine-grained sand.	SP		Bentonite
19/24/30	850			45				
14/18/21	750			50				
13/16/23	2,000			55				
17/22/30	2,000			60	Fine- to medium-grained, moist to wet.			
				65				
				70				
				75				
				80				

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

HS-3

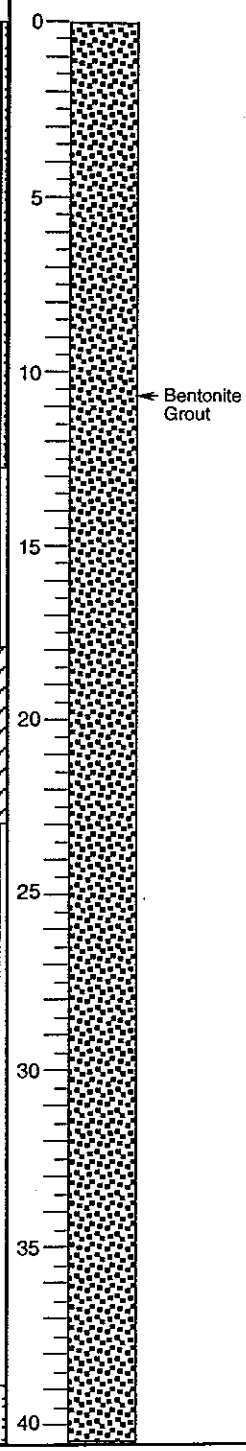
PROJECT NO.: 23-0134-50	DATE DRILLED: July 12, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 61.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
7/10/25	2,000			5	SILTY SAND: moderate brown, medium dense, slightly moist, fine-grained sand, trace clay.	SM
10/17/26	2,000			10	Grayish olive green.	
12/16/23	2,000			15	SANDY SILT: olive gray, very stiff, slightly moist, fine-grained sand.	ML
17/22/26	2,000			20	CLAY: dusky yellow, very stiff, slightly moist, very fine-grained sand.	CL
14/18/27	2,000			25	SILT: moderate yellowish brown, very stiff, slightly moist, very fine-grained sand.	ML
16/21/30	2,000			30		
24/50	2,000			35	SANDY SILT: light olive gray, hard, slightly moist, very fine-grained sand.	-
				40		SM

SYMBOL

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

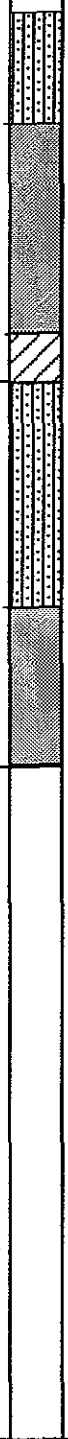
HS-4
PAGE 1 OF 2

PROJECT NO.: 23-0134-50	DATE DRILLED: July 12, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

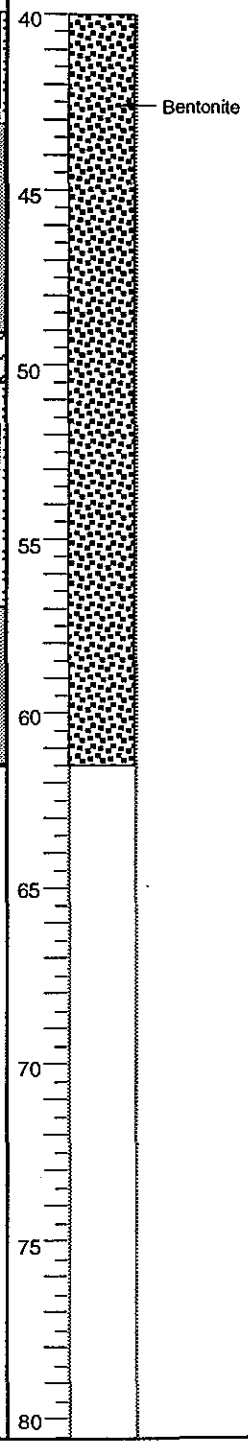
DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 61.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
17/22/31	2,000			40	SILTY SAND: grayish olive green, medium dense, moist, very fine-grained sand.	SM
7/7/20	2,000			45	SAND: light olive gray, medium dense, moist, very fine-grained.	SP
				50	CLAY: moderate yellowish brown, stiff, slightly moist, some silt.	CL
11/13/14	2,000				SILTY SAND: light olive gray, dense, moist, very fine-grained sand.	SM
20/34/37	2,000			55	Dusky yellow, very fine-grained sand.	
25/50	2,000			60	SAND: light olive gray, moist to wet, fine- to medium-grained.	SP
				65		
				70		
				75		
				80		

SYMBOL



WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

HS-4

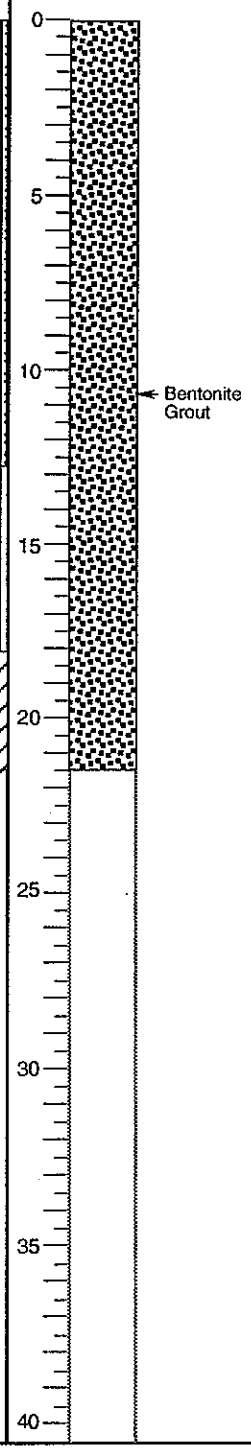
PROJECT NO.: 23-0134-50	DATE DRILLED: July 13, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 21.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
7/10/14	o			5	SILTY SAND: moderate yellowish brown, loose, slightly moist, fine-grained sand.	SM
12/18/21				10	Grayish olive, medium dense.	SM
14/17/24				15	SANDY SILT: grayish olive, very stiff, slightly moist, fine-grained sand.	ML
18/27/43				20	CLAY: pale olive, slightly moist.	CL

SYMBOL

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

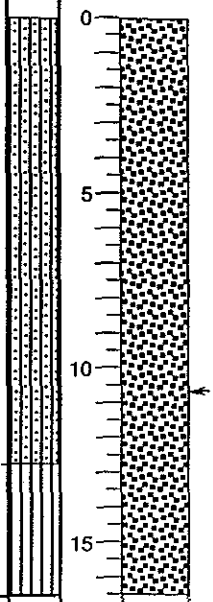
LOG OF EXPLORATORY BORING

HS-5
PAGE 1 OF 1

PROJECT NO.: 23-0134-50	DATE DRILLED: July 13, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 16.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	SYMBOL	WELL CONSTRUCTION DETAIL
10/20/22				0–5	SILTY SAND: moderate yellowish brown, medium dense, slightly moist, fine-grained sand.	SM		
10/12/14				5–10				Bentonite Grout
12/24/30				10–15	SANDY SILT: moderate yellowish brown, very stiff, slightly moist, fine-grained sand.	ML		
				15–16.5				



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

HS-6
PAGE 1 OF 1

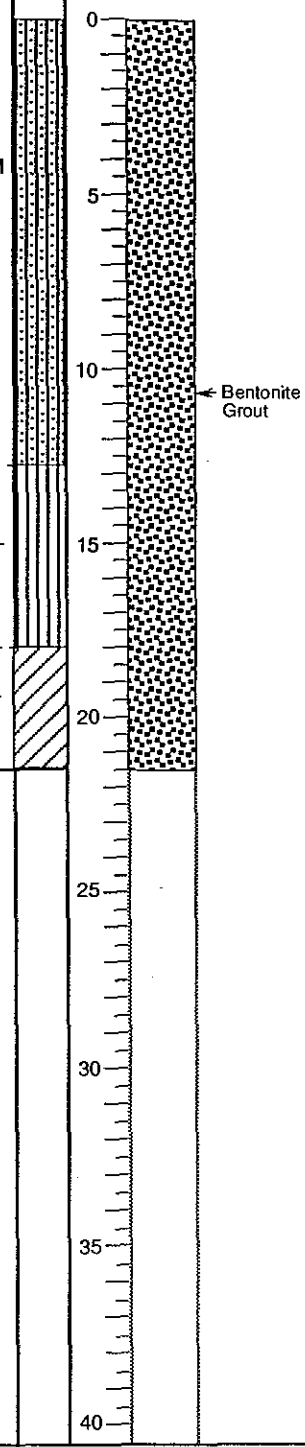
PROJECT NO.: 23-0134-50	DATE DRILLED: July 13, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 21.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
7/10/12	0			5	SILTY SAND: moderate yellowish brown, medium dense, slightly moist, fine-grained sand.	SM
7/10/14				10	Grayish olive.	
7/12/14				15	SANDY SILT: light olive gray, very stiff, slightly moist, fine-grained sand.	ML
18/50				20	CLAY: light olive gray, hard, slightly moist, very fine-grained sand.	CL

SYMBOL

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

HS-7
PAGE 1 OF 1

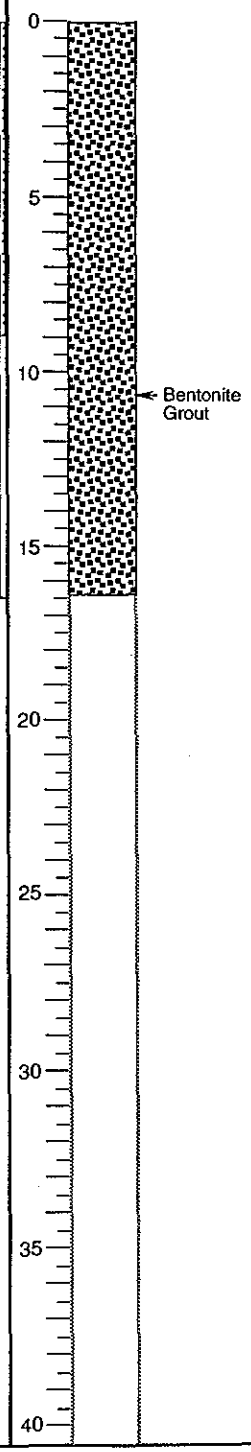
PROJECT NO.: 23-0134-50	DATE DRILLED: July 13, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 16.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
12/13/17				5	SILTY SAND: moderate yellowish brown, medium dense, slightly moist, fine-grained sand.	SM
17/18/24				10	SANDY SILT: grayish olive, very stiff, slightly moist, very fine-grained sand.	ML
15/19/22				15	Moderate yellowish brown.	

SYMBOL

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

HS-8
PAGE 1 OF 1

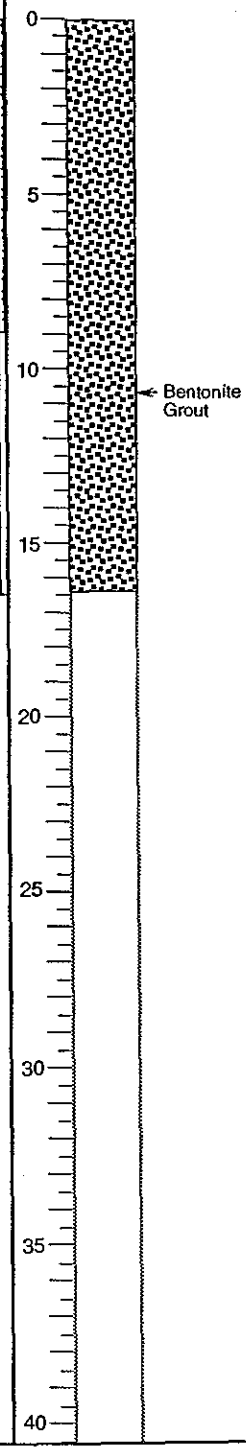
PROJECT NO.: 23-0134-50	DATE DRILLED: July 13, 1997
LOCATION: Mobil Jalk Fee	LOGGED BY: C. Cullum
10607 Norwalk Boulevard	APPROVED BY: K. Keenan, RG
Santa Fe Springs, California	DRILLING CO.: West Hazmat Drilling-CME-75

DRILLING METHOD: 6-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 16.5 feet DEPTH TO WATER: NA

BLOWS PER 6 INCHES	PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
12/14/18				5	SILTY SAND: moderate yellowish brown, medium dense, slightly moist, fine-grained sand, trace clay and gravels.	SM
9/13/17				10	SANDY SILT: dark yellowish brown, very stiff, slightly moist, fine-grained sand.	ML
10/30/31				15	SILT: dark yellowish brwon, very stiff, slightly moist, very fine-grained sand.	

SYMBOL

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

HS-9
PAGE 1 OF 1

APPENDIX A

GENERAL FIELD PROCEDURES, BORING LOGS

A description of the general field procedures used during site investigation and monitoring activities is presented below. For an overview of protocol, refer to the appropriate section(s).

DRILLING AND SOIL SAMPLING

Soil borings are drilled using either geoprobe or continuous-flight, hollow-stem augers. Borings that are not completed as monitoring wells are grouted to within 5 feet of the ground surface with a cement/bentonite slurry. The remaining 5 feet is filled with concrete.

Soil samples are obtained for soil description, field hydrocarbon vapor screening, and possible laboratory analysis. Soil samples are retrieved from the borings by one of two methods: 1) continuously, using a 5-foot-long, continuous-core barrel sampler advanced into the soil with the lead auger; sample tubes are driven into the core with a mallet, or 2) at 2.5- or 5-foot intervals, using a standard split-spoon sampler lined with four 1.5-inch-diameter stainless steel or brass sample inserts. The split-spoon sampler is driven approximately 18 inches beyond the lead auger with a 140-pound hammer dropped from a height of 30 inches.

During drilling activities, soil adjacent to the laboratory sample is screened for combustible vapors using a combustible gas indicator (CGI) or equivalent field instrument. For each hydrocarbon vapor screening event, a 6-inch-long by 2.5-inch-diameter sample insert is filled approximately 1/3 full with the soil sample, capped at both ends, and shaken. The probe is then inserted through a small opening in the cap, and a reading is taken after approximately 15 seconds and recorded on the boring log. The remaining soil recovered is removed from the sample insert or sampler, and described in accordance with the Unified Soil Classification System. For each sampling interval, field estimates of soil type, density/consistency, moisture, color, and grading are recorded on the boring logs.

SOIL SAMPLE HANDLING

Soil sample handling follows the same basic protocol for both drilling and excavation activities. Upon retrieval, soil samples are immediately removed from the sampler, sealed with Teflon sheeting and polyurethane caps, and wrapped with tape. Each sample is labeled with the project number, boring/well number, sample depth, geologist's initials, and date of collection. After the samples have been labeled and documented in the chain of custody record, they are placed in a cooler with ice at approximately 4 degrees Celsius (°C) prior to and during transport to a state-certified laboratory for analysis. Samples not selected for immediate analysis may be transported in a cooler with ice and archived in a frostless refrigerator at approximately 4°C for possible future testing.

FLUID LEVEL MONITORING

Fluid levels are monitored in the wells using an electronic interface probe with conductance sensors. The presence of liquid-phase hydrocarbons is verified using a hydrocarbon-reactive paste. The depth to liquid-phase hydrocarbons and water is measured relative to the well box top or top of casing. Well box or casing elevations are surveyed to within 0.02 foot relative to an arbitrary or county or city bench mark.

GROUND WATER PURGING AND SAMPLING

Ground water monitoring wells are purged and sampled in accordance with standard regulatory protocol. Typically, monitoring wells that contain no liquid-phase hydrocarbons are purged of ground water prior to sampling so that fluids sampled are representative of fluids within the formation. Temperature, pH, and specific conductance are typically measured after each well casing volume has been removed. Purging is considered complete when these parameters vary less than 10% from the previous readings, or when four casing volumes of fluid have been removed. Samples are collected without further purging if the well does not recharge within 2 hours to 80% of its volume before purging. The purged water is either pumped directly into a licensed vacuum truck or temporarily stored in labeled drums prior to transport to an appropriate treatment or recycling facility.

Ground water samples are collected by lowering a 1.5-inch-diameter, bottom-fill, disposable polyethylene bailer just below the static water level in the well. The samples are carefully transferred from the check-valve-equipped bailer to 1-liter and 40-milliliter glass containers. The sample containers are filled to zero headspace and fitted with Teflon-sealed caps. Each sample is labeled with the project number, well number, sample date, and sampler's initials. Samples remain chilled at approximately 4°C prior to analysis by a state-certified laboratory.

CHAIN OF CUSTODY PROTOCOL

Chain of custody protocol is followed for all soil and ground water samples selected for laboratory analysis. The chain of custody form(s) accompanies the samples from the sampling locality to the laboratory, providing a continuous record of possession prior to analysis.

DECONTAMINATION

Drilling and Soil Sampling

Drilling equipment is decontaminated by steam cleaning before being brought onsite. The augers are also steam cleaned before each new boring is commenced. Prior to use, the sampler and sampling tubes are brush-scrubbed in a Liqui-nox and potable water solution and rinsed twice in

clean potable water. Sampling equipment and tubes are also decontaminated before each sample is collected to avoid cross-contamination between borings.

Ground Water Sampling

Purging and sampling equipment that could contact well fluids is either dedicated to a particular well or cleaned prior to each use in a Liqui-nox solution followed by two tap water rinses.

APPENDIX C

OFFICIAL SURVEY DATA

William A. Teipe & Associates, Inc.
3164 East La Palma Avenue - Suite C
Anaheim, California 92806-2811
(714) 630-3312
FAX (714) 630-9077

August 1, 1997

Mr. Kevin Keenan
Alton Geoscience
25A Technology Drive
Irvine, CA 92718

Re: **Mobil Jalk Fee Property**
10607 Norwalk Boulevard
Santa Fe Springs, California

Dear Mr. Keenan:

Locations and elevations of Monitoring Wells **MMW-3** through **MMW-5**, and locations of borings **HS-1** through **HS-9** and borings **GP-25** through **GP-46** at the subject location have been determined by field survey.

Elevations are based on:NAIL ON THE WEST CURB OF NORWALK BOULEVARD ALONG THE PROLONGATION OF APPARENT SOUTH PROPERTY LINE WITH ASSUMED ELEVATION OF 100.00.

Horizontal Coordinates are based on the following: WEST CURB FACE OF NORWALK BOULEVARD, ASSUMED RUNNING NORTH - SOUTH. THE PROD OF THE NAIL (ASSUMED BENCHMARK) ON THE WEST CURB FACE OF NORWALK BOULEVARD IS ASSUMED AS NORTH 1000, AND EAST 1000.

MONITORING WELL	NORTHING	EASTING	ELEVATION TOP OF CASING	ELEVATION TOP OF RIM
MMW3	1316.87	512.46	99.17	99.65
MMW4	1022.12	104.23	96.34	96.70
MMW5	1018.08	562.03	98.33	98.92

BORING	NORTHING	EASTING
HS-1	1060.9	640.2
HS-2	1037.4	789.1
HS-3	1014.0	787.5
HS-4	1015.6	809.9
HS-5	1111.3	787.6
HS-6	1110.1	812.9
HS-7	1109.4	840.2
HS-8	1109.9	862.0
HS-9	1084.8	863.3
GP-25	1060.6	813.1
GP-26	1062.1	788.6

BORING	NORTHING	EASTING
GP-27	1062.0	762.3
GP-28	1063.4	738.0
GP-29	1062.0	665.5
GP-30	1037.5	588.3
GP-31	1036.3	613.2
GP-32	1035.4	638.7
GP-33	1036.4	663.5
GP-34	1038.1	737.7
GP-35	1037.0	762.8
GP-36	1037.4	812.6
GP-37	1013.7	762.0
GP-38	1013.9	737.7
GP-39	1011.5	663.8
GP-40	1011.1	641.7
GP-41	1013.1	558.5
GP-42	1038.2	838.2
GP-43	1060.1	838.3
GP-44	1085.3	813.3
GP-45	1085.0	838.6
GP-46	1086.3	788.5

Elevations shown for Top of Casings are on the north edge of casing walls, and elevations for Top of Rims are on the north edge of well rims.

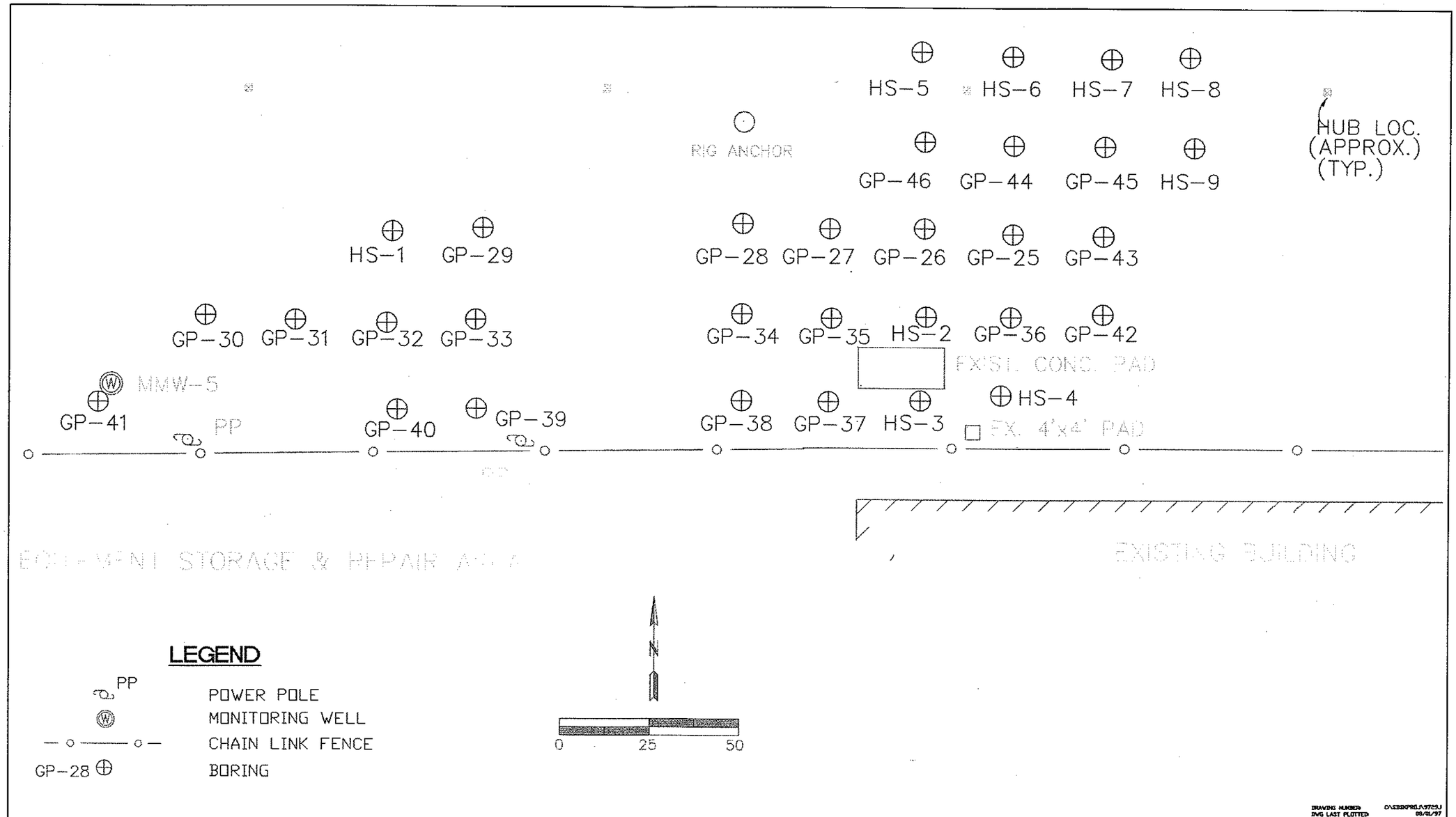
Please call if you have any questions.

Very truly yours,

William A. Teipe, P.E.

REGISTERED PROFESSIONAL ENGINEER
WILLIAM A. TEIPE
21838
Exp. 3-31-98
CIVIL
STATE OF CALIFORNIA

file : 9729j



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DWG LAST PLOTTED: 08/01/97
DWG LAST REVISED: 08/01/97

NUMBER	SHT.	REFERENCE DRAWING

REV.	DATE	BY	CHK.	APP.

DRAWN ERL
DATE 08/01/97
DESIGNED
CHECKED VAT
APPROVED
APPROVED
SCALE 1=25'

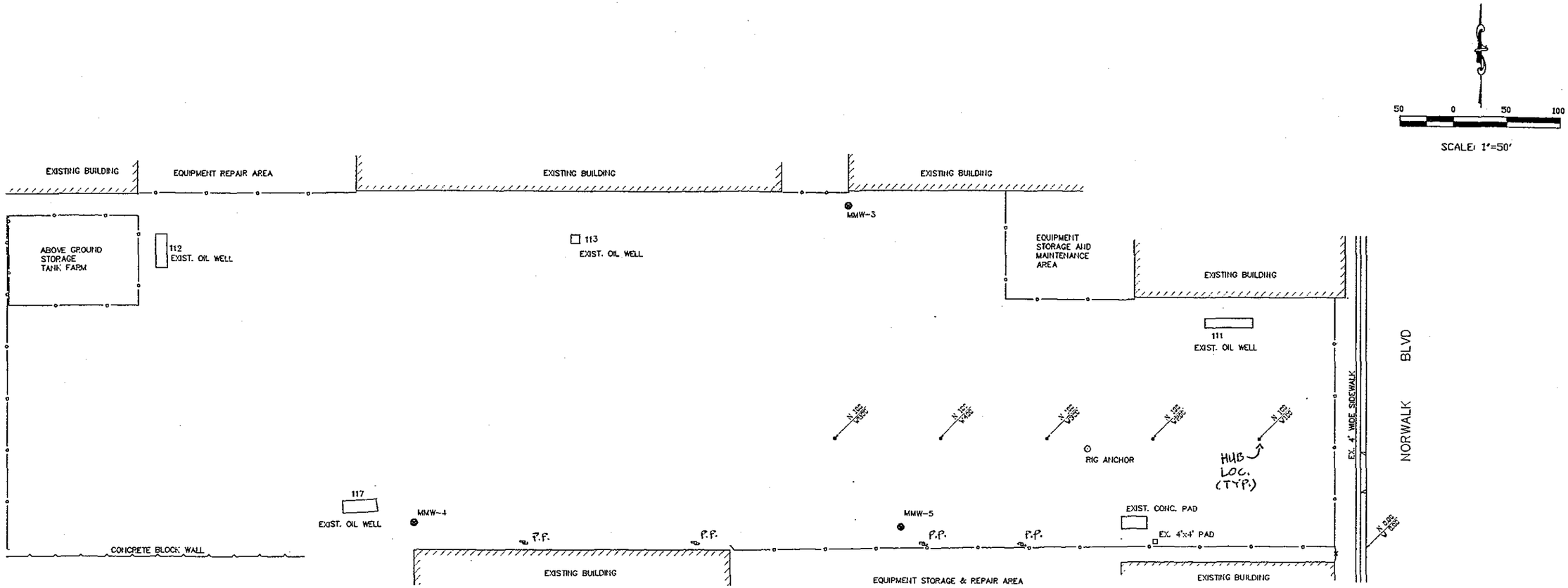
ALTON GEOSCIENCE

MOBIL JALK FEE PROPERTY

BORING LOCATION PLAN

10607 NORWALK BOULEVARD — SANTA FE SPRINGS, CA

PLOT SCALE 1=25 — DRAWING 9729J-C102 — REV.



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DWG LAST PLOTTED: 06/18/97
DWG LAST REVISED: 06/18/97

NUMBER	SHT.	REFERENCE DRAWING

WILLIAM A. TEIPE & ASSOCIATES, INC.
CONSULTING ENGINEERS
3164 EAST LA PALMA AVENUE SUITE - C
ANAHEIM, CA 92806
(714) 630-3312

REV.	DATE		BY	CHK.	APP.

REVISIONS

DRAWN: ERL
DATE: 06/18/97
DESIGNED:
CHECKED: WAT
APPROVED:
APPROVED:
SCALE: AS NOTED

ALTON GEOSCIENCE

MOBIL JALK FEE PROPERTY

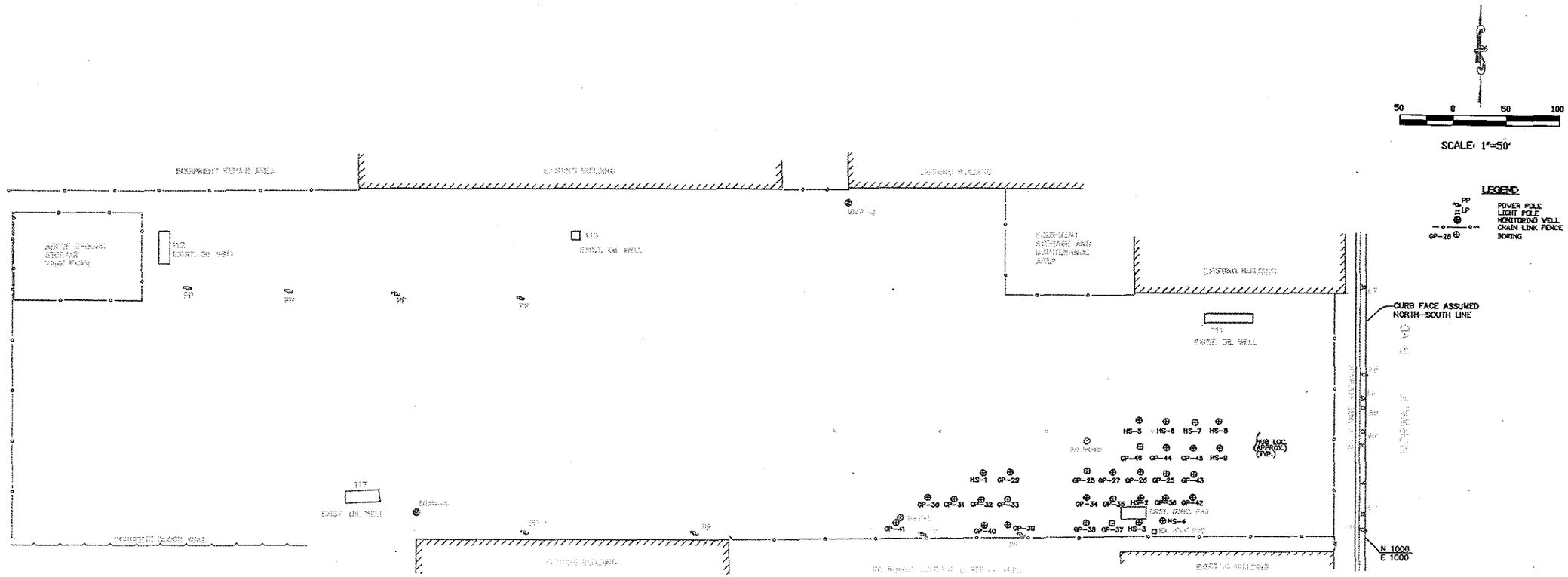
SITE PLAN

10607 NORWALK BBULEVARD — SANTA FE SPRINGS, CA

PLOT SCALE: 1=50

DRAWING: 9729J-C101

REV.



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DWG LAST REVISED: 08/01/97

NUMBER	SHT.	REFERENCE DRAWING

REV.	DATE	BY	CHK.	APP.

DRAWN	ERL
DATE	06/19/97
DESIGNED	
CHECKED	WAT
APPROVED	
APPROVED	
SCALE	AS NOTED

ALTON GEOSCIENCE

MOBIL JALK FEE PROPERTY

SITE PLAN

10607 NORWALK BOULEVARD — SANTA FE SPRINGS, CA

PLOT SCALE	DRAWING	REV.
1=50	9729J-C101	

APPENDIX D

ENVIRONMENTAL FATE AND TRANSPORT MODELING

APPENDIX D

ENVIRONMENTAL FATE AND TRANSPORT MODELING

D.1 BACKGROUND TO ENVIRONMENTAL FATE AND TRANSPORT MODELING

The vadose zone is a dynamic interdependent system of abiotic and biotic factors that are linked by physical, chemical, and biological processes. Chemicals introduced into this system use these linkages to migrate within and between the various media, and as they migrate are transformed and degraded. The processes of importance can be categorized as transport, sorption, transformation/degradation, and volatilization. Environmental fate and transport models can be used to simulate the processes acting on chemicals in soil. The mathematical representation of natural fate and transport processes is limited by 1) how accurately the model represents the process and 2) the parameter values used in the model. Alton Geoscience has incorporated site-specific parameter values where available and, in the absence of site-specific parameter values, representative estimates were obtained from literature-derived sources and/or conservative model default parameters.

In order to determine the potential for residual chlorinated solvents and crude oil in soil to impact groundwater, the environmental fate and transport of PCE, TCE, cis-1,2-DCE and naphthalene were analyzed.

D.1.1 Transport

Transport of chemicals in the vadose zone occurs in the pore spaces of the soil. Transport of chemicals can occur in the three following phases: 1) dissolved in soil moisture, 2) vapor-phase in soil pore gas, and 3) liquid-phase (free-phase) chemical.

When a sufficient quantity of liquid chemical is released to the vadose zone, it can locally replace water as the primary solvent in the media. In this instance, the downward migration of such a chemical is due to gravity and capillary forces. This migration will continue until one of three conditions occurs: 1) the bulk chemical plume encounters an impermeable feature, 2) the bulk chemical plume reaches the capillary fringe above the saturated zone, or 3) the chemical is completely transformed to residual saturation (Dragun, 1988).

When a plume reaches an impermeable layer, it will accumulate and spread laterally at the boundary layer of the strata. If a sufficient volume of the bulk chemicals is present, the lateral spreading will continue until the plume reaches an edge of the layer or a pore channel and then will continue to migrate downward.

Upon reaching the capillary fringe, the chemical plume will come into contact with water-filled pore channels. At this point the chemical will either pool on the groundwater surface or on the

bottom of the aquifer, depending on the density of the chemical. The chemical will also dissolve into groundwater and be subject to transport with the groundwater in the dissolved phase.

When chemicals travel in liquid-phase, a mass of chemical will remain in the pore channels after the bulk chemical plume has passed through the soil column. The mass of chemical held by the capillary forces of the soil is referred to as the residual saturation. As the downward migration proceeds, the bulk chemical plume is converted to residual saturation. When this conversion is complete, free-phase migration ceases (Dragun, 1988). The concentrations of contaminants observed in soil samples collected from the Jalk Fee site are lower than the concentrations necessary for bulk transport to occur (Pankow and Cherry, 1996). As a result, dissolved-phase transport of contaminants through precipitation-driven mechanisms was selected as the primary fate and transport process for this analysis.

Properties that impart a significant influence on fate and transport of petroleum hydrocarbons under precipitation-driven mechanisms include: solubility in water, volatilization rates, adsorption characteristics, biodegradation rates, hydrolysis, and oxidation reduction characteristics. These properties and their effect on chemical fate and transport are discussed in further detail below:

Solubility

The solubility of a substance in water is defined as the mass of substance that will dissolve in a unit volume of water. The solubility of a compound varies with temperature, pressure, pH, and the concentration of other dissolved constituents in the solution (Montgomery and Welkom, 1990). A liquid or solid contaminant may partially or wholly dissolve in water and therefore, may be transported in the dissolved phase. The solubility of a compound controls the amount of compound which may be released to soil moisture or groundwater and therefore, limits the magnitude of potential groundwater impact. In general, highly soluble chemicals can be rapidly leached from soils and are mobile in groundwater. The solubilities of organic chemicals range from less than 1 milligram per liter (mg/l) in water for polychlorinated biphenyls to greater than 100,000 mg/l for acetone (Howard, 1990). The solubility of chemicals as used in the SESOIL model for the Jalk Fee site are as follows: PCE 240 mg/l, TCE 1,100 mg/l and cis-1,2-DCE is 3,500 mg/l (Pankow and Cherry, 1996) and naphthalene 31 mg/l (GSC, 1995).

Volatilization

Volatilization of a compound depends on physical and chemical properties such as vapor pressure, water solubility, and molecular weight. Highly water-soluble compounds generally have lower volatilization rates from water than compounds having a low water solubility. The Henry's Law constant combines vapor pressure with solubility to provide a means of estimating the transfer of a compound from water to air. Chemicals with Henry's Law constants less than or equal to 0.001 (atm m^3/mole) do not volatilize readily, whereas chemicals with Henry's Law constants greater than 1.0 will be found primarily in the vapor phase. The Henry's Law constant for PCE is 0.0174

(atm-m^3/mole), for TCE is 0.00937 (atm-m^3/mole), for cis-1,2-DCE is 0.00374 (atm-m^3/mole) (Pankow and Cherry, 1996) and for naphthalene is 4.83×10^{-4} (atm-m^3/mole) (EPA, 1990).

D.1.2 Sorption

Movement of chemicals through the vadose zone to groundwater is primarily a liquid-phase process involving a solvent (water) and the chemical. Sorption is the removal of a solute from a solution through its association with a solid surface as the result of electrostatic or chemical forces (Srinivasan and Mercer, 1987). Sorption can occur as a result of the affinity of the solute for the solid, or the lack of affinity of the solute for the solution. The lack of a solute's affinity for water is termed *hydrophobicity*, and is typified by many nonpolar organic compounds. Chemicals that adsorb readily to soil organic matter and clay particles will not migrate significantly from the region of the soil profile in which they are initially located. Several generalizations can be made regarding sorption:

- The pH of the water and crystal structure of the sorbing minerals have a direct effect on the sorption characteristics of the media.

- There is a direct relationship between the concentrations of a contaminant in solution and the amount of that substance which will be adsorbed on particle surfaces. An increase in the concentration of a substance in solution will cause a corresponding increase in the quantity sorbed (Aller et al., 1987).

- Organic substances that are molecularly nonpolar, and therefore not attracted to water molecules, are frequently adsorbed by soils and sediments containing clay and organic carbon (Aller et al., 1987).

The sorption of hydrophobic chemicals to soils can be correlated to the organic carbon content of the soil. Hydrophobic chemicals partition between the organic carbon of the soil and water. The partitioning is similar to the partitioning of the chemical between water and an immiscible organic solvent, such as octanol. Thus, the octanol-water partition coefficient (K_{ow}) is used to calculate the organic carbon-water partition coefficient (K_{oc}). The normal range of K_{oc} is from 1.0 to greater than 100,000 (Howard, 1990). As the K_{oc} increases, the affinity to the organic carbon fraction of soil increases. The K_{oc} for PCE is 364, for TCE is 126, for cis-1,2-DCE is 86 (Pankow and Cherry, 1996) and for naphthalene is 871 to 1288 (Lyman, 1990 and ATSDR, 1995), indicating a moderate to strong affinity to organic carbon.

Sorption can result in reducing the migration rate of hydrophobic chemicals dissolved in pore water or groundwater. Thus, the velocity of the chemical would be retarded in relationship to the pore water or groundwater velocity. This applies only to chemicals traveling as a dissolved phase, the free-phase velocity is not affected by this mechanism (EPA, 1988). However, this distinction is insignificant because free-phase solvent transport cannot occur under the observed site-specific conditions at the subject site. In addition, sorption of a chemical can also affect other fate and

transport processes. Rates of volatilization, hydrolysis, photolysis, and biodegradation are all affected by the extent of sorption of chemicals to solids (Dragun, 1988).

D.1.3 Transformation-Degradation

Transformation and degradation processes include the primary chemical and biological mechanisms that influence the fate of a chemical and determine its persistence in soil or groundwater. The key processes include biotransformation, chemical hydrolysis, photolysis, and oxidation-reduction. These processes can occur under aerobic or anaerobic conditions and may depend on the nature and extent of the contamination. **To be conservative during modeling it was assumed that no transformation/degradation processes were occurring.**

D.2 MODELING DISSOLVED-PHASE CHEMICAL MIGRATION USING SESOIL

SESOIL (Bonazountas and Wagner, 1984; Hetrick et al., 1984, 1991, 1993) was used to model the dissolved-phase transport of PCE, TCE, cis-1,2-DCE and naphthalene in the soil. This transport occurs when percolating rainfall leaches through the soil and dissolves the residual contaminants. Depth to groundwater was based on site-specific observations and set at approximately 60 feet below grade (18.3 meters). The following sections provide conceptual descriptions of the input file construction and cite the parameters used to model the fate and transport of the PCE, TCE, cis-1,2-DCE and naphthalene in the vadose zone.

D.2.1 SESOIL Input File Parameters

Representation of site-specific parameters is accomplished through designing appropriate values for the SESOIL input files. The four input files used in the SESOIL modeling regimen include descriptions of 1) climate, 2) soil, 3) chemical, and 4) application or chemical loading. In the absence of site-specific data, literature-derived and/or SESOIL default values were used.

D.2.1.1 Climate Input File

The climate input file contains data required to simulate the hydrologic cycle. Information included in this file includes: 1) monthly climatologic data for a region (e.g., temperature, humidity), and 2) monthly storm parameters for a region (e.g., rainfall, infiltration). The parameters determine the input of water to the soil column, the evaporation of water from the soil column, and the percolation of water through the soil column. The amount of water that percolates through the soil layers is equal to the amount of water which is input to the soil less the amount of water that evaporates back to the atmosphere. The precipitation is approximated from the average storm cycle of the geographical region. The average storm cycle includes average values for precipitation, number of storms, and storm duration. Monthly rainfall depth, temperature, percent humidity, percent cloud cover, storm frequency, and storm duration data were derived from data collected from the Brea Dam monitoring station (GSC, 1995).

D.2.1.2 Soil Input File

Soil parameters are used in the SESOIL program to determine the rate at which chemicals and water move through the soil matrix. The soil parameters include effective porosity, bulk density, permeability, disconnectedness, organic carbon content, and cation exchange coefficient.

The total porosity of a soil is a measure of the fraction of the soil volume that is not occupied by soil particles. In essence, it is a measurement of the "empty spaces" in a soil which can be occupied by air or water. Hygroscopic water is the fraction of pore water which is tightly held to soil particles. In addition, hygroscopic water is not mobile (Dragun, 1988).

The effective porosity of soil represents the total porosity of soil minus the fraction of the hygroscopic porosity. Therefore, a portion of the soil volume is occupied by water which is not mobile. The value of effective porosity used in this analysis is 0.28, and is an average value for sandy loam. The bulk density of a soil is the dry weight of the soil divided by its volume (kg/m^3). The bulk density value used in this analysis is 1.49 g/cm^3 and was based on the average bulk density of the entire soil column (based on 12 site specific measurements) between the ground surface and the saturated zone.

The disconnectedness of a soil indicates the ratio of soil micropores to macropores. Macropores are spaces between soil particles that are greater than 100 μm wide and micropores are spaces between soil particles that are less than 100 μm wide (Dragun, 1988). Water can flow freely through macropores, but is inhibited in micropores by capillary forces. Values for disconnectedness of a soil range from 1 to 15, with higher values indicating a greater percentage of micropores. Therefore, transport of water (and hydrocarbons dissolved in water) is retarded in soil with high disconnectedness values. The disconnectedness values for sandy soils are reported to range from approximately 3.7 to 6.0 (Bonazountas and Wagner, 1984). The disconnectedness value used in this study (3.9) is on the lower end of the range of values for sandy soil (Bonazountas and Wagner, 1984).

The fraction organic carbon content of a soil indicates the weight fraction of soil that is composed of organic carbon. Organic molecules are generally nonpolar, meaning that they do not carry an electrical charge, while water is a polar liquid. Organic molecules do not tend to dissolve well in polar liquids like water. Instead, organic molecules tend to adsorb onto surfaces which are nonpolar. Since organic carbon is a major nonpolar component of soils, it is used as a reference to determine the adsorptivity of a soil.

In soils with low organic carbon content (e.g., less than 0.1%), sorption becomes affected significantly by the inorganic mineral surfaces of the soil (Karickhoff, 1984). This is a current topic of much research, and it appears that the significant factors controlling sorption in soils with low organic content are the presence of intragranular porosity, and the types of mineral surfaces (Hassett and Banwart, 1989; Pignatello, 1989). However, SESOIL accounts only for the partitioning effects due to soil organic carbon. The value for organic carbon used in this

environmental fate analysis (0.093%) was conservatively based 11 of 12 measurements collected from the site during site assessment activities. To be conservative one value (HS-3 at 16 fbg) was eliminated from the data set due an anomalous high result (Table 5).

The cation exchange capacity (CEC) is the total amount of cations (positive ions) that can be adsorbed by a mass of soil (Dragun, 1988). This capacity is usually defined in units of milliequivalents (meq) per 100 grams of soil. A milliequivalent is defined as the amount of charge present in one milligram of hydrogen. The weight of one milliequivalent of a chemical is equal to the atomic weight of the chemical divided by its valence. A CEC of zero was assumed in this analysis, therefore, cation exchange was not incorporated as an attenuating mechanism in the fate and transport process of petroleum hydrocarbons.

D.2.1.3 Chemical Input File

The migration and transformation of a chemical in the soil matrix are determined by the chemical's properties. Chemical-specific parameters which are important in assessing environmental fate include water solubility, diffusion coefficient in air, Henry's Law constant, adsorption coefficient, and molecular weight. Summaries of the physical and chemical properties used for PCE, TCE and cis-1,2-DCE are provided in Table 8. A general summary for naphthalene is attached to this appendix.

D.2.1.4 Application Input File

The application file describes the chemical loading rate to the soil layers, the size and thickness of the soil layers, the variability of soil parameters between the layers, and the number and frequency of output data. For the purpose of this simulation, the vadose zone was simplified and was divided into four soil layers (Layer 1 through Layer 4). Figure 14 depicts the conceptual soil column structure as defined for the environmental fate modeling analysis.

The application area for the SESOIL analysis was based on site-specific observations of contaminant distribution but simplified to facilitate modeling activities. The contaminant distribution was simplified by estimating the total lateral extent using data from all depths for each of the modeled contaminant (Figures 8, 11, 12 and 13). Using the 10 ppb line as a cutoff value for the solvents the lateral extent (area) was calculated. It was then assumed that the contamination occupied the area beneath the 10 ppb contour at a calculated average concentration for each of 4 identified soil layers. The lateral extent of TRPH affected soil was determined from the 10 foot contour of concentrations over 100 ppm as this was the maximum lateral distribution depth.

The chemical loading in SESOIL is designated in units of μg/ml (μg/cm^3) as an initial chemical concentration. The initial chemical concentration is converted internally by SESOIL by multiplying the user-supplied initial soil concentration (μg/g or mg/kg) by the bulk density of the soil (gm/cm^3).

For this analysis the concentrations used for each chemical in each soil layer are presented in Table 8.

D.2.2 SESOIL Output File

The SESOIL output file contains the model input and monthly results from the hydrologic cycle, washload cycle (not used in this analysis), and pollutant cycle. An annual summary report is also provided for each year of the simulation. The output from SESOIL also includes data regarding the mass distributions and chemical concentrations in various soil layers. The average groundwater concentration resulting from the fate and transport mechanisms described previously are calculated using the Summers Model for the groundwater mixing zone which is included as a component of the SESOIL program. The Summers Model uses groundwater parameters including hydraulic conductivity, horizontal gradient, thickness of saturated zone, and width of contaminated interval to predict groundwater concentrations of contaminants immediately beneath the affected vadose zone. Figure 14 provides a summary of parameters used to describe the groundwater mixing zone.

PHYSICAL AND CHEMICAL PROPERTIES OF NAPHTHALENE

PROPERTY	VALUE	REFERENCES
Molecular Formula	$C_{10}H_8$	Merck, 1989
Molecular Weight	128 g/mol	Merck, 1989
Appearance	Colorless to brown molten solid	Merck, 1989
Odor	Mothball-like	Merck, 1989
Boiling Point	424°F	GSC, 1995
Adsorption Coefficient (K_{oc})	871 to 1288	Lyman, 1990: ATSDR, 1995
Specific Gravity	1.15	GSC, 1995
Diffusion Coefficient (air)	8.4E-2 cm^2/second	EPA, 1990
Vapor Pressure	0.08 mm	GSC, 1995
Henry's Law Constant	4.83E-4 m^3-atm/mole	EPA, 1990
Solubility	31 mg/L	GSC, 1995

APPENDIX E

SESOIL MODELING OUTPUT - PCE

PCE FINAL OUTPUT.

YRS 6, 7, 10, 50, 100, 119, 150

```
*****************************************************************************************
******
*****                                                    *****
***** SESOIL-84 :  SEASONAL CYCLES OF WATER, SEDIMENT, AND POLLUTANTS IN SOIL
ENVIRONMENTS      *****
*****                                                    *****
***** DEVELOPERS:  M. BONAZOUNTAS,ARTHUR D. LITTLE INC.  ,(617)864-5770,X5871
*****
*****          J. WAGNER    ,DIS/ADLPIPE, INC.     ,(617)492-1991,X5820              *****
*****                                                    *****
***** MODIFIED EXTENSIVELY BY:                                          *****
***** D.M. HETRICK                                              *****
***** OAK RIDGE NATIONAL LABORATORY                                          *****
***** (615) 576-7556                                        *****
***** VERSION  : JANUARY 1995                                          *****
*****                                                    *****

*****************************************************************************************
******


            ****** MONTHLY SESOIL MODEL OPERATION ******
                 MONTHLY SITE SPECIFIC SIMULATION


REGION        :    BREA DAM
SOIL TYPE     :    Silty Sand
COMPOUND      :    Tetrachloroethylene
WASHLOAD DATA  :
APPLICATION AREA:    PCE Simulation


WARNING- SOIL PERMEABILITY VARYS CONSIDERABLY AMONG LAYERS
SESOIL MAY NOT BE ACCURATE FOR SUCH AN INHOMOGENEOUS COLUMN

WARNING- SOIL PERMEABILITY VARYS CONSIDERABLY AMONG LAYERS
SESOIL MAY NOT BE ACCURATE FOR SUCH AN INHOMOGENEOUS COLUMN


   GENERAL INPUT PARAMETERS
   ========================


   -- SOIL INPUT PARAMETERS --

SOIL DENSITY (G/CM**3):                          1.49
INTRINSIC PERMEABILITY (CM**2):                     .000
DISCONNECTEDNESS INDEX (-):                        3.90
POROSITY (-):                          .280
ORGANIC CARBON CONTENT (%):                        .930E-01
CATION EXCHANGE CAPACITY (MILLI EQ./100G DRY SOIL):    .000
FREUNDLICH EXPONENT (-):                         1.00
```

-- CHEMICAL INPUT PARAMETERS --

SOLUBILITY (UG/ML): 240.
DIFFUSION COEFFICIENT IN AIR (CM**2/SEC): .739E-02
HENRYS LAW CONSTANT (M**3-ATM/MOLE): .174E-01
ADSORPTION COEFFICIENT ON ORGANIC CARBON(KOC): 364.
ADSORPTION COEFFICIENT ON SOIL (K): .000
MOLECULAR WEIGHT (G/MOL): 166.
VALENCE (-): .000
NEUTRAL HYDROLYSIS CONSTANT (/DAY): .000
BASE HYDROLYSIS CONSTANT (L/MOL-DAY): .000
ACID HYDROLYSIS CONSTANT (L/MOL-DAY): .000
DEGRADATION RATE IN MOISTURE (/DAY): .000
DEGRADATION RATE ON SOIL (/DAY): .000
LIGAND-POLLUTANT STABILITY CONSTANT (-): .000
NO. MOLES LIGAND/MOLE POLLUTANT (-): .000
LIGAND MOLECULAR WEIGHT (G/MOL): .000

-- APPLICATION INPUT PARAMETERS --

NUMBER OF SOIL LAYERS: 4
YEARS TO BE SIMULATED: 150
AREA (CM**2): 0.140E+08
APPLICATION AREA LATITUDE (DEG.): 33.9
SPILL (1) OR STEADY APPLICATION (0): 1
MODIFIED SUMMERS MODEL USED (1) OR NOT (0) FOR GWR. CONC.: 1
INITIAL CHEMICAL CONCENTRATIONS GIVEN (1) OR NOT GIVEN (0) 1
DEPTHS (CM): 0.70E+03 91. 0.40E+03 0.64E+03
NUMBER OF SUBLAYERS/LAYER 1 1 1 10
PH (CM): 0.00 0.00 0.00 0.00
INTRINSIC PERMEABILITIES (CM**2): 0.24E-07 0.94E-09 0.36E-10 0.81E-07
KDEL RATIOS (-): 1.0 1.0 1.0
KDES RATIOS (-): 1.0 1.0 1.0
OC RATIOS (-): 0.10 0.40 1.0
CEC RATIOS (-): 1.0 1.0 1.0
FRN RATIOS(-): 1.0 1.0 1.0
ADS RATIOS(-): 1.0 1.0 1.0
1

YEAR - 1 MONTHLY INPUT PARAMETERS
======== ==========

-- CLIMATIC INPUT PARAMETERS --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TEMP. (DEG C)	17.720	14.110	11.390	10.610	11.390	12.170	14.110	16.280	18.610	21.890	22.110	20.940
CLOUD CVR (FRAC.)	0.350	0.400	0.500	0.500	0.450	0.500	0.500	0.450	0.400	0.300	0.250	0.250
REL. HUM.(FRAC.)	0.650	0.550	0.600	0.650	0.600	0.600	0.700	0.600	0.650	0.550	0.650	0.650

ALBEDO (-) 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190
0.190
EVAPOT. (CM/DAY) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000
0.000

PRECIP. (CM) 0.530 4.020 4.390 8.100 6.020 4.900 2.540 0.450 0.090 0.030 0.260
0.680
M.TIME RAIN(DAYS) 0.100 0.400 0.430 0.520 0.410 0.340 0.280 0.110 0.029 0.014 0.010
0.081
M. STORM NO. (-) 0.550 2.000 2.410 3.500 2.700 2.970 2.000 0.390 0.130 0.090 0.090
0.320
M. SEASON (DAYS) 30.400 30.400 30.400 30.400 30.400 30.400 30.400 30.400 30.400 30.400
30.400 30.400

INITIAL POLLUTANT CONCENTRATIONS IN UG/ML,INPUT FOR MONTH 12 OF YEAR 1

LAYER 1:
SUBLAYER 1
INITIAL CONC. (UG/ML) 3.20E-01

LAYER 2:
SUBLAYER 1
INITIAL CONC. (UG/ML) 1.40E-01

LAYER 3:
SUBLAYER 1
INITIAL CONC. (UG/ML) 3.30E-01

LAYER 4:
SUBLAYER 1 2 3 4 5 6 7 8 9 10
INITIAL CONC. (UG/ML) 3.30E-02 3.30E-02 3.30E-02 3.30E-02 3.30E-02 3.30E-02 3.30E-02 3.30E-02 3.30E-02
3.30E-02

-- POLLUTANT INPUT PARAMETERS --

OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG
SEP

POL. INP-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

VOLATILIZATION MULT.-1 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00
SURFACE RUNOFF MULT. 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
POL. IN RAIN (FRAC-SL) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-2 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00

POL. INP-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-3 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00

POL. INP-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-L 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00
1

YEAR - 2 MONTHLY INPUT PARAMETERS
======== ==========

-- CLIMATIC INPUT PARAMETERS ARE SAME AS LAST YEAR

-- POLLUTANT INPUT PARAMETERS --

OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG
SEP

POL. INP-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-1 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SURFACE RUNOFF MULT. 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
POL. IN RAIN (FRAC-SL) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-2 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-3 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-L 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
1

YEAR - 3 MONTHLY INPUT PARAMETERS
======== ==========

-- CLIMATIC INPUT PARAMETERS ARE SAME AS LAST YEAR

-- POLLUTANT INPUT PARAMETERS ARE SAME AS LAST YEAR

YEAR - 6 MONTHLY RESULTS (OUTPUT)
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-- HYDROLOGIC CYCLE COMPONENTS --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MOIS. IN L1 (%)	7.405	8.16I	9.001	10.849	10.905	10.485	9.673	9.001	8.553	8.217	7.965	7.685
MOIS. BELOW L1 (%)	7.405	8.161	9.001	10.849	10.905	10.485	9.673	9.001	8.553	8.217	7.965	7.685
PRECIPATION (CM)	0.577	3.988	4.381	8.036	6.021	4.888	2.542	0.512	0.090	0.051	0.566	0.685
NET INFILT. (CM)	0.490	3.313	3.723	6.362	4.615	4.066	2.266	0.407	0.068	0.044	0.094	0.392
EVAPOTRANS. (CM)	1.064	2.241	2.405	3.094	4.046	4.331	3.306	1.349	0.720	0.570	0.535	0.913
MOIS. RETEN (CM)	-0.427	1.152	1.280	2.815	0.085	-0.640	-1.237	-1.024	-0.682	-0.512	-0.384	-0.427
SUR. RUNOFF (CM)	0.087	0.675	0.658	1.675	1.406	0.822	0.276	0.105	0.022	0.000	0.472	0.293
GRW. RUNOFF (CM)	-0.148	-0.080	0.038	0.453	0.483	0.375	0.196	0.082	0.030	-0.014	-0.057	-0.095
YIELD (CM)	-0.061	0.595	0.696	2.128	1.889	1.197	0.472	0.187	0.052	-0.007	0.415	0.199
PAU/MPA (GZU)	1.088	0.992	0.998	0.992	1.000	0.998	1.001	1.138	1.002	1.705	2.177	1.008
PA/MPA (GZ)	1.088	0.992	0.998	0.992	1.000	0.998	1.001	1.138	1.002	1.705	2.177	1.008

1 -- POLLUTANT MASS INPUT TO COLUMN (UG) --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
PRECIP.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD UPPER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD ZONE 2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD ZONE 3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD LOWER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TOTAL INPUT 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

UPPER SOIL ZONE:

SUBLAYER 1

IN SOIL MOI 2.326E+00 1.209E+00 7.067E-01 5.324E-01 5.351E-01 5.145E-01 4.747E-01 4.417E-01 4.197E-01 4.032E-01 3.909E-01 3.771E-01
ADS ON SOIL 1.584E+01 7.475E+00 3.960E+00 2.475E+00 2.475E+00 2.475E+00 2.475E+00 2.475E+00 2.475E+00 2.475E+00 2.475E+00 2.475E+00
IN SOIL AIR 4.690E+00 2.159E+00 1.106E+00 6.320E-01 6.288E-01 6.431E-01 6.602E-01 6.790E-01 6.892E-01 6.905E-01 6.988E-01 7.110E-01

SOIL ZONE 2:

SUBLAYER 1

IN SOIL MOI 1.792E+00 1.040E+00 8.027E-01 5.529E-01 5.557E-01 5.343E-01 4.929E-01 4.587E-01 4.359E-01 4.187E-01 4.059E-01 3.916E-01
ADS ON SOIL 1.221E+00 6.426E-01 4.498E-01 2.570E-01 2.570E-01 2.570E-01 2.570E-01 2.570E-01 2.570E-01 2.570E-01 2.570E-01 2.570E-01
IN SOIL AIR 3.615E+00 1.856E+00 1.257E+00 6.564E-01 6.531E-01 6.679E-01 6.856E-01 7.051E-01 7.157E-01 7.171E-01 7.257E-01 7.383E-01

SOIL ZONE 3:

SUBLAYER 1

IN SOIL MOI 7.703E+08 8.373E+08 9.113E+08 1.072E+09 1.070E+09 1.026E+09 9.530E+08 8.920E+08 8.522E+08 8.247E+08 8.008E+08 7.727E+08
ADS ON SOIL 2.099E+09 2.070E+09 2.043E+09 1.994E+09 1.980E+09 1.973E+09 1.988E+09 1.999E+09 2.010E+09 2.025E+09 2.028E+09 2.029E+09
IN SOIL AIR 1.554E+09 1.495E+09 1.426E+09 1.273E+09 1.258E+09 1.282E+09 1.325E+09 1.371E+09 1.399E+09 1.412E+09 1.432E+09 1.457E+09

LOWER SOIL ZONE:

SUBLAYER 1

IN SOIL MOI 5.158E+07 5.747E+07 6.417E+07 7.889E+07 8.088E+07 7.916E+07 7.412E+07 6.936E+07 6.615E+07 6.384E+07 6.198E+07 5.992E+07
ADS ON SOIL 3.513E+08 3.552E+08 3.596E+08 3.668E+08 3.741E+08 3.808E+08 3.865E+08 3.887E+08 3.901E+08 3.918E+08 3.925E+08 3.933E+08
IN SOIL AIR 1.040E+08 1.026E+08 1.004E+08 9.366E+07 9.505E+07 9.895E+07 1.031E+08 1.066E+08 1.086E+08 1.093E+08 1.108E+08 1.130E+08

SUBLAYER 2

IN SOIL MOI 2.045E+07 2.325E+07 2.655E+07 3.406E+07 3.604E+07 3.620E+07 3.438E+07 3.227E+07 3.080E+07 2.973E+07 2.889E+07 2.800E+07
ADS ON SOIL 1.393E+08 1.437E+08 1.488E+08 1.583E+08 1.667E+08 1.742E+08 1.793E+08 1.808E+08 1.816E+08 1.825E+08 1.829E+08 1.838E+08
IN SOIL AIR 4.124E+07 4.151E+07 4.156E+07 4.043E+07 4.235E+07 4.525E+07 4.782E+07 4.961E+07 5.057E+07 5.091E+07 5.165E+07 5.279E+07

SUBLAYER 3

IN SOIL MOI 7.195E+06 8.208E+06 9.416E+06 1.224E+07 1.312E+07 1.334E+07 1.276E+07 1.200E+07 1.145E+07 1.106E+07 1.075E+07 1.043E+07
ADS ON SOIL 4.901E+07 5.073E+07 5.277E+07 5.692E+07 6.069E+07 6.419E+07 6.653E+07 6.723E+07 6.755E+07 6.788E+07 6.807E+07 6.846E+07
IN SOIL AIR 1.451E+07 1.465E+07 1.474E+07 1.454E+07 1.542E+07 1.668E+07 1.775E+07 1.844E+07 1.881E+07 1.894E+07 1.922E+07 1.967E+07

SUBLAYER 4

IN SOIL MOI 3.871E+06 4.321E+06 4.844E+06 6.048E+06 6.304E+06 6.273E+06 5.933E+06 5.566E+06 5.312E+06 5.127E+06 4.981E+06 4.824E+06
ADS ON SOIL 2.637E+07 2.670E+07 2.714E+07 2.812E+07 2.916E+07 3.018E+07 3.094E+07 3.119E+07 3.133E+07 3.147E+07 3.154E+07 3.166E+07
IN SOIL AIR 7.807E+06 7.714E+06 7.582E+06 7.180E+06 7.409E+06 7.842E+06 8.252E+06 8.557E+06 8.723E+06 8.779E+06 8.905E+06 9.094E+06

SUBLAYER 5

IN SOIL MOI 3.311E+06 3.649E+06 4.029E+06 4.874E+06 4.951E+06 4.815E+06 4.496E+06 4.205E+06 4.010E+06 3.870E+06 3.757E+06 3.630E+06
ADS ON SOIL 2.255E+07 2.255E+07 2.258E+07 2.266E+07 2.290E+07 2.316E+07 2.344E+07 2.357E+07 2.365E+07 2.375E+07 2.379E+07 2.383E+07
IN SOIL AIR 6.678E+06 6.515E+06 6.307E+06 5.787E+06 5.818E+06 6.019E+06 6.253E+06 6.465E+06 6.586E+06 6.627E+06 6.716E+06 6.844E+06

SUBLAYER 6

IN SOIL MOI 3.244E+06 3.567E+06 3.927E+06 4.717E+06 4.761E+06 4.602E+06 4.282E+06 4.001E+06 3.815E+06 3.681E+06 3.572E+06 3.450E+06
ADS ON SOIL 2.210E+07 2.204E+07 2.200E+07 2.193E+07 2.202E+07 2.214E+07 2.233E+07 2.242E+07 2.250E+07 2.259E+07 2.262E+07 2.264E+07
IN SOIL AIR 6.543E+06 6.368E+06 6.146E+06 5.600E+06 5.594E+06 5.752E+06 5.955E+06 6.151E+06 6.264E+06 6.303E+06 6.387E+06 6.504E+06

SUBLAYER 7

IN SOIL MOI 3.239E+06 3.559E+06 3.917E+06 4.702E+06 4.741E+06 4.579E+06 4.258E+06 3.979E+06 3.793E+06 3.660E+06 3.552E+06 3.430E+06
ADS ON SOIL 2.206E+07 2.200E+07 2.195E+07 2.186E+07 2.193E+07 2.203E+07 2.220E+07 2.230E+07 2.237E+07 2.247E+07 2.249E+07 2.251E+07
IN SOIL AIR 6.532E+06 6.354E+06 6.132E+06 5.582E+06 5.572E+06 5.724E+06 5.922E+06 6.117E+06 6.229E+06 6.268E+06 6.351E+06 6.467E+06

SUBLAYER 8

IN SOIL MOI 3.238E+06 3.559E+06 3.917E+06 4.700E+06 4.740E+06 4.578E+06 4.256E+06 3.977E+06 3.792E+06 3.658E+06 3.551E+06 3.429E+06
ADS ON SOIL 2.206E+07 2.199E+07 2.195E+07 2.185E+07 2.192E+07 2.202E+07 2.219E+07 2.229E+07 2.236E+07 2.246E+07 2.248E+07 2.250E+07
IN SOIL AIR 6.531E+06 6.354E+06 6.131E+06 5.580E+06 5.570E+06 5.722E+06 5.920E+06 6.114E+06 6.226E+06 6.265E+06 6.348E+06 6.464E+06

SUBLAYER 9

IN SOIL MOI 3.238E+06 3.559E+06 3.917E+06 4.700E+06 4.740E+06 4.577E+06 4.256E+06 3.977E+06 3.792E+06 3.658E+06 3.551E+06 3.429E+06
ADS ON SOIL 2.206E+07 2.199E+07 2.195E+07 2.185E+07 2.192E+07 2.202E+07 2.219E+07 2.229E+07 2.236E+07 2.246E+07 2.248E+07 2.250E+07
IN SOIL AIR 6.531E+06 6.354E+06 6.131E+06 5.580E+06 5.570E+06 5.722E+06 5.919E+06 6.114E+06 6.226E+06 6.265E+06 6.348E+06 6.464E+06

SUBLAYER 10

IN SOIL MOI 3.677E+06 4.040E+06 4.447E+06 5.379E+06 5.471E+06 5.318E+06 4.961E+06 4.643E+06 4.428E+06 4.273E+06 4.147E+06 4.004E+06
ADS ON SOIL 2.504E+07 2.497E+07 2.492E+07 2.501E+07 2.530E+07 2.558E+07 2.587E+07 2.602E+07 2.612E+07 2.623E+07 2.626E+07 2.628E+07
IN SOIL AIR 7.415E+06 7.212E+06 6.961E+06 6.387E+06 6.429E+06 6.647E+06 6.900E+06 7.137E+06 7.272E+06 7.317E+06 7.414E+06 7.549E+06

-- POLLUTANT CONCENTRATIONS (UG/ML) OR (UG/G) -- NOTE: IF CONCENTRATIONS ARE ZERO FOR EACH MONTH, THEY ARE NOT PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

MOISTURE 3.200E-09 1.510E-09 8.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10
%SOLUBILITY 1.333E-09 6.292E-10 3.333E-10 2.083E-10 2.083E-10 2.083E-10 2.083E-10 2.083E-10 2.083E-10 2.083E-10 2.083E-10 2.083E-10
ADSORBED 1.083E-09 5.112E-10 2.708E-10 1.693E-10 1.693E-10 1.693E-10 1.693E-10 1.693E-10 1.693E-10 1.693E-10 1.693E-10 1.693E-10
SOIL AIR 2.321E-09 1.109E-09 5.933E-10 3.755E-10 3.748E-10 3.741E-10 3.670E-10 3.642E-10 3.611E-10 3.556E-10 3.554E-10 3.566E-10

SOIL ZONE 2:

SUBLAYER 1

MOISTURE 1.900E-08 1.000E-08 7.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09
%SOLUBILITY 7.917E-09 4.167E-09 2.917E-09 1.667E-09 1.667E-09 1.667E-09 1.667E-09 1.667E-09 1.667E-09 1.667E-09 1.667E-09 1.667E-09

ADSORBED 6.432E-10 3.385E-10 2.370E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10
SOIL AIR 1.378E-08 7.344E-09 5.191E-09 3.004E-09 2.999E-09 2.993E-09 2.936E-09 2.913E-09 2.889E-09 2.845E-09 2.843E-09 2.853E-09

SOIL ZONE 3:

SUBLAYER 1

MOISTURE 1.876E+00 1.851E+00 1.826E+00 1.783E+00 1.770E+00 1.764E+00 1.777E+00 1.788E+00 1.797E+00 1.810E+00 1.813E+00 1.814E+00
%SOLUBILITY 7.818E-01 7.711E-01 7.609E-01 7.428E-01 7.376E-01 7.351E-01 7.404E-01 7.448E-01 7.489E-01 7.543E-01 7.556E-01 7.557E-01
ADSORBED 2.541E-01 2.506E-01 2.473E-01 2.414E-01 2.397E-01 2.389E-01 2.406E-01 2.420E-01 2.434E-01 2.451E-01 2.455E-01 2.456E-01
SOIL AIR 1.361E+00 1.359E+00 1.354E+00 1.339E+00 1.327E+00 1.320E+00 1.304E+00 1.302E+00 1.298E+00 1.288E+00 1.289E+00 1.293E+00

LOWER SOIL ZONE:

SUBLAYER 1

MOISTURE 7.774E-01 7.859E-01 7.956E-01 8.116E-01 8.278E-01 8.426E-01 8.552E-01 8.601E-01 8.632E-01 8.670E-01 8.684E-01 8.702E-01
%SOLUBILITY 3.239E-01 3.275E-01 3.315E-01 3.382E-01 3.449E-01 3.511E-01 3.563E-01 3.584E-01 3.597E-01 3.613E-01 3.618E-01 3.626E-01
ADSORBED 2.632E-01 2.661E-01 2.693E-01 2.747E-01 2.802E-01 2.852E-01 2.895E-01 2.911E-01 2.922E-01 2.935E-01 2.940E-01 2.946E-01
SOIL AIR 5.637E-01 5.772E-01 5.900E-01 6.095E-01 6.206E-01 6.305E-01 6.278E-01 6.264E-01 6.234E-01 6.167E-01 6.173E-01 6.206E-01

SUBLAYER 2

MOISTURE 3.082E-01 3.180E-01 3.292E-01 3.503E-01 3.688E-01 3.854E-01 3.967E-01 4.001E-01 4.019E-01 4.038E-01 4.048E-01 4.066E-01
%SOLUBILITY 1.284E-01 1.325E-01 1.372E-01 1.460E-01 1.537E-01 1.606E-01 1.653E-01 1.667E-01 1.674E-01 1.682E-01 1.687E-01 1.694E-01
ADSORBED 1.043E-01 1.076E-01 1.114E-01 1.186E-01 1.248E-01 1.305E-01 1.343E-01 1.355E-01 1.360E-01 1.367E-01 1.370E-01 1.376E-01
SOIL AIR 2.235E-01 2.335E-01 2.441E-01 2.631E-01 2.765E-01 2.884E-01 2.912E-01 2.914E-01 2.903E-01 2.872E-01 2.877E-01 2.900E-01

SUBLAYER 3

MOISTURE 1.084E-01 1.122E-01 1.168E-01 1.259E-01 1.343E-01 1.420E-01 1.472E-01 1.488E-01 1.495E-01 1.502E-01 1.506E-01 1.515E-01
%SOLUBILITY 4.518E-02 4.677E-02 4.865E-02 5.248E-02 5.596E-02 5.918E-02 6.134E-02 6.198E-02 6.228E-02 6.258E-02 6.276E-02 6.312E-02
ADSORBED 3.671E-02 3.800E-02 3.952E-02 4.264E-02 4.546E-02 4.808E-02 4.984E-02 5.036E-02 5.060E-02 5.085E-02 5.099E-02 5.128E-02
SOIL AIR 7.864E-02 8.244E-02 8.659E-02 9.459E-02 1.007E-01 1.063E-01 1.081E-01 1.083E-01 1.080E-01 1.068E-01 1.071E-01 1.080E-01

SUBLAYER 4

MOISTURE 5.834E-02 5.909E-02 6.006E-02 6.221E-02 6.452E-02 6.678E-02 6.846E-02 6.902E-02 6.931E-02 6.964E-02 6.979E-02 7.005E-02
%SOLUBILITY 2.431E-02 2.462E-02 2.503E-02 2.592E-02 2.688E-02 2.782E-02 2.852E-02 2.876E-02 2.888E-02 2.902E-02 2.908E-02 2.919E-02
ADSORBED 1.975E-02 2.000E-02 2.033E-02 2.106E-02 2.184E-02 2.260E-02 2.317E-02 2.336E-02 2.346E-02 2.357E-02 2.362E-02 2.371E-02
SOIL AIR 4.231E-02 4.340E-02 4.454E-02 4.672E-02 4.837E-02 4.997E-02 5.025E-02 5.027E-02 5.006E-02 4.953E-02 4.961E-02 4.996E-02

SUBLAYER 5

MOISTURE 4.991E-02 4.990E-02 4.996E-02 5.014E-02 5.067E-02 5.125E-02 5.187E-02 5.214E-02 5.233E-02 5.256E-02 5.264E-02 5.272E-02
%SOLUBILITY 2.079E-02 2.079E-02 2.082E-02 2.089E-02 2.111E-02 2.136E-02 2.161E-02 2.173E-02 2.180E-02 2.190E-02 2.193E-02 2.197E-02
ADSORBED 1.689E-02 1.689E-02 1.691E-02 1.697E-02 1.715E-02 1.735E-02 1.756E-02 1.765E-02 1.771E-02 1.779E-02 1.782E-02 1.785E-02
SOIL AIR 3.619E-02 3.665E-02 3.705E-02 3.766E-02 3.798E-02 3.835E-02 3.808E-02 3.798E-02 3.779E-02 3.738E-02 3.742E-02 3.760E-02

SUBLAYER 6

MOISTURE 4.890E-02 4.877E-02 4.869E-02 4.852E-02 4.872E-02 4.899E-02 4.940E-02 4.961E-02 4.978E-02 4.999E-02 5.006E-02 5.010E-02
%SOLUBILITY 2.037E-02 2.032E-02 2.029E-02 2.022E-02 2.030E-02 2.041E-02 2.058E-02 2.067E-02 2.074E-02 2.083E-02 2.086E-02 2.088E-02
ADSORBED 1.655E-02 1.651E-02 1.648E-02 1.643E-02 1.649E-02 1.658E-02 1.672E-02 1.679E-02 1.685E-02 1.692E-02 1.695E-02 1.696E-02
SOIL AIR 3.546E-02 3.582E-02 3.611E-02 3.644E-02 3.652E-02 3.666E-02 3.626E-02 3.613E-02 3.595E-02 3.556E-02 3.558E-02 3.573E-02

SUBLAYER 7

MOISTURE 4.881E-02 4.867E-02 4.857E-02 4.837E-02 4.852E-02 4.874E-02 4.913E-02 4.934E-02 4.950E-02 4.971E-02 4.977E-02 4.981E-02
%SOLUBILITY 2.034E-02 2.028E-02 2.024E-02 2.015E-02 2.022E-02 2.031E-02 2.047E-02 2.056E-02 2.062E-02 2.071E-02 2.074E-02 2.076E-02
ADSORBED 1.652E-02 1.648E-02 1.644E-02 1.637E-02 1.643E-02 1.650E-02 1.663E-02 1.670E-02 1.676E-02 1.683E-02 1.685E-02 1.686E-02
SOIL AIR 3.540E-02 3.575E-02 3.602E-02 3.632E-02 3.637E-02 3.647E-02 3.607E-02 3.593E-02 3.575E-02 3.536E-02 3.538E-02 3.553E-02

SUBLAYER 8

MOISTURE 4.880E-02 4.867E-02 4.856E-02 4.835E-02 4.851E-02 4.873E-02 4.911E-02 4.931E-02 4.948E-02 4.969E-02 4.975E-02 4.979E-02
%SOLUBILITY 2.034E-02 2.028E-02 2.023E-02 2.015E-02 2.021E-02 2.030E-02 2.046E-02 2.055E-02 2.062E-02 2.070E-02 2.073E-02 2.075E-02
ADSORBED 1.652E-02 1.647E-02 1.644E-02 1.637E-02 1.642E-02 1.649E-02 1.662E-02 1.669E-02 1.675E-02 1.682E-02 1.684E-02 1.686E-02
SOIL AIR 3.539E-02 3.574E-02 3.601E-02 3.631E-02 3.636E-02 3.646E-02 3.605E-02 3.592E-02 3.573E-02 3.534E-02 3.536E-02 3.551E-02

SUBLAYER 9

MOISTURE 4.880E-02 4.867E-02 4.856E-02 4.835E-02 4.851E-02 4.872E-02 4.911E-02 4.931E-02 4.948E-02 4.969E-02 4.975E-02 4.979E-02
%SOLUBILITY 2.034E-02 2.028E-02 2.023E-02 2.015E-02 2.021E-02 2.030E-02 2.046E-02 2.055E-02 2.061E-02 2.070E-02 2.073E-02 2.075E-02
ADSORBED 1.652E-02 1.647E-02 1.644E-02 1.637E-02 1.642E-02 1.649E-02 1.662E-02 1.669E-02 1.675E-02 1.682E-02 1.684E-02 1.686E-02
SOIL AIR 3.539E-02 3.574E-02 3.601E-02 3.631E-02 3.636E-02 3.646E-02 3.605E-02 3.592E-02 3.573E-02 3.534E-02 3.536E-02 3.551E-02

SUBLAYER 10

MOISTURE 5.542E-02 5.524E-02 5.514E-02 5.534E-02 5.599E-02 5.660E-02 5.724E-02 5.756E-02 5.779E-02 5.803E-02 5.811E-02 5.815E-02
%SOLUBILITY 2.309E-02 2.302E-02 2.298E-02 2.306E-02 2.333E-02 2.358E-02 2.385E-02 2.398E-02 2.408E-02 2.418E-02 2.421E-02 2.423E-02
ADSORBED 1.876E-02 1.870E-02 1.867E-02 1.873E-02 1.895E-02 1.916E-02 1.938E-02 1.949E-02 1.956E-02 1.965E-02 1.967E-02 1.968E-02
SOIL AIR 4.019E-02 4.057E-02 4.089E-02 4.156E-02 4.197E-02 4.236E-02 4.202E-02 4.192E-02 4.174E-02 4.128E-02 4.130E-02 4.147E-02

POL DEP CM 1.818E+03 1.818E+03 1.819E+03 1.820E+03 1.822E+03 1.823E+03 1.823E+03 1.823E+03 1.823E+03 1.823E+03 1.823E+03 1.823E+03
1 YEAR - 6 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 8.342E-10
ADSORBED SOIL (UG/G) 2.824E-10
SOIL AIR (UG/ML) 6.089E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 6.000E-09
ADSORBED SOIL (UG/G) 2.031E-10
SOIL AIR (UG/ML) 4.382E-09

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.806E+00
ADSORBED SOIL (UG/G) 2.445E-01
SOIL AIR (UG/ML) 1.320E+00

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 8.354E-01
ADSORBED SOIL (UG/G) 2.828E-01
SOIL AIR (UG/ML) 6.103E-01

SUBLAYER 2

SOIL MOISTURE (UG/ML) 3.728E-01
ADSORBED SOIL (UG/G) 1.262E-01
SOIL AIR (UG/ML) 2.722E-01

SUBLAYER 3

SOIL MOISTURE (UG/ML) 1.365E-01
ADSORBED SOIL (UG/G) 4.619E-02
SOIL AIR (UG/ML) 9.962E-02

SUBLAYER 4

SOIL MOISTURE (UG/ML) 6.561E-02
ADSORBED SOIL (UG/G) 2.221E-02
SOIL AIR (UG/ML) 4.791E-02

SUBLAYER 5

SOIL MOISTURE (UG/ML) 5.134E-02
ADSORBED SOIL (UG/G) 1.738E-02

SOIL AIR (UG/ML) 3.751E-02

SUBLAYER 6

SOIL MOISTURE (UG/ML) 4.929E-02
ADSORBED SOIL (UG/G) 1.669E-02
SOIL AIR (UG/ML) 3.602E-02

SUBLAYER 7

SOIL MOISTURE (UG/ML) 4.908E-02
ADSORBED SOIL (UG/G) 1.661E-02
SOIL AIR (UG/ML) 3.586E-02

SUBLAYER 8

SOIL MOISTURE (UG/ML) 4.906E-02
ADSORBED SOIL (UG/G) 1.661E-02
SOIL AIR (UG/ML) 3.585E-02

SUBLAYER 9

SOIL MOISTURE (UG/ML) 4.906E-02
ADSORBED SOIL (UG/G) 1.661E-02
SOIL AIR (UG/ML) 3.585E-02

SUBLAYER 10

SOIL MOISTURE (UG/ML) 5.672E-02
ADSORBED SOIL (UG/G) 1.920E-02
SOIL AIR (UG/ML) 4.144E-02

MAX. POLL. DEPTH (M) 1.823E+01

1

YEAR - 7 MONTHLY RESULTS (OUTPUT)
======== ==========

-- HYDROLOGIC CYCLE COMPONENTS --

OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

MOIS. IN L1 (%) 7.405 8.161 9.001 10.849 10.905 10.485 9.673 9.001 8.553 8.217 7.965 7.685
MOIS. BELOW L1 (%) 7.405 8.161 9.001 10.849 10.905 10.485 9.673 9.001 8.553 8.217 7.965 7.685
PRECIPATION (CM) 0.577 3.988 4.381 8.036 6.021 4.888 2.542 0.512 0.090 0.051 0.566 0.685
NET INFILT. (CM) 0.490 3.313 3.723 6.362 4.615 4.066 2.266 0.407 0.068 0.044 0.094 0.392
EVAPOTRANS. (CM) 1.064 2.241 2.405 3.094 4.046 4.331 3.306 1.349 0.720 0.570 0.535 0.913
MOIS. RETEN (CM) -0.427 1.152 1.280 2.815 0.085 -0.640 -1.237 -1.024 -0.682 -0.512 -0.384 -0.427
SUR. RUNOFF (CM) 0.087 0.675 0.658 1.675 1.406 0.822 0.276 0.105 0.022 0.000 0.472 0.293
GRW. RUNOFF (CM) -0.148 -0.080 0.038 0.453 0.483 0.375 0.196 0.082 0.030 -0.014 -0.057 -0.095
YIELD (CM) -0.061 0.595 0.696 2.128 1.889 1.197 0.472 0.187 0.052 -0.007 0.415 0.199

PAU/MPA (GZU) 1.088 0.992 0.998 0.992 1.000 0.998 1.001 1.138 1.002 1.705 2.177 1.008
PA/MPA (GZ) 1.088 0.992 0.998 0.992 1.000 0.998 1.001 1.138 1.002 1.705 2.177 1.008

1 -- POLLUTANT MASS INPUT TO COLUMN (UG) --

OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP

PRECIP. 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
LOAD UPPER 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
LOAD ZONE 2 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
LOAD ZONE 3 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
LOAD LOWER 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00

TOTAL INPUT 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

UPPER SOIL ZONE:

SUBLAYER 1

IN SOIL MOI 3.634E-01 4.005E-01 4.417E-01 4.259E-01 4.281E-01 4.116E-01 3.797E-01 3.533E-01 3.358E-01 3.226E-01 3.127E-01 3.017E-01
ADS ON SOIL 2.475E+00 2.475E+00 2.475E+00 1.980E+00 1.980E+00 1.980E+00 1.980E+00 1.980E+00 1.980E+00 1.980E+00 1.980E+00 1.980E+00
IN SOIL AIR 7.329E-01 7.150E-01 6.914E-01 5.056E-01 5.031E-01 5.145E-01 5.281E-01 5.432E-01 5.514E-01 5.524E-01 5.590E-01 5.688E-01

SOIL ZONE 2:

SUBLAYER 1

IN SOIL MOI 3.774E-01 4.159E-01 4.587E-01 4.147E-01 4.168E-01 4.007E-01 3.697E-01 3.440E-01 3.269E-01 3.141E-01 3.044E-01 2.937E-01
ADS ON SOIL 2.570E-01 2.570E-01 2.570E-01 1.928E-01 1.928E-01 1.928E-01 1.928E-01 1.928E-01 1.928E-01 1.928E-01 1.928E-01 1.928E-01
IN SOIL AIR 7.611E-01 7.425E-01 7.180E-01 4.923E-01 4.898E-01 5.009E-01 5.142E-01 5.289E-01 5.368E-01 5.378E-01 5.443E-01 5.538E-01

SOIL ZONE 3:

SUBLAYER 1

IN SOIL MOI 7.410E+08 8.055E+08 8.766E+08 1.031E+09 1.030E+09 9.866E+08 9.167E+08 8.581E+08 8.198E+08 7.933E+08 7.703E+08 7.433E+08
ADS ON SOIL 2.019E+09 1.991E+09 1.965E+09 1.918E+09 1.905E+09 1.898E+09 1.912E+09 1.923E+09 1.934E+09 1.948E+09 1.951E+09 1.951E+09
IN SOIL AIR 1.494E+09 1.438E+09 1.372E+09 1.225E+09 1.210E+09 1.233E+09 1.275E+09 1.319E+09 1.346E+09 1.358E+09 1.377E+09 1.401E+09

LOWER SOIL ZONE:

SUBLAYER 1

IN SOIL MOI 5.772E+07 6.397E+07 7.101E+07 8.646E+07 8.804E+07 8.569E+07 8.001E+07 7.482E+07 7.135E+07 6.885E+07 6.683E+07 6.458E+07
ADS ON SOIL 3.932E+08 3.953E+08 3.979E+08 4.020E+08 4.072E+08 4.122E+08 4.172E+08 4.193E+08 4.208E+08 4.226E+08 4.232E+08 4.238E+08
IN SOIL AIR 1.164E+08 1.142E+08 1.112E+08 1.027E+08 1.035E+08 1.071E+08 1.113E+08 1.150E+08 1.172E+08 1.179E+08 1.195E+08 1.217E+08

SUBLAYER 2

IN SOIL MOI 2.706E+07 3.051E+07 3.451E+07 4.353E+07 4.551E+07 4.528E+07 4.277E+07 4.010E+07 3.826E+07 3.693E+07 3.587E+07 3.474E+07
ADS ON SOIL 1.843E+08 1.886E+08 1.934E+08 2.024E+08 2.105E+08 2.178E+08 2.230E+08 2.247E+08 2.256E+08 2.267E+08 2.272E+08 2.280E+08
IN SOIL AIR 5.458E+07 5.447E+07 5.402E+07 5.168E+07 5.348E+07 5.659E+07 5.949E+07 6.165E+07 6.283E+07 6.324E+07 6.414E+07 6.549E+07

SUBLAYER 3

IN SOIL MOI 1.010E+07 1.148E+07 1.312E+07 1.690E+07 1.798E+07 1.817E+07 1.731E+07 1.626E+07 1.552E+07 1.499E+07 1.456E+07 1.412E+07

ADS ON SOIL 6.878E+07 7.095E+07 7.349E+07 7.858E+07 8.318E+07 8.740E+07 9.026E+07 9.113E+07 9.155E+07 9.199E+07 9.223E+07 9.270E+07
IN SOIL AIR 2.037E+07 2.049E+07 2.053E+07 2.007E+07 2.113E+07 2.271E+07 2.407E+07 2.500E+07 2.549E+07 2.566E+07 2.604E+07 2.663E+07

SUBLAYER 4

IN SOIL MOI 4.658E+06 5.227E+06 5.894E+06 7.437E+06 7.811E+06 7.816E+06 7.414E+06 6.959E+06 6.642E+06 6.412E+06 6.229E+06 6.036E+06
ADS ON SOIL 3.173E+07 3.231E+07 3.303E+07 3.458E+07 3.613E+07 3.760E+07 3.866E+07 3.900E+07 3.917E+07 3.936E+07 3.945E+07 3.961E+07
IN SOIL AIR 9.394E+06 9.333E+06 9.226E+06 8.830E+06 9.179E+06 9.770E+06 1.031E+07 1.070E+07 1.091E+07 1.098E+07 1.114E+07 1.138E+07

SUBLAYER 5

IN SOIL MOI 3.495E+06 3.861E+06 4.276E+06 5.206E+06 5.318E+06 5.197E+06 4.865E+06 4.554E+06 4.344E+06 4.191E+06 4.069E+06 3.934E+06
ADS ON SOIL 2.380E+07 2.386E+07 2.396E+07 2.421E+07 2.460E+07 2.500E+07 2.537E+07 2.552E+07 2.561E+07 2.573E+07 2.577E+07 2.582E+07
IN SOIL AIR 7.048E+06 6.893E+06 6.693E+06 6.181E+06 6.249E+06 6.496E+06 6.767E+06 7.001E+06 7.133E+06 7.177E+06 7.276E+06 7.417E+06

SUBLAYER 6

IN SOIL MOI 3.319E+06 3.650E+06 4.020E+06 4.836E+06 4.886E+06 4.729E+06 4.402E+06 4.115E+06 3.923E+06 3.785E+06 3.674E+06 3.548E+06
ADS ON SOIL 2.261E+07 2.256E+07 2.253E+07 2.248E+07 2.260E+07 2.275E+07 2.295E+07 2.306E+07 2.314E+07 2.324E+07 2.327E+07 2.329E+07
IN SOIL AIR 6.693E+06 6.516E+06 6.293E+06 5.741E+06 5.742E+06 5.911E+06 6.122E+06 6.325E+06 6.442E+06 6.482E+06 6.569E+06 6.690E+06

SUBLAYER 7

IN SOIL MOI 3.299E+06 3.626E+06 3.991E+06 4.791E+06 4.832E+06 4.668E+06 4.341E+06 4.056E+06 3.867E+06 3.731E+06 3.621E+06 3.497E+06
ADS ON SOIL 2.247E+07 2.241E+07 2.236E+07 2.227E+07 2.235E+07 2.245E+07 2.263E+07 2.273E+07 2.280E+07 2.290E+07 2.293E+07 2.295E+07
IN SOIL AIR 6.654E+06 6.474E+06 6.247E+06 5.688E+06 5.678E+06 5.835E+06 6.037E+06 6.235E+06 6.350E+06 6.389E+06 6.475E+06 6.593E+06

SUBLAYER 8

IN SOIL MOI 3.298E+06 3.624E+06 3.989E+06 4.787E+06 4.827E+06 4.662E+06 4.335E+06 4.050E+06 3.862E+06 3.726E+06 3.616E+06 3.492E+06
ADS ON SOIL 2.246E+07 2.240E+07 2.235E+07 2.225E+07 2.233E+07 2.243E+07 2.260E+07 2.270E+07 2.277E+07 2.287E+07 2.290E+07 2.292E+07
IN SOIL AIR 6.651E+06 6.470E+06 6.243E+06 5.683E+06 5.672E+06 5.827E+06 6.029E+06 6.227E+06 6.341E+06 6.380E+06 6.465E+06 6.583E+06

SUBLAYER 9

IN SOIL MOI 3.298E+06 3.624E+06 3.988E+06 4.787E+06 4.827E+06 4.661E+06 4.334E+06 4.050E+06 3.861E+06 3.726E+06 3.616E+06 3.491E+06

ADS ON SOIL 2.246E+07 2.240E+07 2.235E+07 2.225E+07 2.232E+07 2.242E+07 2.260E+07 2.270E+07 2.277E+07 2.287E+07 2.290E+07 2.292E+07
IN SOIL AIR 6.651E+06 6.470E+06 6.243E+06 5.683E+06 5.672E+06 5.827E+06 6.028E+06 6.226E+06 6.341E+06 6.380E+06 6.465E+06 6.582E+06

SUBLAYER 10

IN SOIL MOI 3.851E+06 4.231E+06 4.657E+06 5.632E+06 5.725E+06 5.561E+06 5.166E+06 4.825E+06 4.600E+06 4.438E+06 4.307E+06 4.159E+06
ADS ON SOIL 2.623E+07 2.615E+07 2.610E+07 2.618E+07 2.648E+07 2.675E+07 2.694E+07 2.704E+07 2.713E+07 2.724E+07 2.728E+07 2.730E+07
IN SOIL AIR 7.767E+06 7.553E+06 7.290E+06 6.686E+06 6.728E+06 6.951E+06 7.184E+06 7.418E+06 7.554E+06 7.600E+06 7.701E+06 7.841E+06
GWR. RUNOFF 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 2.073E+04 1.638E+05 6.870E+04 2.529E+04 0.000E+00 0.000E+00 0.000E+00

-- POLLUTANT CONCENTRATIONS (UG/ML) OR (UG/G) -- NOTE: IF CONCENTRATIONS ARE ZERO FOR EACH MONTH, THEY ARE NOT PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

MOISTURE 5.000E-10 5.000E-10 5.000E-10 4.000E-10 4.000E-10 4.000E-10 4.000E-10 4.000E-10 4.000E-10 4.000E-10 4.000E-10 4.000E-10
%SOLUBILITY 2.083E-10 2.083E-10 2.083E-10 1.667E-10 1.667E-10 1.667E-10 1.667E-10 1.667E-10 1.667E-10 1.667E-10 1.667E-10 1.667E-10
ADSORBED 1.693E-10 1.693E-10 1.693E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10 1.354E-10
SOIL AIR 3.626E-10 3.672E-10 3.708E-10 3.004E-10 2.999E-10 2.993E-10 2.936E-10 2.913E-10 2.889E-10 2.845E-10 2.843E-10 2.853E-10

SOIL ZONE 2:

SUBLAYER 1

MOISTURE 4.000E-09 4.000E-09 4.000E-09 3.000E-09 3.000E-09 3.000E-09 3.000E-09 3.000E-09 3.000E-09 3.000E-09 3.000E-09 3.000E-09
%SOLUBILITY 1.667E-09 1.667E-09 1.667E-09 1.250E-09 1.250E-09 1.250E-09 1.250E-09 1.250E-09 1.250E-09 1.250E-09 1.250E-09 1.250E-09
ADSORBED 1.354E-10 1.354E-10 1.354E-10 1.016E-10 1.016E-10 1.016E-10 1.016E-10 1.016E-10 1.016E-10 1.016E-10 1.016E-10 1.016E-10
SOIL AIR 2.901E-09 2.938E-09 2.966E-09 2.253E-09 2.249E-09 2.245E-09 2.202E-09 2.185E-09 2.167E-09 2.134E-09 2.132E-09 2.140E-09

SOIL ZONE 3:

SUBLAYER 1

MOISTURE 1.805E+00 1.780E+00 1.757E+00 1.715E+00 1.703E+00 1.697E+00 1.709E+00 1.720E+00 1.729E+00 1.741E+00 1.744E+00 1.745E+00
%SOLUBILITY 7.521E-01 7.418E-01 7.320E-01 7.145E-01 7.095E-01 7.072E-01 7.123E-01 7.165E-01 7.204E-01 7.256E-01 7.269E-01 7.269E-01
ADSORBED 2.444E-01 2.411E-01 2.379E-01 2.322E-01 2.306E-01 2.298E-01 2.315E-01 2.328E-01 2.341E-01 2.358E-01 2.362E-01 2.362E-01
SOIL AIR 1.309E+00 1.308E+00 1.303E+00 1.288E+00 1.277E+00 1.270E+00 1.255E+00 1.252E+00 1.249E+00 1.239E+00 1.240E+00 1.244E+00

LOWER SOIL ZONE:

SUBLAYER 1

MOISTURE 8.699E-01 8.748E-01 8.805E-01 8.895E-01 9.011E-01 9.121E-01 9.231E-01 9.277E-01 9.310E-01 9.351E-01 9.364E-01 9.378E-01
%SOLUBILITY 3.625E-01 3.645E-01 3.669E-01 3.706E-01 3.754E-01 3.801E-01 3.846E-01 3.866E-01 3.879E-01 3.896E-01 3.902E-01 3.908E-01
ADSORBED 2.945E-01 2.961E-01 2.981E-01 3.011E-01 3.050E-01 3.088E-01 3.125E-01 3.141E-01 3.152E-01 3.165E-01 3.170E-01 3.175E-01
SOIL AIR 6.309E-01 6.425E-01 6.530E-01 6.680E-01 6.755E-01 6.825E-01 6.776E-01 6.757E-01 6.724E-01 6.651E-01 6.656E-01 6.689E-01

SUBLAYER 2

MOISTURE 4.079E-01 4.172E-01 4.279E-01 4.478E-01 4.658E-01 4.819E-01 4.935E-01 4.972E-01 4.993E-01 5.016E-01 5.027E-01 5.045E-01
%SOLUBILITY 1.700E-01 1.738E-01 1.783E-01 1.866E-01 1.941E-01 2.008E-01 2.056E-01 2.072E-01 2.080E-01 2.090E-01 2.094E-01 2.102E-01
ADSORBED 1.381E-01 1.412E-01 1.449E-01 1.516E-01 1.577E-01 1.631E-01 1.671E-01 1.683E-01 1.690E-01 1.698E-01 1.702E-01 1.708E-01
SOIL AIR 2.958E-01 3.064E-01 3.173E-01 3.363E-01 3.492E-01 3.606E-01 3.623E-01 3.622E-01 3.606E-01 3.568E-01 3.573E-01 3.598E-01

SUBLAYER 3

MOISTURE 1.522E-01 1.570E-01 1.626E-01 1.739E-01 1.841E-01 1.934E-01 1.997E-01 2.016E-01 2.026E-01 2.035E-01 2.041E-01 2.051E-01
%SOLUBILITY 6.341E-02 6.541E-02 6.776E-02 7.245E-02 7.669E-02 8.058E-02 8.322E-02 8.402E-02 8.440E-02 8.481E-02 8.503E-02 8.546E-02
ADSORBED 5.152E-02 5.314E-02 5.505E-02 5.886E-02 6.231E-02 6.546E-02 6.761E-02 6.826E-02 6.857E-02 6.890E-02 6.908E-02 6.943E-02
SOIL AIR 1.104E-01 1.153E-01 1.206E-01 1.306E-01 1.380E-01 1.447E-01 1.466E-01 1.469E-01 1.463E-01 1.448E-01 1.451E-01 1.463E-01

SUBLAYER 4

MOISTURE 7.020E-02 7.149E-02 7.308E-02 7.651E-02 7.994E-02 8.320E-02 8.554E-02 8.629E-02 8.667E-02 8.708E-02 8.728E-02 8.766E-02
%SOLUBILITY 2.925E-02 2.979E-02 3.045E-02 3.188E-02 3.331E-02 3.467E-02 3.564E-02 3.595E-02 3.611E-02 3.628E-02 3.637E-02 3.652E-02
ADSORBED 2.376E-02 2.420E-02 2.474E-02 2.590E-02 2.706E-02 2.816E-02 2.896E-02 2.921E-02 2.934E-02 2.948E-02 2.955E-02 2.967E-02
SOIL AIR 5.091E-02 5.250E-02 5.420E-02 5.746E-02 5.992E-02 6.226E-02 6.279E-02 6.285E-02 6.260E-02 6.194E-02 6.204E-02 6.252E-02

SUBLAYER 5

MOISTURE 5.267E-02 5.280E-02 5.302E-02 5.356E-02 5.442E-02 5.532E-02 5.614E-02 5.647E-02 5.668E-02 5.693E-02 5.702E-02 5.713E-02
%SOLUBILITY 2.195E-02 2.200E-02 2.209E-02 2.232E-02 2.268E-02 2.305E-02 2.339E-02 2.353E-02 2.362E-02 2.372E-02 2.376E-02 2.381E-02
ADSORBED 1.783E-02 1.787E-02 1.795E-02 1.813E-02 1.842E-02 1.873E-02 1.900E-02 1.911E-02 1.919E-02 1.927E-02 1.930E-02 1.934E-02
SOIL AIR 3.820E-02 3.878E-02 3.932E-02 4.022E-02 4.080E-02 4.139E-02 4.121E-02 4.112E-02 4.093E-02 4.049E-02 4.053E-02 4.075E-02

SUBLAYER 6

MOISTURE 5.002E-02 4.991E-02 4.985E-02 4.974E-02 5.001E-02 5.033E-02 5.079E-02 5.102E-02 5.119E-02 5.141E-02 5.148E-02 5.153E-02
%SOLUBILITY 2.084E-02 2.080E-02 2.077E-02 2.073E-02 2.084E-02 2.097E-02 2.116E-02 2.126E-02 2.133E-02 2.142E-02 2.145E-02 2.147E-02
ADSORBED 1.693E-02 1.690E-02 1.687E-02 1.684E-02 1.693E-02 1.704E-02 1.719E-02 1.727E-02 1.733E-02 1.740E-02 1.743E-02 1.744E-02
SOIL AIR 3.627E-02 3.666E-02 3.697E-02 3.736E-02 3.749E-02 3.766E-02 3.728E-02 3.716E-02 3.697E-02 3.657E-02 3.659E-02 3.675E-02

SUBLAYER 7

MOISTURE 4.973E-02 4.959E-02 4.949E-02 4.928E-02 4.945E-02 4.968E-02 5.008E-02 5.029E-02 5.046E-02 5.068E-02 5.074E-02 5.078E-02
%SOLUBILITY 2.072E-02 2.066E-02 2.062E-02 2.054E-02 2.060E-02 2.070E-02 2.087E-02 2.096E-02 2.103E-02 2.112E-02 2.114E-02 2.116E-02
ADSORBED 1.683E-02 1.679E-02 1.675E-02 1.668E-02 1.674E-02 1.682E-02 1.695E-02 1.703E-02 1.708E-02 1.716E-02 1.718E-02 1.719E-02
SOIL AIR 3.606E-02 3.642E-02 3.670E-02 3.701E-02 3.707E-02 3.718E-02 3.676E-02 3.663E-02 3.644E-02 3.605E-02 3.607E-02 3.622E-02

SUBLAYER 8

MOISTURE 4.970E-02 4.956E-02 4.945E-02 4.924E-02 4.940E-02 4.962E-02 5.001E-02 5.022E-02 5.039E-02 5.061E-02 5.067E-02 5.071E-02
%SOLUBILITY 2.071E-02 2.065E-02 2.061E-02 2.052E-02 2.058E-02 2.068E-02 2.084E-02 2.093E-02 2.100E-02 2.109E-02 2.111E-02 2.113E-02
ADSORBED 1.682E-02 1.678E-02 1.674E-02 1.667E-02 1.672E-02 1.680E-02 1.693E-02 1.700E-02 1.706E-02 1.713E-02 1.715E-02 1.717E-02
SOIL AIR 3.604E-02 3.640E-02 3.668E-02 3.698E-02 3.703E-02 3.713E-02 3.671E-02 3.658E-02 3.639E-02 3.599E-02 3.602E-02 3.617E-02

SUBLAYER 9

MOISTURE 4.970E-02 4.956E-02 4.945E-02 4.924E-02 4.940E-02 4.962E-02 5.001E-02 5.022E-02 5.038E-02 5.060E-02 5.066E-02 5.070E-02
%SOLUBILITY 2.071E-02 2.065E-02 2.061E-02 2.052E-02 2.058E-02 2.067E-02 2.084E-02 2.092E-02 2.099E-02 2.108E-02 2.111E-02 2.113E-02
ADSORBED 1.682E-02 1.678E-02 1.674E-02 1.667E-02 1.672E-02 1.680E-02 1.693E-02 1.700E-02 1.706E-02 1.713E-02 1.715E-02 1.716E-02

SOIL AIR 3.604E-02 3.640E-02 3.667E-02 3.698E-02 3.703E-02 3.713E-02 3.671E-02 3.657E-02 3.639E-02 3.599E-02 3.601E-02 3.616E-02

SUBLAYER 10

MOISTURE 5.804E-02 5.785E-02 5.775E-02 5.793E-02 5.859E-02 5.919E-02 5.960E-02 5.983E-02 6.002E-02 6.028E-02 6.035E-02 6.040E-02
%SOLUBILITY 2.418E-02 2.411E-02 2.406E-02 2.414E-02 2.441E-02 2.466E-02 2.483E-02 2.493E-02 2.501E-02 2.512E-02 2.515E-02 2.517E-02
ADSORBED 1.965E-02 1.959E-02 1.955E-02 1.961E-02 1.983E-02 2.004E-02 2.018E-02 2.025E-02 2.032E-02 2.041E-02 2.043E-02 2.045E-02
SOIL AIR 4.209E-02 4.249E-02 4.283E-02 4.351E-02 4.392E-02 4.429E-02 4.375E-02 4.358E-02 4.335E-02 4.288E-02 4.290E-02 4.308E-02

POL DEP CM 1.823E+03 1.824E+03 1.824E+03 1.826E+03 1.827E+03 1.828E+03 1.828E+03 1.828E+03 1.828E+03 1.828E+03 1.828E+03 1.828E+03

-- POLLUTANT CONCENTRATION IN GROUNDWATER (UG/ML) --

GWR. CONC. 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 1.210E-04 6.384E-05 2.678E-05 9.861E-06 0.000E+00 0.000E+00 0.000E+00
1 YEAR - 7 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 2.785E+05

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.250E-10
ADSORBED SOIL (UG/G) 1.439E-10
SOIL AIR (UG/ML) 3.107E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.250E-09
ADSORBED SOIL (UG/G) 1.100E-10
SOIL AIR (UG/ML) 2.376E-09

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.737E+00
ADSORBED SOIL (UG/G) 2.352E-01
SOIL AIR (UG/ML) 1.269E+00

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 9.099E-01
ADSORBED SOIL (UG/G) 3.080E-01
SOIL AIR (UG/ML) 6.648E-01

SUBLAYER 2

SOIL MOISTURE (UG/ML) 4.706E-01
ADSORBED SOIL (UG/G) 1.593E-01
SOIL AIR (UG/ML) 3.437E-01

SUBLAYER 3

SOIL MOISTURE (UG/ML) 1.866E-01
ADSORBED SOIL (UG/G) 6.318E-02
SOIL AIR (UG/ML) 1.363E-01

SUBLAYER 4

SOIL MOISTURE (UG/ML) 8.124E-02
ADSORBED SOIL (UG/G) 2.750E-02
SOIL AIR (UG/ML) 5.933E-02

SUBLAYER 5

SOIL MOISTURE (UG/ML) 5.518E-02
ADSORBED SOIL (UG/G) 1.868E-02
SOIL AIR (UG/ML) 4.031E-02

SUBLAYER 6

SOIL MOISTURE (UG/ML) 5.061E-02
ADSORBED SOIL (UG/G) 1.713E-02
SOIL AIR (UG/ML) 3.698E-02

SUBLAYER 7

SOIL MOISTURE (UG/ML) 5.002E-02
ADSORBED SOIL (UG/G) 1.693E-02
SOIL AIR (UG/ML) 3.655E-02

SUBLAYER 8

SOIL MOISTURE (UG/ML) 4.997E-02
ADSORBED SOIL (UG/G) 1.691E-02
SOIL AIR (UG/ML) 3.651E-02

SUBLAYER 9

SOIL MOISTURE (UG/ML) 4.996E-02
ADSORBED SOIL (UG/G) 1.691E-02
SOIL AIR (UG/ML) 3.651E-02

SUBLAYER 10

SOIL MOISTURE (UG/ML) 5.915E-02
ADSORBED SOIL (UG/G) 2.002E-02
SOIL AIR (UG/ML) 4.322E-02

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 1.846E-05
1

YEAR - 8

1 YEAR - 10 ANNUAL SUMMARY REPORT

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE I (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 1.415E+06

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.000E-10
ADSORBED SOIL (UG/G) 1.354E-10
SOIL AIR (UG/ML) 2.923E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-09
ADSORBED SOIL (UG/G) 1.016E-10
SOIL AIR (UG/ML) 2.193E-09

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.546E+00
ADSORBED SOIL (UG/G) 2.094E-01
SOIL AIR (UG/ML) 1.130E+00

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.018E+00
ADSORBED SOIL (UG/G) 3.445E-01
SOIL AIR (UG/ML) 7.437E-01

SUBLAYER 2

SOIL MOISTURE (UG/ML) 7.254E-01
ADSORBED SOIL (UG/G) 2.456E-01
SOIL AIR (UG/ML) 5.299E-01

SUBLAYER 3

SOIL MOISTURE (UG/ML) 3.785E-01
ADSORBED SOIL (UG/G) 1.281E-01
SOIL AIR (UG/ML) 2.764E-01

SUBLAYER 4

SOIL MOISTURE (UG/ML) 1.659E-01
ADSORBED SOIL (UG/G) 5.616E-02
SOIL AIR (UG/ML) 1.211E-01

SUBLAYER 5

SOIL MOISTURE (UG/ML) 8.163E-02
ADSORBED SOIL (UG/G) 2.763E-02
SOIL AIR (UG/ML) 5.963E-02

SUBLAYER 6

SOIL MOISTURE (UG/ML) 5.824E-02
ADSORBED SOIL (UG/G) 1.972E-02
SOIL AIR (UG/ML) 4.255E-02

SUBLAYER 7

SOIL MOISTURE (UG/ML) 5.354E-02
ADSORBED SOIL (UG/G) 1.812E-02
SOIL AIR (UG/ML) 3.912E-02

SUBLAYER 8

SOIL MOISTURE (UG/ML) 5.284E-02
ADSORBED SOIL (UG/G) 1.789E-02
SOIL AIR (UG/ML) 3.861E-02

SUBLAYER 9

SOIL MOISTURE (UG/ML) 5.277E-02
ADSORBED SOIL (UG/G) 1.786E-02

SOIL AIR (UG/ML) 3.856E-02

SUBLAYER 10

SOIL MOISTURE (UG/ML) 6.152E-02
ADSORBED SOIL (UG/G) 2.083E-02
SOIL AIR (UG/ML) 4.496E-02

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 4.593E-05

1 YEAR - 50 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 5.883E+06

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.000E-10
ADSORBED SOIL (UG/G) 1.354E-10
SOIL AIR (UG/ML) 2.923E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-09
ADSORBED SOIL (UG/G) 1.016E-10
SOIL AIR (UG/ML) 2.193E-09

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.287E-01
ADSORBED SOIL (UG/G) 4.451E-02
SOIL AIR (UG/ML) 2.402E-01

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.876E-01
ADSORBED SOIL (UG/G) 9.737E-02
SOIL AIR (UG/ML) 2.102E-01

SUBLAYER 2

SOIL MOISTURE (UG/ML) 4.007E-01
ADSORBED SOIL (UG/G) 1.356E-01
SOIL AIR (UG/ML) 2.928E-01

SUBLAYER 3

SOIL MOISTURE (UG/ML) 5.679E-01
ADSORBED SOIL (UG/G) 1.923E-01
SOIL AIR (UG/ML) 4.151E-01

SUBLAYER 4

SOIL MOISTURE (UG/ML) 7.908E-01
ADSORBED SOIL (UG/G) 2.677E-01
SOIL AIR (UG/ML) 5.779E-01

SUBLAYER 5

SOIL MOISTURE (UG/ML) 1.022E+00
ADSORBED SOIL (UG/G) 3.459E-01
SOIL AIR (UG/ML) 7.468E-01

SUBLAYER 6

SOIL MOISTURE (UG/ML) 1.156E+00
ADSORBED SOIL (UG/G) 3.915E-01
SOIL AIR (UG/ML) 8.450E-01

SUBLAYER 7

SOIL MOISTURE (UG/ML) 1.090E+00
ADSORBED SOIL (UG/G) 3.691E-01
SOIL AIR (UG/ML) 7.966E-01

SUBLAYER 8

SOIL MOISTURE (UG/ML) 8.263E-01
ADSORBED SOIL (UG/G) 2.797E-01
SOIL AIR (UG/ML) 6.037E-01

SUBLAYER 9

SOIL MOISTURE (UG/ML) 4.980E-01
ADSORBED SOIL (UG/G) 1.686E-01

SOIL AIR (UG/ML) 3.639E-01

SUBLAYER 10

SOIL MOISTURE (UG/ML) 2.573E-01
ADSORBED SOIL (UG/G) 8.711E-02
SOIL AIR (UG/ML) 1.880E-01

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 1.921E-04

1 YEAR - 100 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 4.188E+07

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.000E-10
ADSORBED SOIL (UG/G) 1.354E-10
SOIL AIR (UG/ML) 2.923E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-09
ADSORBED SOIL (UG/G) 1.016E-10
SOIL AIR (UG/ML) 2.193E-09

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.742E-02
ADSORBED SOIL (UG/G) 6.421E-03
SOIL AIR (UG/ML) 3.465E-02

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.151E-02
ADSORBED SOIL (UG/G) 1.405E-02
SOIL AIR (UG/ML) 3.034E-02

SUBLAYER 2

SOIL MOISTURE (UG/ML) 5.812E-02
ADSORBED SOIL (UG/G) 1.967E-02
SOIL AIR (UG/ML) 4.247E-02

SUBLAYER 3

SOIL MOISTURE (UG/ML) 8.474E-02
ADSORBED SOIL (UG/G) 2.868E-02
SOIL AIR (UG/ML) 6.193E-02

SUBLAYER 4

SOIL MOISTURE (UG/ML) 1.301E-01
ADSORBED SOIL (UG/G) 4.403E-02
SOIL AIR (UG/ML) 9.506E-02

SUBLAYER 5

SOIL MOISTURE (UG/ML) 2.127E-01
ADSORBED SOIL (UG/G) 7.199E-02
SOIL AIR (UG/ML) 1.554E-01

SUBLAYER 6

SOIL MOISTURE (UG/ML) 3.693E-01
ADSORBED SOIL (UG/G) 1.250E-01
SOIL AIR (UG/ML) 2.699E-01

SUBLAYER 7

SOIL MOISTURE (UG/ML) 6.570E-01
ADSORBED SOIL (UG/G) 2.224E-01
SOIL AIR (UG/ML) 4.801E-01

SUBLAYER 8

SOIL MOISTURE (UG/ML) 1.110E+00
ADSORBED SOIL (UG/G) 3.757E-01
SOIL AIR (UG/ML) 8.110E-01

SUBLAYER 9

SOIL MOISTURE (UG/ML) 1.617E+00
ADSORBED SOIL (UG/G) 5.472E-01

SOIL AIR (UG/ML) 1.181E+00

SUBLAYER 10

SOIL MOISTURE (UG/ML) 1.821E+00
ADSORBED SOIL (UG/G) 6.165E-01
SOIL AIR (UG/ML) 1.331E+00

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 1.360E-03

1 YEAR - 119 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 4.668E+07

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.000E-10
ADSORBED SOIL (UG/G) 1.354E-10
SOIL AIR (UG/ML) 2.923E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-09
ADSORBED SOIL (UG/G) 1.016E-10
SOIL AIR (UG/ML) 2.193E-09

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.273E-02
ADSORBED SOIL (UG/G) 3.078E-03
SOIL AIR (UG/ML) 1.661E-02

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.990E-02
ADSORBED SOIL (UG/G) 6.735E-03
SOIL AIR (UG/ML) 1.454E-02

SUBLAYER 2

SOIL MOISTURE (UG/ML) 2.786E-02
ADSORBED SOIL (UG/G) 9.430E-03
SOIL AIR (UG/ML) 2.036E-02

SUBLAYER 3

SOIL MOISTURE (UG/ML) 4.064E-02
ADSORBED SOIL (UG/G) 1.376E-02
SOIL AIR (UG/ML) 2.970E-02

SUBLAYER 4

SOIL MOISTURE (UG/ML) 6.248E-02
ADSORBED SOIL (UG/G) 2.115E-02
SOIL AIR (UG/ML) 4.566E-02

SUBLAYER 5

SOIL MOISTURE (UG/ML) 1.027E-01
ADSORBED SOIL (UG/G) 3.478E-02
SOIL AIR (UG/ML) 7.508E-02

SUBLAYER 6

SOIL MOISTURE (UG/ML) 1.840E-01
ADSORBED SOIL (UG/G) 6.229E-02
SOIL AIR (UG/ML) 1.345E-01

SUBLAYER 7

SOIL MOISTURE (UG/ML) 3.579E-01
ADSORBED SOIL (UG/G) 1.212E-01
SOIL AIR (UG/ML) 2.616E-01

SUBLAYER 8

SOIL MOISTURE (UG/ML) 7.173E-01
ADSORBED SOIL (UG/G) 2.428E-01
SOIL AIR (UG/ML) 5.242E-01

SUBLAYER 9

SOIL MOISTURE (UG/ML) 1.336E+00
ADSORBED SOIL (UG/G) 4.522E-01

SOIL AIR (UG/ML) 9.761E-01

SUBLAYER 10

SOIL MOISTURE (UG/ML) 2.027E+00
ADSORBED SOIL (UG/G) 6.863E-01
SOIL AIR (UG/ML) 1.482E+00

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 1.514E-03

1 YEAR - 150 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 3.788E+07

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.000E-10
ADSORBED SOIL (UG/G) 1.354E-10
SOIL AIR (UG/ML) 2.923E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-09
ADSORBED SOIL (UG/G) 1.016E-10
SOIL AIR (UG/ML) 2.193E-09

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 6.840E-03
ADSORBED SOIL (UG/G) 9.261E-04
SOIL AIR (UG/ML) 4.998E-03

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 5.988E-03
ADSORBED SOIL (UG/G) 2.027E-03
SOIL AIR (UG/ML) 4.376E-03

SUBLAYER 2

SOIL MOISTURE (UG/ML) 8.382E-03
ADSORBED SOIL (UG/G) 2.837E-03
SOIL AIR (UG/ML) 6.126E-03

SUBLAYER 3

SOIL MOISTURE (UG/ML) 1.222E-02
ADSORBED SOIL (UG/G) 4.138E-03
SOIL AIR (UG/ML) 8.933E-03

SUBLAYER 4

SOIL MOISTURE (UG/ML) 1.881E-02
ADSORBED SOIL (UG/G) 6.367E-03
SOIL AIR (UG/ML) 1.374E-02

SUBLAYER 5

SOIL MOISTURE (UG/ML) 3.104E-02
ADSORBED SOIL (UG/G) 1.051E-02
SOIL AIR (UG/ML) 2.269E-02

SUBLAYER 6

SOIL MOISTURE (UG/ML) 5.639E-02
ADSORBED SOIL (UG/G) 1.909E-02
SOIL AIR (UG/ML) 4.121E-02

SUBLAYER 7

SOIL MOISTURE (UG/ML) 1.164E-01
ADSORBED SOIL (UG/G) 3.939E-02
SOIL AIR (UG/ML) 8.504E-02

SUBLAYER 8

SOIL MOISTURE (UG/ML) 2.764E-01
ADSORBED SOIL (UG/G) 9.357E-02
SOIL AIR (UG/ML) 2.020E-01

SUBLAYER 9

SOIL MOISTURE (UG/ML) 7.040E-01
ADSORBED SOIL (UG/G) 2.383E-01

SOIL AIR (UG/ML) 5.145E-01

SUBLAYER 10

SOIL MOISTURE (UG/ML) 1.643E+00
ADSORBED SOIL (UG/G) 5.563E-01
SOIL AIR (UG/ML) 1.201E+00

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 1.227E-03

**********EXECUTION COMPLETED**********

APPENDIX E

SESOIL MODELING OUTPUT - TCE

FINAL TCE
YRS 4, 10, 50, 55, 100, 150

```
*****************************************************************************************
******
*****                                                    *****
***** SESOIL-84 :  SEASONAL CYCLES OF WATER, SEDIMENT, AND POLLUTANTS IN SOIL
ENVIRONMENTS      *****
*****                                                    *****
***** DEVELOPERS:  M. BONAZOUNTAS,ARTHUR D. LITTLE INC.  ,(617)864-5770,X5871
*****
*****          J. WAGNER    ,DIS/ADLPIPE, INC.     ,(617)492-1991,X5820              *****
*****                                                    *****
***** MODIFIED EXTENSIVELY BY:                                          *****
***** D.M. HETRICK                                              *****
***** OAK RIDGE NATIONAL LABORATORY                                              *****
***** (615) 576-7556                                        *****
***** VERSION   :  JANUARY 1995                                        *****
*****                                                    *****

*****************************************************************************************
******


            ****** MONTHLY SESOIL MODEL OPERATION ******
                MONTHLY SITE SPECIFIC SIMULATION


REGION        :    BREA DAM
SOIL TYPE     :    Silty Sand
COMPOUND      :    Trichloroethylene (Ethene, trichloro-)
WASHLOAD DATA  :
APPLICATION AREA:    TCE Simulation


WARNING- SOIL PERMEABILITY VARYS CONSIDERABLY AMONG LAYERS
SESOIL MAY NOT BE ACCURATE FOR SUCH AN INHOMOGENEOUS COLUMN

WARNING- SOIL PERMEABILITY VARYS CONSIDERABLY AMONG LAYERS
SESOIL MAY NOT BE ACCURATE FOR SUCH AN INHOMOGENEOUS COLUMN


   GENERAL INPUT PARAMETERS
   ========================


   -- SOIL INPUT PARAMETERS --

SOIL DENSITY (G/CM**3):                          1.49
INTRINSIC PERMEABILITY (CM**2):                     .000
DISCONNECTEDNESS INDEX (-):                       3.90
POROSITY (-):                          .280
ORGANIC CARBON CONTENT (%):                        .930E-01
CATION EXCHANGE CAPACITY (MILLI EQ./100G DRY SOIL):     .000
FREUNDLICH EXPONENT (-):                         1.00
```

1

-- CHEMICAL INPUT PARAMETERS --

SOLUBILITY (UG/ML): .110E+04
DIFFUSION COEFFICIENT IN AIR (CM**2/SEC): .830E-01
HENRYS LAW CONSTANT (M**3-ATM/MOLE): .937E-02
ADSORPTION COEFFICIENT ON ORGANIC CARBON(KOC): 126.
ADSORPTION COEFFICIENT ON SOIL (K): .000
MOLECULAR WEIGHT (G/MOL): 132.
VALENCE (-): .000
NEUTRAL HYDROLYSIS CONSTANT (/DAY): .000
BASE HYDROLYSIS CONSTANT (L/MOL-DAY): .000
ACID HYDROLYSIS CONSTANT (L/MOL-DAY): .000
DEGRADATION RATE IN MOISTURE (/DAY): .000
DEGRADATION RATE ON SOIL (/DAY): .000
LIGAND-POLLUTANT STABILITY CONSTANT (-): .000
NO. MOLES LIGAND/MOLE POLLUTANT (-): .000
LIGAND MOLECULAR WEIGHT (G/MOL): .000

-- APPLICATION INPUT PARAMETERS --

NUMBER OF SOIL LAYERS: 4
YEARS TO BE SIMULATED: 150
AREA (CM**2): 0.140E+07
APPLICATION AREA LATITUDE (DEG.): 33.9
SPILL (1) OR STEADY APPLICATION (0): 1
MODIFIED SUMMERS MODEL USED (1) OR NOT (0) FOR GWR. CONC.: 1
INITIAL CHEMICAL CONCENTRATIONS GIVEN (1) OR NOT GIVEN (0) 1
DEPTHS (CM): 0.70E+03 91. 0.40E+03 0.64E+03
NUMBER OF SUBLAYERS/LAYER 1 1 1 10
PH (CM): 0.00 0.00 0.00 0.00
INTRINSIC PERMEABILITIES (CM**2): 0.24E-07 0.94E-09 0.36E-10 0.81E-07
KDEL RATIOS (-): 1.0 1.0 1.0
KDES RATIOS (-): 1.0 1.0 1.0
OC RATIOS (-): 0.10 0.40 1.0
CEC RATIOS (-): 1.0 1.0 1.0
FRN RATIOS(-): 1.0 1.0 1.0
ADS RATIOS(-): 1.0 1.0 1.0

1

YEAR - 1 MONTHLY INPUT PARAMETERS
======== ==========

-- CLIMATIC INPUT PARAMETERS --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TEMP. (DEG C)	17.720	14.110	11.390	10.610	11.390	12.170	14.110	16.280	18.610	21.890	22.110	20.940
CLOUD CVR (FRAC.)	0.350	0.400	0.500	0.500	0.450	0.500	0.500	0.450	0.400	0.300	0.250	0.250
REL. HUM.(FRAC.)	0.650	0.550	0.600	0.650	0.600	0.600	0.700	0.600	0.650	0.550	0.650	0.650

ALBEDO (-) 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190
0.190
EVAPOT. (CM/DAY) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000
0.000

PRECIP. (CM) 0.530 4.020 4.390 8.100 6.020 4.900 2.540 0.450 0.090 0.030 0.260
0.680
M.TIME RAIN(DAYS) 0.100 0.400 0.430 0.520 0.410 0.340 0.280 0.110 0.029 0.014 0.010
0.081
M. STORM NO. (-) 0.550 2.000 2.410 3.500 2.700 2.970 2.000 0.390 0.130 0.090 0.090
0.320
M. SEASON (DAYS) 30.400 30.400 30.400 30.400 30.400 30.400 30.400 30.400 30.400 30.400
30.400 30.400

INITIAL POLLUTANT CONCENTRATIONS IN UG/ML,INPUT FOR MONTH 12 OF YEAR 1

LAYER 1:
SUBLAYER 1
INITIAL CONC. (UG/ML) 2.20E-02

LAYER 2:
SUBLAYER 1
INITIAL CONC. (UG/ML) 5.40E-02

LAYER 3:
SUBLAYER 1
INITIAL CONC. (UG/ML) 5.20E-02

LAYER 4:
SUBLAYER 1 2 3 4 5 6 7 8 9 10
INITIAL CONC. (UG/ML) 1.90E-02 1.90E-02 1.90E-02 1.90E-02 1.90E-02 1.90E-02 1.90E-02 1.90E-02 1.90E-02
1.90E-02

-- POLLUTANT INPUT PARAMETERS --

OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG
SEP

POL. INP-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

VOLATILIZATION MULT.-1 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00
SURFACE RUNOFF MULT. 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
POL. IN RAIN (FRAC-SL) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-2 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00

POL. INP-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-3 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00

POL. INP-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-L 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00
1

YEAR - 2 MONTHLY INPUT PARAMETERS
======== ==========

-- CLIMATIC INPUT PARAMETERS ARE SAME AS LAST YEAR

-- POLLUTANT INPUT PARAMETERS --

OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP

POL. INP-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-1 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SURFACE RUNOFF MULT. 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
POL. IN RAIN (FRAC-SL) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-2 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-3 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-L 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
1

YEAR - 3 MONTHLY INPUT PARAMETERS
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– CLIMATIC INPUT PARAMETERS ARE SAME AS LAST YEAR

-- POLLUTANT INPUT PARAMETERS ARE SAME AS LAST YEAR

1

YEAR - 4 MONTHLY INPUT PARAMETERS

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YEAR - 4 MONTHLY RESULTS (OUTPUT)
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-- HYDROLOGIC CYCLE COMPONENTS --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MOIS. IN L1 (%)	7.405	8.161	9.001	10.849	10.905	10.485	9.673	9.001	8.553	8.217	7.965	7.685
MOIS. BELOW L1 (%)	7.405	8.161	9.001	10.849	10.905	10.485	9.673	9.001	8.553	8.217	7.965	7.685
PRECIPATION (CM)	0.577	3.988	4.381	8.036	6.021	4.888	2.542	0.512	0.090	0.051	0.566	0.685
NET INFILT. (CM)	0.490	3.313	3.723	6.362	4.615	4.066	2.266	0.407	0.068	0.044	0.094	0.392
EVAPOTRANS. (CM)	1.064	2.241	2.405	3.094	4.046	4.331	3.306	1.349	0.720	0.570	0.535	0.913
MOIS. RETEN (CM)	-0.427	1.152	1.280	2.815	0.085	-0.640	-1.237	-1.024	-0.682	-0.512	-0.384	-0.427
SUR. RUNOFF (CM)	0.087	0.675	0.658	1.675	1.406	0.822	0.276	0.105	0.022	0.000	0.472	0.293
GRW. RUNOFF (CM)	-0.148	-0.080	0.038	0.453	0.483	0.375	0.196	0.082	0.030	-0.014	-0.057	-0.095
YIELD (CM)	-0.061	0.595	0.696	2.128	1.889	1.197	0.472	0.187	0.052	-0.007	0.415	0.199
PAU/MPA (GZU)	1.088	0.992	0.998	0.992	1.000	0.998	1.001	1.138	1.002	1.705	2.177	1.008
PA/MPA (GZ)	1.088	0.992	0.998	0.992	1.000	0.998	1.001	1.138	1.002	1.705	2.177	1.008

1 -- POLLUTANT MASS INPUT TO COLUMN (UG) --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
PRECIP.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD UPPER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD ZONE 2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD ZONE 3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD LOWER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TOTAL INPUT 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00

0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

UPPER SOIL ZONE:

SUBLAYER 1

IN SOIL MOI 5.087E-02 5.607E-02 5.300E-02 5.324E-02 5.351E-02 5.145E-02 4.747E-02 4.417E-02 4.197E-02 4.032E-02 3.909E-02 3.771E-02

ADS ON SOIL 1.199E-01 1.199E-01 1.028E-01 8.568E-02 8.568E-02 8.568E-02 8.568E-02 8.568E-02 8.568E-02 8.568E-02 8.568E-02 8.568E-02

IN SOIL AIR 5.525E-02 5.390E-02 4.468E-02 3.404E-02 3.386E-02 3.463E-02 3.555E-02 3.656E-02 3.711E-02 3.718E-02 3.763E-02 3.829E-02

SOIL ZONE 2:

SUBLAYER 1

IN SOIL MOI 5.661E-02 5.199E-02 5.734E-02 5.529E-02 5.557E-02 5.343E-02 4.929E-02 4.587E-02 4.359E-02 4.187E-02 4.059E-02 3.916E-02

ADS ON SOIL 1.335E-02 1.112E-02 1.112E-02 8.898E-03 8.898E-03 8.898E-03 8.898E-03 8.898E-03 8.898E-03 8.898E-03 8.898E-03 8.898E-03

IN SOIL AIR 6.148E-02 4.998E-02 4.833E-02 3.535E-02 3.517E-02 3.597E-02 3.692E-02 3.797E-02 3.854E-02 3.861E-02 3.908E-02 3.976E-02

SOIL ZONE 3:

SUBLAYER 1

IN SOIL MOI 1.626E+07 1.734E+07 1.848E+07 2.084E+07 2.067E+07 1.986E+07 1.868E+07 1.771E+07 1.706E+07 1.662E+07 1.622E+07 1.573E+07

ADS ON SOIL 1.534E+07 1.484E+07 1.434E+07 1.342E+07 1.324E+07 1.323E+07 1.349E+07 1.374E+07 1.393E+07 1.413E+07 1.422E+07 1.430E+07

IN SOIL AIR 1.766E+07 1.667E+07 1.558E+07 1.333E+07 1.308E+07 1.337E+07 1.399E+07 1.466E+07 1.509E+07 1.533E+07 1.562E+07 1.597E+07

LOWER SOIL ZONE:

SUBLAYER 1

IN SOIL MOI 1.258E+06 1.395E+06 1.547E+06 1.861E+06 1.906E+06 1.875E+06 1.776E+06 1.678E+06 1.610E+06 1.562E+06 1.523E+06 1.478E+06

ADS ON SOIL 2.966E+06 2.985E+06 3.001E+06 2.994E+06 3.052E+06 3.123E+06 3.205E+06 3.254E+06 3.287E+06 3.320E+06 3.338E+06 3.358E+06

IN SOIL AIR 1.366E+06 1.342E+06 1.304E+06 1.189E+06 1.206E+06 1.262E+06 1.330E+06 1.389E+06 1.424E+06 1.441E+06 1.466E+06 1.500E+06

SUBLAYER 2

IN SOIL MOI 7.384E+05 8.328E+05 9.417E+05 1.178E+06 1.245E+06 1.256E+06 1.206E+06 1.143E+06 1.098E+06 1.065E+06 1.039E+06 1.011E+06
ADS ON SOIL 1.741E+06 1.782E+06 1.827E+06 1.896E+06 1.993E+06 2.092E+06 2.177E+06 2.217E+06 2.241E+06 2.264E+06 2.278E+06 2.297E+06
IN SOIL AIR 8.019E+05 8.007E+05 7.938E+05 7.532E+05 7.876E+05 8.455E+05 9.032E+05 9.460E+05 9.707E+05 9.824E+05 1.000E+06 1.027E+06

SUBLAYER 3

IN SOIL MOI 4.954E+05 5.520E+05 6.175E+05 7.629E+05 8.027E+05 8.097E+05 7.781E+05 7.376E+05 7.086E+05 6.878E+05 6.708E+05 6.529E+05
ADS ON SOIL 1.168E+06 1.181E+06 1.198E+06 1.228E+06 1.285E+06 1.348E+06 1.404E+06 1.431E+06 1.447E+06 1.461E+06 1.470E+06 1.483E+06
IN SOIL AIR 5.381E+05 5.307E+05 5.205E+05 4.878E+05 5.080E+05 5.450E+05 5.827E+05 6.106E+05 6.266E+05 6.342E+05 6.458E+05 6.629E+05

SUBLAYER 4

IN SOIL MOI 4.288E+05 4.703E+05 5.170E+05 6.186E+05 6.358E+05 6.293E+05 5.987E+05 5.663E+05 5.438E+05 5.277E+05 5.144E+05 4.998E+05
ADS ON SOIL 1.011E+06 1.006E+06 1.003E+06 9.955E+05 1.018E+06 1.048E+06 1.081E+06 1.098E+06 1.110E+06 1.121E+06 1.128E+06 1.135E+06
IN SOIL AIR 4.658E+05 4.522E+05 4.358E+05 3.955E+05 4.024E+05 4.236E+05 4.484E+05 4.688E+05 4.809E+05 4.866E+05 4.952E+05 5.074E+05

SUBLAYER 5

IN SOIL MOI 4.166E+05 4.545E+05 4.963E+05 5.854E+05 5.941E+05 5.811E+05 5.490E+05 5.185E+05 4.977E+05 4.829E+05 4.705E+05 4.566E+05
ADS ON SOIL 9.823E+05 9.723E+05 9.627E+05 9.421E+05 9.512E+05 9.677E+05 9.910E+05 1.006E+06 1.016E+06 1.026E+06 1.031E+06 1.037E+06
IN SOIL AIR 4.525E+05 4.369E+05 4.184E+05 3.742E+05 3.760E+05 3.912E+05 4.112E+05 4.292E+05 4.401E+05 4.453E+05 4.530E+05 4.635E+05

SUBLAYER 6

IN SOIL MOI 4.150E+05 4.523E+05 4.933E+05 5.800E+05 5.867E+05 5.720E+05 5.393E+05 5.091E+05 4.886E+05 4.740E+05 4.618E+05 4.480E+05
ADS ON SOIL 9.785E+05 9.676E+05 9.569E+05 9.334E+05 9.394E+05 9.525E+05 9.735E+05 9.875E+05 9.974E+05 1.007E+06 1.012E+06 1.018E+06
IN SOIL AIR 4.507E+05 4.348E+05 4.158E+05 3.708E+05 3.713E+05 3.850E+05 4.039E+05 4.214E+05 4.321E+05 4.371E+05 4.447E+05 4.548E+05

SUBLAYER 7

IN SOIL MOI 4.149E+05 4.521E+05 4.930E+05 5.794E+05 5.858E+05 5.708E+05 5.379E+05 5.077E+05 4.873E+05 4.727E+05 4.606E+05 4.467E+05
ADS ON SOIL 9.781E+05 9.671E+05 9.563E+05 9.324E+05 9.379E+05 9.505E+05 9.710E+05 9.848E+05 9.947E+05 1.004E+06 1.010E+06 1.015E+06
IN SOIL AIR 4.506E+05 4.346E+05 4.156E+05 3.704E+05 3.707E+05 3.842E+05 4.029E+05 4.203E+05 4.309E+05 4.359E+05 4.435E+05 4.535E+05

SUBLAYER 8

IN SOIL MOI 4.148E+05 4.520E+05 4.930E+05 5.793E+05 5.857E+05 5.706E+05 5.378E+05 5.076E+05 4.872E+05 4.726E+05 4.604E+05 4.466E+05
ADS ON SOIL 9.781E+05 9.671E+05 9.562E+05 9.323E+05 9.377E+05 9.502E+05 9.707E+05 9.846E+05 9.945E+05 1.004E+06 1.009E+06 1.015E+06
IN SOIL AIR 4.505E+05 4.346E+05 4.155E+05 3.704E+05 3.706E+05 3.841E+05 4.028E+05 4.202E+05 4.308E+05 4.358E+05 4.433E+05 4.534E+05

SUBLAYER 9

IN SOIL MOI 4.148E+05 4.520E+05 4.930E+05 5.793E+05 5.857E+05 5.706E+05 5.378E+05 5.076E+05 4.872E+05 4.726E+05 4.604E+05 4.466E+05
ADS ON SOIL 9.781E+05 9.671E+05 9.562E+05 9.323E+05 9.377E+05 9.502E+05 9.707E+05 9.845E+05 9.944E+05 1.004E+06 1.009E+06 1.015E+06
IN SOIL AIR 4.505E+05 4.346E+05 4.155E+05 3.704E+05 3.706E+05 3.841E+05 4.028E+05 4.202E+05 4.308E+05 4.358E+05 4.433E+05 4.534E+05

SUBLAYER 10

IN SOIL MOI 4.743E+05 5.165E+05 5.637E+05 6.732E+05 6.926E+05 6.762E+05 6.360E+05 5.999E+05 5.756E+05 5.584E+05 5.440E+05 5.276E+05
ADS ON SOIL 1.118E+06 1.105E+06 1.093E+06 1.083E+06 1.109E+06 1.126E+06 1.148E+06 1.164E+06 1.175E+06 1.187E+06 1.193E+06 1.199E+06
IN SOIL AIR 5.151E+05 4.966E+05 4.752E+05 4.304E+05 4.383E+05 4.551E+05 4.764E+05 4.966E+05 5.090E+05 5.149E+05 5.238E+05 5.356E+05
GWR. RUNOFF 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 2.519E+04 2.016E+04 8.541E+03 3.165E+03 0.000E+00 0.000E+00 0.000E+00

-- POLLUTANT CONCENTRATIONS (UG/ML) OR (UG/G) -- NOTE: IF CONCENTRATIONS ARE ZERO FOR EACH MONTH, THEY ARE NOT PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

MOISTURE 7.000E-10 7.000E-10 6.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10 5.000E-10
%SOLUBILITY 6.364E-11 6.364E-11 5.455E-11 4.545E-11 4.545E-11 4.545E-11 4.545E-11 4.545E-11 4.545E-11 4.545E-11 4.545E-11 4.545E-11
ADSORBED 8.203E-11 8.203E-11 7.031E-11 5.859E-11 5.859E-11 5.859E-11 5.859E-11 5.859E-11 5.859E-11 5.859E-11 5.859E-11 5.859E-11
SOIL AIR 2.734E-10 2.769E-10 2.396E-10 2.022E-10 2.018E-10 2.015E-10 1.977E-10 1.961E-10 1.945E-10 1.915E-10 1.914E-10 1.920E-10

SOIL ZONE 2:

SUBLAYER 1

MOISTURE 6.000E-09 5.000E-09 5.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09 4.000E-09

%SOLUBILITY 5.455E-10 4.545E-10 4.545E-10 3.636E-10 3.636E-10 3.636E-10 3.636E-10 3.636E-10 3.636E-10 3.636E-10 3.636E-10 3.636E-10
ADSORBED 7.031E-11 5.859E-11 5.859E-11 4.687E-11 4.687E-11 4.687E-11 4.687E-11 4.687E-11 4.687E-11 4.687E-11 4.687E-11 4.687E-11
SOIL AIR 2.343E-09 1.978E-09 1.997E-09 1.618E-09 1.615E-09 1.612E-09 1.581E-09 1.569E-09 1.556E-09 1.532E-09 1.531E-09 1.536E-09

SOIL ZONE 3:

SUBLAYER 1

MOISTURE 3.961E-01 3.832E-01 3.703E-01 3.465E-01 3.418E-01 3.417E-01 3.484E-01 3.548E-01 3.599E-01 3.649E-01 3.674E-01 3.693E-01
%SOLUBILITY 3.601E-02 3.483E-02 3.366E-02 3.150E-02 3.108E-02 3.106E-02 3.167E-02 3.226E-02 3.272E-02 3.317E-02 3.340E-02 3.357E-02
ADSORBED 1.856E-02 1.796E-02 1.736E-02 1.624E-02 1.602E-02 1.602E-02 1.633E-02 1.663E-02 1.687E-02 1.710E-02 1.722E-02 1.731E-02
SOIL AIR 1.547E-01 1.515E-01 1.479E-01 1.401E-01 1.380E-01 1.377E-01 1.377E-01 1.392E-01 1.400E-01 1.398E-01 1.406E-01 1.418E-01

LOWER SOIL ZONE:

SUBLAYER 1

MOISTURE 1.896E-01 1.908E-01 1.919E-01 1.914E-01 1.951E-01 1.996E-01 2.049E-01 2.080E-01 2.101E-01 2.122E-01 2.133E-01 2.146E-01
%SOLUBILITY 1.723E-02 1.735E-02 1.744E-02 1.740E-02 1.774E-02 1.815E-02 1.863E-02 1.891E-02 1.910E-02 1.929E-02 1.939E-02 1.951E-02
ADSORBED 2.221E-02 2.236E-02 2.248E-02 2.243E-02 2.286E-02 2.339E-02 2.401E-02 2.437E-02 2.462E-02 2.487E-02 2.500E-02 2.515E-02
SOIL AIR 7.403E-02 7.547E-02 7.662E-02 7.740E-02 7.877E-02 8.043E-02 8.099E-02 8.158E-02 8.173E-02 8.128E-02 8.166E-02 8.243E-02

SUBLAYER 2

MOISTURE 1.113E-01 1.139E-01 1.168E-01 1.212E-01 1.274E-01 1.337E-01 1.391E-01 1.417E-01 1.432E-01 1.447E-01 1.456E-01 1.468E-01
%SOLUBILITY 1.012E-02 1.035E-02 1.062E-02 1.102E-02 1.158E-02 1.215E-02 1.265E-02 1.288E-02 1.302E-02 1.315E-02 1.324E-02 1.335E-02
ADSORBED 1.304E-02 1.335E-02 1.368E-02 1.420E-02 1.493E-02 1.567E-02 1.630E-02 1.660E-02 1.679E-02 1.696E-02 1.706E-02 1.721E-02
SOIL AIR 4.346E-02 4.504E-02 4.663E-02 4.902E-02 5.142E-02 5.387E-02 5.500E-02 5.557E-02 5.571E-02 5.542E-02 5.573E-02 5.640E-02

SUBLAYER 3

MOISTURE 7.467E-02 7.549E-02 7.656E-02 7.848E-02 8.215E-02 8.619E-02 8.977E-02 9.145E-02 9.247E-02 9.341E-02 9.399E-02 9.482E-02
%SOLUBILITY 6.788E-03 6.863E-03 6.960E-03 7.135E-03 7.468E-03 7.835E-03 8.161E-03 8.314E-03 8.406E-03 8.492E-03 8.545E-03 8.620E-03
ADSORBED 8.750E-03 8.846E-03 8.972E-03 9.197E-03 9.627E-03 1.010E-02 1.052E-02 1.072E-02 1.084E-02 1.095E-02 1.101E-02 1.111E-02
SOIL AIR 2.916E-02 2.986E-02 3.058E-02 3.174E-02 3.316E-02 3.473E-02 3.549E-02 3.587E-02 3.596E-02 3.578E-02 3.598E-02 3.642E-02

SUBLAYER 4

MOISTURE 6.463E-02 6.432E-02 6.410E-02 6.364E-02 6.507E-02 6.699E-02 6.907E-02 7.022E-02 7.096E-02 7.167E-02 7.207E-02 7.258E-02
%SOLUBILITY 5.876E-03 5.847E-03 5.827E-03 5.785E-03 5.916E-03 6.090E-03 6.279E-03 6.383E-03 6.451E-03 6.515E-03 6.552E-03 6.598E-03
ADSORBED 7.574E-03 7.537E-03 7.512E-03 7.457E-03 7.625E-03 7.849E-03 8.094E-03 8.228E-03 8.315E-03 8.398E-03 8.446E-03 8.505E-03
SOIL AIR 2.524E-02 2.544E-02 2.560E-02 2.574E-02 2.627E-02 2.699E-02 2.730E-02 2.754E-02 2.760E-02 2.745E-02 2.759E-02 2.787E-02

SUBLAYER 5

MOISTURE 6.279E-02 6.215E-02 6.154E-02 6.022E-02 6.080E-02 6.186E-02 6.335E-02 6.429E-02 6.495E-02 6.559E-02 6.593E-02 6.631E-02
%SOLUBILITY 5.708E-03 5.650E-03 5.594E-03 5.474E-03 5.527E-03 5.623E-03 5.759E-03 5.845E-03 5.904E-03 5.962E-03 5.994E-03 6.028E-03
ADSORBED 7.358E-03 7.283E-03 7.211E-03 7.056E-03 7.125E-03 7.248E-03 7.423E-03 7.533E-03 7.611E-03 7.685E-03 7.726E-03 7.770E-03
SOIL AIR 2.452E-02 2.458E-02 2.458E-02 2.435E-02 2.454E-02 2.493E-02 2.504E-02 2.521E-02 2.526E-02 2.512E-02 2.524E-02 2.547E-02

SUBLAYER 6

MOISTURE 6.255E-02 6.185E-02 6.117E-02 5.966E-02 6.005E-02 6.089E-02 6.223E-02 6.312E-02 6.376E-02 6.438E-02 6.471E-02 6.506E-02
%SOLUBILITY 5.686E-03 5.623E-03 5.561E-03 5.424E-03 5.459E-03 5.535E-03 5.657E-03 5.738E-03 5.796E-03 5.853E-03 5.883E-03 5.914E-03
ADSORBED 7.329E-03 7.248E-03 7.168E-03 6.991E-03 7.036E-03 7.135E-03 7.292E-03 7.397E-03 7.471E-03 7.544E-03 7.583E-03 7.623E-03
SOIL AIR 2.443E-02 2.446E-02 2.443E-02 2.413E-02 2.424E-02 2.454E-02 2.460E-02 2.476E-02 2.480E-02 2.466E-02 2.477E-02 2.499E-02

SUBLAYER 7

MOISTURE 6.252E-02 6.182E-02 6.113E-02 5.960E-02 5.995E-02 6.076E-02 6.207E-02 6.295E-02 6.359E-02 6.421E-02 6.454E-02 6.488E-02
%SOLUBILITY 5.684E-03 5.620E-03 5.557E-03 5.418E-03 5.450E-03 5.523E-03 5.642E-03 5.723E-03 5.781E-03 5.837E-03 5.867E-03 5.898E-03
ADSORBED 7.327E-03 7.244E-03 7.163E-03 6.984E-03 7.025E-03 7.119E-03 7.273E-03 7.377E-03 7.451E-03 7.524E-03 7.562E-03 7.602E-03
SOIL AIR 2.442E-02 2.445E-02 2.441E-02 2.410E-02 2.420E-02 2.448E-02 2.454E-02 2.469E-02 2.473E-02 2.459E-02 2.470E-02 2.492E-02

SUBLAYER 8

MOISTURE 6.252E-02 6.182E-02 6.112E-02 5.959E-02 5.994E-02 6.074E-02 6.205E-02 6.293E-02 6.357E-02 6.419E-02 6.452E-02 6.486E-02
%SOLUBILITY 5.684E-03 5.620E-03 5.557E-03 5.418E-03 5.449E-03 5.522E-03 5.641E-03 5.721E-03 5.779E-03 5.835E-03 5.865E-03 5.896E-03
ADSORBED 7.326E-03 7.244E-03 7.163E-03 6.983E-03 7.024E-03 7.118E-03 7.271E-03 7.375E-03 7.449E-03 7.522E-03 7.560E-03 7.600E-03

SOIL AIR 2.442E-02 2.445E-02 2.441E-02 2.410E-02 2.420E-02 2.448E-02 2.453E-02 2.468E-02 2.472E-02 2.459E-02 2.470E-02 2.491E-02

SUBLAYER 9

MOISTURE 6.252E-02 6.182E-02 6.112E-02 5.959E-02 5.994E-02 6.074E-02 6.205E-02 6.293E-02 6.357E-02 6.419E-02 6.452E-02 6.486E-02
%SOLUBILITY 5.684E-03 5.620E-03 5.557E-03 5.418E-03 5.449E-03 5.522E-03 5.641E-03 5.721E-03 5.779E-03 5.835E-03 5.865E-03 5.896E-03
ADSORBED 7.326E-03 7.244E-03 7.163E-03 6.983E-03 7.024E-03 7.118E-03 7.271E-03 7.375E-03 7.449E-03 7.522E-03 7.560E-03 7.600E-03
SOIL AIR 2.442E-02 2.445E-02 2.441E-02 2.410E-02 2.420E-02 2.448E-02 2.453E-02 2.468E-02 2.472E-02 2.459E-02 2.470E-02 2.491E-02

SUBLAYER 10

MOISTURE 7.149E-02 7.063E-02 6.990E-02 6.926E-02 7.088E-02 7.197E-02 7.338E-02 7.438E-02 7.511E-02 7.585E-02 7.623E-02 7.662E-02
%SOLUBILITY 6.499E-03 6.421E-03 6.354E-03 6.296E-03 6.444E-03 6.543E-03 6.671E-03 6.762E-03 6.828E-03 6.895E-03 6.930E-03 6.966E-03
ADSORBED 8.377E-03 8.277E-03 8.190E-03 8.116E-03 8.306E-03 8.434E-03 8.599E-03 8.716E-03 8.802E-03 8.888E-03 8.933E-03 8.979E-03
SOIL AIR 2.792E-02 2.794E-02 2.791E-02 2.801E-02 2.861E-02 2.900E-02 2.901E-02 2.917E-02 2.921E-02 2.905E-02 2.918E-02 2.943E-02

POL DEP CM 1.819E+03 1.820E+03 1.822E+03 1.825E+03 1.827E+03 1.828E+03 1.828E+03 1.828E+03 1.828E+03 1.828E+03 1.828E+03 1.828E+03

-- POLLUTANT CONCENTRATION IN GROUNDWATER (UG/ML) --

GWR. CONC. 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 3.969E-05 2.118E-05 8.968E-06 3.323E-06 0.000E+00 0.000E+00 0.000E+00
1 YEAR - 4 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575

TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 5.706E+04

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 5.417E-10
ADSORBED SOIL (UG/G) 6.347E-11
SOIL AIR (UG/ML) 2.132E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.333E-09
ADSORBED SOIL (UG/G) 5.078E-11
SOIL AIR (UG/ML) 1.706E-09

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.620E-01
ADSORBED SOIL (UG/G) 1.697E-02
SOIL AIR (UG/ML) 1.424E-01

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.018E-01
ADSORBED SOIL (UG/G) 2.365E-02
SOIL AIR (UG/ML) 7.937E-02

SUBLAYER 2

SOIL MOISTURE (UG/ML) 1.321E-0I
ADSORBED SOIL (UG/G) 1.548E-02
SOIL AIR (UG/ML) 5.194E-02

SUBLAYER 3

SOIL MOISTURE (UG/ML) 8.579E-02
ADSORBED SOIL (UG/G) 1.005E-02
SOIL AIR (UG/ML) 3.373E-02

SUBLAYER 4

SOIL MOISTURE (UG/ML) 6.794E-02
ADSORBED SOIL (UG/G) 7.962E-03
SOIL AIR (UG/ML) 2.672E-02

SUBLAYER 5

SOIL MOISTURE (UG/ML) 6.331E-02
ADSORBED SOIL (UG/G) 7.419E-03
SOIL AIR (UG/ML) 2.490E-02

SUBLAYER 6

SOIL MOISTURE (UG/ML) 6.245E-02
ADSORBED SOIL (UG/G) 7.318E-03
SOIL AIR (UG/ML) 2.457E-02

SUBLAYER 7

SOIL MOISTURE (UG/ML) 6.233E-02
ADSORBED SOIL (UG/G) 7.304E-03
SOIL AIR (UG/ML) 2.452E-02

SUBLAYER 8

SOIL MOISTURE (UG/ML) 6.232E-02
ADSORBED SOIL (UG/G) 7.303E-03
SOIL AIR (UG/ML) 2.451E-02

SUBLAYER 9

SOIL MOISTURE (UG/ML) 6.232E-02
ADSORBED SOIL (UG/G) 7.303E-03
SOIL AIR (UG/ML) 2.451E-02

SUBLAYER 10

SOIL MOISTURE (UG/ML) 7.298E-02
ADSORBED SOIL (UG/G) 8.551E-03
SOIL AIR (UG/ML) 2.870E-02

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 6.097E-06

1 YEAR - 10 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 1.941E+05

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 3.515E-11
SOIL AIR (UG/ML) 1.181E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.000E-09
ADSORBED SOIL (UG/G) 2.344E-11
SOIL AIR (UG/ML) 7.871E-10

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.382E-01
ADSORBED SOIL (UG/G) 1.116E-02
SOIL AIR (UG/ML) 9.370E-02

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.920E-01
ADSORBED SOIL (UG/G) 2.250E-02
SOIL AIR (UG/ML) 7.555E-02

SUBLAYER 2

SOIL MOISTURE (UG/ML) 2.185E-01
ADSORBED SOIL (UG/G) 2.560E-02
SOIL AIR (UG/ML) 8.595E-02

SUBLAYER 3

SOIL MOISTURE (UG/ML) 2.127E-01
ADSORBED SOIL (UG/G) 2.492E-02
SOIL AIR (UG/ML) 8.365E-02

SUBLAYER 4

SOIL MOISTURE (UG/ML) 1.769E-01
ADSORBED SOIL (UG/G) 2.073E-02
SOIL AIR (UG/ML) 6.956E-02

SUBLAYER 5

SOIL MOISTURE (UG/ML) 1.335E-01
ADSORBED SOIL (UG/G) 1.564E-02
SOIL AIR (UG/ML) 5.249E-02

SUBLAYER 6

SOIL MOISTURE (UG/ML) 1.019E-01
ADSORBED SOIL (UG/G) 1.194E-02
SOIL AIR (UG/ML) 4.009E-02

SUBLAYER 7

SOIL MOISTURE (UG/ML) 8.614E-02
ADSORBED SOIL (UG/G) 1.009E-02
SOIL AIR (UG/ML) 3.388E-02

SUBLAYER 8

SOIL MOISTURE (UG/ML) 8.047E-02
ADSORBED SOIL (UG/G) 9.429E-03
SOIL AIR (UG/ML) 3.165E-02

SUBLAYER 9

SOIL MOISTURE (UG/ML) 7.900E-02
ADSORBED SOIL (UG/G) 9.258E-03

SOIL AIR (UG/ML) 3.108E-02

SUBLAYER 10

SOIL MOISTURE (UG/ML) 8.627E-02
ADSORBED SOIL (UG/G) 1.011E-02
SOIL AIR (UG/ML) 3.394E-02

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 1.701E-05

1 YEAR - 50 ANNUAL SUMMARY REPORT

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– TOTAL INPUTS (UG) –

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763

0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 1.164E+06

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 3.515E-11
SOIL AIR (UG/ML) 1.181E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.000E-09
ADSORBED SOIL (UG/G) 2.344E-11
SOIL AIR (UG/ML) 7.871E-10

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.461E-02
ADSORBED SOIL (UG/G) 6.847E-04
SOIL AIR (UG/ML) 5.746E-03

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.227E-02
ADSORBED SOIL (UG/G) 1.438E-03
SOIL AIR (UG/ML) 4.828E-03

SUBLAYER 2

SOIL MOISTURE (UG/ML) 1.649E-02
ADSORBED SOIL (UG/G) 1.933E-03
SOIL AIR (UG/ML) 6.490E-03

SUBLAYER 3

SOIL MOISTURE (UG/ML) 2.297E-02
ADSORBED SOIL (UG/G) 2.691E-03
SOIL AIR (UG/ML) 9.037E-03

SUBLAYER 4

SOIL MOISTURE (UG/ML) 3.344E-02
ADSORBED SOIL (UG/G) 3.919E-03
SOIL AIR (UG/ML) 1.316E-02

SUBLAYER 5

SOIL MOISTURE (UG/ML) 5.149E-02
ADSORBED SOIL (UG/G) 6.034E-03
SOIL AIR (UG/ML) 2.026E-02

SUBLAYER 6

SOIL MOISTURE (UG/ML) 8.443E-02
ADSORBED SOIL (UG/G) 9.894E-03
SOIL AIR (UG/ML) 3.322E-02

SUBLAYER 7

SOIL MOISTURE (UG/ML) 1.454E-01
ADSORBED SOIL (UG/G) 1.704E-02
SOIL AIR (UG/ML) 5.721E-02

SUBLAYER 8

SOIL MOISTURE (UG/ML) 2.497E-01
ADSORBED SOIL (UG/G) 2.926E-02
SOIL AIR (UG/ML) 9.825E-02

SUBLAYER 9

SOIL MOISTURE (UG/ML) 3.927E-01
ADSORBED SOIL (UG/G) 4.601E-02

SOIL AIR (UG/ML) 1.545E-01

SUBLAYER 10

SOIL MOISTURE (UG/ML) 5.163E-01
ADSORBED SOIL (UG/G) 6.050E-02
SOIL AIR (UG/ML) 2.031E-01

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 1.018E-04

1 YEAR - 55 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE I (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE I (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 1.200E+06

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 3.515E-11
SOIL AIR (UG/ML) 1.181E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.000E-09
ADSORBED SOIL (UG/G) 2.344E-11
SOIL AIR (UG/ML) 7.871E-10

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.030E-02
ADSORBED SOIL (UG/G) 4.828E-04
SOIL AIR (UG/ML) 4.052E-03

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 8.655E-03
ADSORBED SOIL (UG/G) 1.014E-03
SOIL AIR (UG/ML) 3.405E-03

SUBLAYER 2

SOIL MOISTURE (UG/ML) 1.163E-02
ADSORBED SOIL (UG/G) 1.363E-03
SOIL AIR (UG/ML) 4.577E-03

SUBLAYER 3

SOIL MOISTURE (UG/ML) 1.620E-02
ADSORBED SOIL (UG/G) 1.898E-03
SOIL AIR (UG/ML) 6.373E-03

SUBLAYER 4

SOIL MOISTURE (UG/ML) 2.359E-02
ADSORBED SOIL (UG/G) 2.765E-03
SOIL AIR (UG/ML) 9.284E-03

SUBLAYER 5

SOIL MOISTURE (UG/ML) 3.642E-02
ADSORBED SOIL (UG/G) 4.268E-03
SOIL AIR (UG/ML) 1.433E-02

SUBLAYER 6

SOIL MOISTURE (UG/ML) 6.040E-02
ADSORBED SOIL (UG/G) 7.078E-03
SOIL AIR (UG/ML) 2.377E-02

SUBLAYER 7

SOIL MOISTURE (UG/ML) 1.077E-01
ADSORBED SOIL (UG/G) 1.262E-02
SOIL AIR (UG/ML) 4.237E-02

SUBLAYER 8

SOIL MOISTURE (UG/ML) 1.993E-01
ADSORBED SOIL (UG/G) 2.335E-02
SOIL AIR (UG/ML) 7.840E-02

SUBLAYER 9

SOIL MOISTURE (UG/ML) 3.518E-01
ADSORBED SOIL (UG/G) 4.122E-02

SOIL AIR (UG/ML) 1.384E-01

SUBLAYER 10

SOIL MOISTURE (UG/ML) 5.319E-01
ADSORBED SOIL (UG/G) 6.233E-02
SOIL AIR (UG/ML) 2.093E-01

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 1.049E-04

1 YEAR - 100 ANNUAL SUMMARY REPORT

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763

0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 3.296E+05

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 3.515E-11
SOIL AIR (UG/ML) 1.181E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.000E-09
ADSORBED SOIL (UG/G) 2.344E-11
SOIL AIR (UG/ML) 7.871E-10

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.463E-04
ADSORBED SOIL (UG/G) 2.092E-05
SOIL AIR (UG/ML) 1.756E-04

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.749E-04
ADSORBED SOIL (UG/G) 4.393E-05
SOIL AIR (UG/ML) 1.475E-04

SUBLAYER 2

SOIL MOISTURE (UG/ML) 5.040E-04
ADSORBED SOIL (UG/G) 5.905E-05
SOIL AIR (UG/ML) 1.983E-04

SUBLAYER 3

SOIL MOISTURE (UG/ML) 7.017E-04
ADSORBED SOIL (UG/G) 8.223E-05
SOIL AIR (UG/ML) 2.761E-04

SUBLAYER 4

SOIL MOISTURE (UG/ML) 1.022E-03
ADSORBED SOIL (UG/G) 1.198E-04
SOIL AIR (UG/ML) 4.022E-04

SUBLAYER 5

SOIL MOISTURE (UG/ML) 1.580E-03
ADSORBED SOIL (UG/G) 1.852E-04
SOIL AIR (UG/ML) 6.219E-04

SUBLAYER 6

SOIL MOISTURE (UG/ML) 2.653E-03
ADSORBED SOIL (UG/G) 3.109E-04
SOIL AIR (UG/ML) 1.044E-03

SUBLAYER 7

SOIL MOISTURE (UG/ML) 5.028E-03
ADSORBED SOIL (UG/G) 5.892E-04
SOIL AIR (UG/ML) 1.978E-03

SUBLAYER 8

SOIL MOISTURE (UG/ML) 1.154E-02
ADSORBED SOIL (UG/G) 1.352E-03
SOIL AIR (UG/ML) 4.540E-03

SUBLAYER 9

SOIL MOISTURE (UG/ML) 3.543E-02
ADSORBED SOIL (UG/G) 4.152E-03

SOIL AIR (UG/ML) 1.394E-02

SUBLAYER 10

SOIL MOISTURE (UG/ML) 1.454E-01
ADSORBED SOIL (UG/G) 1.704E-02
SOIL AIR (UG/ML) 5.721E-02

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 2.867E-05

1 YEAR - 150 ANNUAL SUMMARY REPORT

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 2.168E+04

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 3.515E-11
SOIL AIR (UG/ML) 1.181E-10

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.000E-09
ADSORBED SOIL (UG/G) 2.344E-11
SOIL AIR (UG/ML) 7.871E-10

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.367E-05
ADSORBED SOIL (UG/G) 6.408E-07
SOIL AIR (UG/ML) 5.378E-06

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.148E-05
ADSORBED SOIL (UG/G) 1.345E-06
SOIL AIR (UG/ML) 4.516E-06

SUBLAYER 2

SOIL MOISTURE (UG/ML) 1.544E-05
ADSORBED SOIL (UG/G) 1.810E-06
SOIL AIR (UG/ML) 6.076E-06

SUBLAYER 3

SOIL MOISTURE (UG/ML) 2.163E-05
ADSORBED SOIL (UG/G) 2.534E-06
SOIL AIR (UG/ML) 8.509E-06

SUBLAYER 4

SOIL MOISTURE (UG/ML) 3.147E-05
ADSORBED SOIL (UG/G) 3.688E-06
SOIL AIR (UG/ML) 1.238E-05

SUBLAYER 5

SOIL MOISTURE (UG/ML) 4.853E-05
ADSORBED SOIL (UG/G) 5.686E-06
SOIL AIR (UG/ML) 1.909E-05

SUBLAYER 6

SOIL MOISTURE (UG/ML) 8.131E-05
ADSORBED SOIL (UG/G) 9.527E-06
SOIL AIR (UG/ML) 3.199E-05

SUBLAYER 7

SOIL MOISTURE (UG/ML) 1.540E-04
ADSORBED SOIL (UG/G) 1.805E-05
SOIL AIR (UG/ML) 6.060E-05

SUBLAYER 8

SOIL MOISTURE (UG/ML) 3.571E-04
ADSORBED SOIL (UG/G) 4.185E-05
SOIL AIR (UG/ML) 1.405E-04

SUBLAYER 9

SOIL MOISTURE (UG/ML) 1.231E-03
ADSORBED SOIL (UG/G) 1.443E-04

SOIL AIR (UG/ML) 4.846E-04

SUBLAYER 10

SOIL MOISTURE (UG/ML) 9.551E-03
ADSORBED SOIL (UG/G) 1.119E-03
SOIL AIR (UG/ML) 3.758E-03

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 1.883E-06

**********EXECUTION COMPLETED**********

APPENDIX E

SESOIL MODELING OUTPUT - cis-1,2-DCE

Cis-1-2, DCE FINAL

```
*****************************************************************************************************
******
 *****                                                                  *****
 ***** SESOIL-84 :  SEASONAL CYCLES OF WATER, SEDIMENT, AND POLLUTANTS IN SOIL
ENVIRONMENTS        *****
 *****                                                                  *****
 ***** DEVELOPERS:  M. BONAZOUNTAS,ARTHUR D. LITTLE INC.  ,(617)864-5770,X5871
*****
 *****          J. WAGNER     ,DIS/ADLPIPE, INC.      ,(617)492-1991,X5820              *****
 *****                                                                  *****
 ***** MODIFIED EXTENSIVELY BY:                                                  *****
 ***** D.M. HETRICK                                                     *****
 ***** OAK RIDGE NATIONAL LABORATORY                                                  *****
 ***** (615) 576-7556                                                  *****
 ***** VERSION   :  JANUARY 1995                                                  *****
 *****                                                                  *****

*****************************************************************************************************
******
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****** MONTHLY SESOIL MODEL OPERATION ******
MONTHLY SITE SPECIFIC SIMULATION

REGION : BREA DAM
SOIL TYPE : Silty Sand
COMPOUND : cis-1,2-Dichlorethene
WASHLOAD DATA :
APPLICATION AREA: cis-1,2-DCE Simulation

WARNING- SOIL PERMEABILITY VARYS CONSIDERABLY AMONG LAYERS
SESOIL MAY NOT BE ACCURATE FOR SUCH AN INHOMOGENEOUS COLUMN

WARNING- SOIL PERMEABILITY VARYS CONSIDERABLY AMONG LAYERS
SESOIL MAY NOT BE ACCURATE FOR SUCH AN INHOMOGENEOUS COLUMN

GENERAL INPUT PARAMETERS
==========

-- SOIL INPUT PARAMETERS --

SOIL DENSITY (G/CM**3): 1.49
INTRINSIC PERMEABILITY (CM**2): .000
DISCONNECTEDNESS INDEX (-): 3.90
POROSITY (-): .280
ORGANIC CARBON CONTENT (%): .930E-01
CATION EXCHANGE CAPACITY (MILLI EQ./100G DRY SOIL): .000
FREUNDLICH EXPONENT (-): 1.00

-- CHEMICAL INPUT PARAMETERS --

SOLUBILITY (UG/ML): .350E+04
DIFFUSION COEFFICIENT IN AIR (CM**2/SEC): .790E-01
HENRYS LAW CONSTANT (M**3-ATM/MOLE): .374E-02
ADSORPTION COEFFICIENT ON ORGANIC CARBON(KOC): 86.0
ADSORPTION COEFFICIENT ON SOIL (K): .000
MOLECULAR WEIGHT (G/MOL): 96.9
VALENCE (-): .000
NEUTRAL HYDROLYSIS CONSTANT (/DAY): .000
BASE HYDROLYSIS CONSTANT (L/MOL-DAY): .000
ACID HYDROLYSIS CONSTANT (L/MOL-DAY): .000
DEGRADATION RATE IN MOISTURE (/DAY): .000
DEGRADATION RATE ON SOIL (/DAY): .000
LIGAND-POLLUTANT STABILITY CONSTANT (-): .000
NO. MOLES LIGAND/MOLE POLLUTANT (-): .000
LIGAND MOLECULAR WEIGHT (G/MOL): .000

-- APPLICATION INPUT PARAMETERS --

NUMBER OF SOIL LAYERS: 4
YEARS TO BE SIMULATED: 150
AREA (CM**2): 0.490E+07
APPLICATION AREA LATITUDE (DEG.): 33.9
SPILL (1) OR STEADY APPLICATION (0): 1
MODIFIED SUMMERS MODEL USED (1) OR NOT (0) FOR GWR. CONC.: 1
INITIAL CHEMICAL CONCENTRATIONS GIVEN (1) OR NOT GIVEN (0) 1
DEPTHS (CM): 0.70E+03 91. 0.40E+03 0.64E+03
NUMBER OF SUBLAYERS/LAYER 1 1 1 10
PH (CM): 0.00 0.00 0.00 0.00
INTRINSIC PERMEABILITIES (CM**2): 0.24E-07 0.94E-09 0.36E-10 0.81E-07
KDEL RATIOS (-): 1.0 1.0 1.0
KDES RATIOS (-): 1.0 1.0 1.0
OC RATIOS (-): 0.10 0.40 1.0
CEC RATIOS (-): 1.0 1.0 1.0
FRN RATIOS(-): 1.0 1.0 1.0
ADS RATIOS(-): 1.0 1.0 1.0

1 YEAR - 3 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 2.961E+05

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.871E-07
ADSORBED SOIL (UG/G) 3.896E-08
SOIL AIR (UG/ML) 7.608E-08

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.856E-06
ADSORBED SOIL (UG/G) 2.284E-08
SOIL AIR (UG/ML) 4.461E-07

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.797E+01
ADSORBED SOIL (UG/G) 5.749E-01
SOIL AIR (UG/ML) 2.821E+00

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 8.337E+00
ADSORBED SOIL (UG/G) 6.668E-01
SOIL AIR (UG/ML) 1.308E+00

SUBLAYER 2

SOIL MOISTURE (UG/ML) 3.971E+00
ADSORBED SOIL (UG/G) 3.176E-01
SOIL AIR (UG/ML) 6.223E-01

SUBLAYER 3

SOIL MOISTURE (UG/ML) 1.557E+00
ADSORBED SOIL (UG/G) 1.246E-01
SOIL AIR (UG/ML) 2.438E-01

SUBLAYER 4

SOIL MOISTURE (UG/ML) 7.374E-01
ADSORBED SOIL (UG/G) 5.897E-02
SOIL AIR (UG/ML) 1.156E-01

SUBLAYER 5

SOIL MOISTURE (UG/ML) 5.446E-01
ADSORBED SOIL (UG/G) 4.356E-02
SOIL AIR (UG/ML) 8.545E-02

SUBLAYER 6

SOIL MOISTURE (UG/ML) 5.117E-01
ADSORBED SOIL (UG/G) 4.092E-02
SOIL AIR (UG/ML) 8.030E-02

SUBLAYER 7

SOIL MOISTURE (UG/ML) 5.075E-01
ADSORBED SOIL (UG/G) 4.059E-02
SOIL AIR (UG/ML) 7.965E-02

SUBLAYER 8

SOIL MOISTURE (UG/ML) 5.071E-01
ADSORBED SOIL (UG/G) 4.055E-02
SOIL AIR (UG/ML) 7.959E-02

SUBLAYER 9

SOIL MOISTURE (UG/ML) 5.070E-01
ADSORBED SOIL (UG/G) 4.055E-02

SOIL AIR (UG/ML) 7.958E-02

SUBLAYER 10

SOIL MOISTURE (UG/ML) 5.877E-01
ADSORBED SOIL (UG/G) 4.701E-02
SOIL AIR (UG/ML) 9.222E-02

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 2.017E-05

1 YEAR - 10 ANNUAL SUMMARY REPORT

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE I (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 6.279E+06

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 2.399E-11
SOIL AIR (UG/ML) 4.713E-11

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.000E-09
ADSORBED SOIL (UG/G) 1.600E-11
SOIL AIR (UG/ML) 3.142E-10

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 9.178E+00
ADSORBED SOIL (UG/G) 2.936E-01
SOIL AIR (UG/ML) 1.441E+00

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 7.531E+00
ADSORBED SOIL (UG/G) 6.023E-01
SOIL AIR (UG/ML) 1.182E+00

SUBLAYER 2

SOIL MOISTURE (UG/ML) 9.333E+00
ADSORBED SOIL (UG/G) 7.465E-01
SOIL AIR (UG/ML) 1.465E+00

SUBLAYER 3

SOIL MOISTURE (UG/ML) 1.040E+01
ADSORBED SOIL (UG/G) 8.322E-01
SOIL AIR (UG/ML) 1.633E+00

SUBLAYER 4

SOIL MOISTURE (UG/ML) 9.834E+00
ADSORBED SOIL (UG/G) 7.865E-01
SOIL AIR (UG/ML) 1.543E+00

SUBLAYER 5

SOIL MOISTURE (UG/ML) 7.624E+00
ADSORBED SOIL (UG/G) 6.098E-01
SOIL AIR (UG/ML) 1.196E+00

SUBLAYER 6

SOIL MOISTURE (UG/ML) 4.830E+00
ADSORBED SOIL (UG/G) 3.863E-01
SOIL AIR (UG/ML) 7.577E-01

SUBLAYER 7

SOIL MOISTURE (UG/ML) 2.611E+00
ADSORBED SOIL (UG/G) 2.088E-01
SOIL AIR (UG/ML) 4.095E-01

SUBLAYER 8

SOIL MOISTURE (UG/ML) 1.385E+00
ADSORBED SOIL (UG/G) 1.107E-01
SOIL AIR (UG/ML) 2.172E-01

SUBLAYER 9

SOIL MOISTURE (UG/ML) 9.031E-01
ADSORBED SOIL (UG/G) 7.223E-02

SOIL AIR (UG/ML) 1.417E-01

SUBLAYER 10

SOIL MOISTURE (UG/ML) 8.196E-01
ADSORBED SOIL (UG/G) 6.555E-02
SOIL AIR (UG/ML) 1.286E-01

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 3.774E-04

1 YEAR - 42 ANNUAL SUMMARY REPORT
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-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 1.748E+08

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 2.399E-11
SOIL AIR (UG/ML) 4.713E-11

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.000E-09
ADSORBED SOIL (UG/G) 1.600E-11
SOIL AIR (UG/ML) 3.142E-10

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.261E-01
ADSORBED SOIL (UG/G) 1.363E-02
SOIL AIR (UG/ML) 6.688E-02

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.544E-01
ADSORBED SOIL (UG/G) 2.834E-02
SOIL AIR (UG/ML) 5.565E-02

SUBLAYER 2

SOIL MOISTURE (UG/ML) 4.747E-01
ADSORBED SOIL (UG/G) 3.796E-02
SOIL AIR (UG/ML) 7.453E-02

SUBLAYER 3

SOIL MOISTURE (UG/ML) 6.581E-01
ADSORBED SOIL (UG/G) 5.264E-02
SOIL AIR (UG/ML) 1.033E-01

SUBLAYER 4

SOIL MOISTURE (UG/ML) 9.535E-01
ADSORBED SOIL (UG/G) 7.626E-02
SOIL AIR (UG/ML) 1.497E-01

SUBLAYER 5

SOIL MOISTURE (UG/ML) 1.464E+00
ADSORBED SOIL (UG/G) 1.171E-01
SOIL AIR (UG/ML) 2.299E-01

SUBLAYER 6

SOIL MOISTURE (UG/ML) 2.422E+00
ADSORBED SOIL (UG/G) 1.937E-01
SOIL AIR (UG/ML) 3.802E-01

SUBLAYER 7

SOIL MOISTURE (UG/ML) 4.344E+00
ADSORBED SOIL (UG/G) 3.474E-01
SOIL AIR (UG/ML) 6.821E-01

SUBLAYER 8

SOIL MOISTURE (UG/ML) 8.194E+00
ADSORBED SOIL (UG/G) 6.553E-01
SOIL AIR (UG/ML) 1.287E+00

SUBLAYER 9

SOIL MOISTURE (UG/ML) 1.486E+01
ADSORBED SOIL (UG/G) 1.189E+00

SOIL AIR (UG/ML) 2.334E+00

SUBLAYER 10

SOIL MOISTURE (UG/ML) 2.264E+01
ADSORBED SOIL (UG/G) 1.811E+00
SOIL AIR (UG/ML) 3.554E+00

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 1.044E-02

1 YEAR - 50 ANNUAL SUMMARY REPORT

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 1.562E+08

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 2.399E-11
SOIL AIR (UG/ML) 4.713E-11

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.000E-09
ADSORBED SOIL (UG/G) 1.600E-11
SOIL AIR (UG/ML) 3.142E-10

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.978E-01
ADSORBED SOIL (UG/G) 6.328E-03
SOIL AIR (UG/ML) 3.105E-02

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.645E-01
ADSORBED SOIL (UG/G) 1.316E-02
SOIL AIR (UG/ML) 2.583E-02

SUBLAYER 2

SOIL MOISTURE (UG/ML) 2.203E-01
ADSORBED SOIL (UG/G) 1.762E-02
SOIL AIR (UG/ML) 3.460E-02

SUBLAYER 3

SOIL MOISTURE (UG/ML) 3.055E-01
ADSORBED SOIL (UG/G) 2.443E-02
SOIL AIR (UG/ML) 4.797E-02

SUBLAYER 4

SOIL MOISTURE (UG/ML) 4.428E-01
ADSORBED SOIL (UG/G) 3.542E-02
SOIL AIR (UG/ML) 6.953E-02

SUBLAYER 5

SOIL MOISTURE (UG/ML) 6.805E-01
ADSORBED SOIL (UG/G) 5.443E-02
SOIL AIR (UG/ML) 1.068E-01

SUBLAYER 6

SOIL MOISTURE (UG/ML) 1.132E+00
ADSORBED SOIL (UG/G) 9.054E-02
SOIL AIR (UG/ML) 1.778E-01

SUBLAYER 7

SOIL MOISTURE (UG/ML) 2.097E+00
ADSORBED SOIL (UG/G) 1.677E-01
SOIL AIR (UG/ML) 3.292E-01

SUBLAYER 8

SOIL MOISTURE (UG/ML) 4.375E+00
ADSORBED SOIL (UG/G) 3.499E-01
SOIL AIR (UG/ML) 6.870E-01

SUBLAYER 9

SOIL MOISTURE (UG/ML) 9.754E+00
ADSORBED SOIL (UG/G) 7.801E-01

SOIL AIR (UG/ML) 1.531E+00

SUBLAYER 10

SOIL MOISTURE (UG/ML) 2.018E+01
ADSORBED SOIL (UG/G) 1.614E+00
SOIL AIR (UG/ML) 3.168E+00

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 9.303E-03

1 YEAR - 100 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 7.085E+06

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 2.399E-11
SOIL AIR (UG/ML) 4.713E-11

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.000E-09
ADSORBED SOIL (UG/G) 1.600E-11
SOIL AIR (UG/ML) 3.142E-10

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.633E-03
ADSORBED SOIL (UG/G) 5.224E-05
SOIL AIR (UG/ML) 2.563E-04

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.358E-03
ADSORBED SOIL (UG/G) 1.086E-04
SOIL AIR (UG/ML) 2.133E-04

SUBLAYER 2

SOIL MOISTURE (UG/ML) 1.819E-03
ADSORBED SOIL (UG/G) 1.455E-04
SOIL AIR (UG/ML) 2.857E-04

SUBLAYER 3

SOIL MOISTURE (UG/ML) 2.522E-03
ADSORBED SOIL (UG/G) 2.017E-04
SOIL AIR (UG/ML) 3.961E-04

SUBLAYER 4

SOIL MOISTURE (UG/ML) 3.656E-03
ADSORBED SOIL (UG/G) 2.924E-04
SOIL AIR (UG/ML) 5.741E-04

SUBLAYER 5

SOIL MOISTURE (UG/ML) 5.620E-03
ADSORBED SOIL (UG/G) 4.495E-04
SOIL AIR (UG/ML) 8.824E-04

SUBLAYER 6

SOIL MOISTURE (UG/ML) 9.364E-03
ADSORBED SOIL (UG/G) 7.489E-04
SOIL AIR (UG/ML) 1.470E-03

SUBLAYER 7

SOIL MOISTURE (UG/ML) 1.760E-02
ADSORBED SOIL (UG/G) 1.408E-03
SOIL AIR (UG/ML) 2.764E-03

SUBLAYER 8

SOIL MOISTURE (UG/ML) 4.036E-02
ADSORBED SOIL (UG/G) 3.228E-03
SOIL AIR (UG/ML) 6.338E-03

SUBLAYER 9

SOIL MOISTURE (UG/ML) 1.353E-01
ADSORBED SOIL (UG/G) 1.082E-02

SOIL AIR (UG/ML) 2.125E-02

SUBLAYER 10

SOIL MOISTURE (UG/ML) 9.109E-01
ADSORBED SOIL (UG/G) 7.285E-02
SOIL AIR (UG/ML) 1.430E-01

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 4.198E-04

1 YEAR - 150 ANNUAL SUMMARY REPORT
==========

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SOIL ZONE 2:

SUBLAYER 1

SOIL ZONE 3:

SUBLAYER 1

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SUBLAYER 5

SUBLAYER 6

SUBLAYER 7

SUBLAYER 8

SUBLAYER 9

SUBLAYER 10

TOTAL IN GROUNDWATER RUNOFF 1.001E+05

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 2.399E-11
SOIL AIR (UG/ML) 4.713E-11

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.000E-09
ADSORBED SOIL (UG/G) 1.600E-11
SOIL AIR (UG/ML) 3.142E-10

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.353E-05
ADSORBED SOIL (UG/G) 4.328E-07
SOIL AIR (UG/ML) 2.123E-06

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.124E-05
ADSORBED SOIL (UG/G) 8.994E-07
SOIL AIR (UG/ML) 1.766E-06

SUBLAYER 2

SOIL MOISTURE (UG/ML) 1.505E-05
ADSORBED SOIL (UG/G) 1.203E-06
SOIL AIR (UG/ML) 2.362E-06

SUBLAYER 3

SOIL MOISTURE (UG/ML) 2.082E-05
ADSORBED SOIL (UG/G) 1.665E-06
SOIL AIR (UG/ML) 3.269E-06

SUBLAYER 4

SOIL MOISTURE (UG/ML) 3.015E-05
ADSORBED SOIL (UG/G) 2.411E-06
SOIL AIR (UG/ML) 4.734E-06

SUBLAYER 5

SOIL MOISTURE (UG/ML) 4.626E-05
ADSORBED SOIL (UG/G) 3.700E-06
SOIL AIR (UG/ML) 7.264E-06

SUBLAYER 6

SOIL MOISTURE (UG/ML) 7.704E-05
ADSORBED SOIL (UG/G) 6.162E-06
SOIL AIR (UG/ML) 1.210E-05

SUBLAYER 7

SOIL MOISTURE (UG/ML) 1.449E-04
ADSORBED SOIL (UG/G) 1.159E-05
SOIL AIR (UG/ML) 2.276E-05

SUBLAYER 8

SOIL MOISTURE (UG/ML) 3.329E-04
ADSORBED SOIL (UG/G) 2.663E-05
SOIL AIR (UG/ML) 5.228E-05

SUBLAYER 9

SOIL MOISTURE (UG/ML) 1.146E-03
ADSORBED SOIL (UG/G) 9.166E-05

SOIL AIR (UG/ML) 1.800E-04

SUBLAYER 10

SOIL MOISTURE (UG/ML) 1.286E-02
ADSORBED SOIL (UG/G) 1.028E-03
SOIL AIR (UG/ML) 2.019E-03

MAX. POLL. DEPTH (M) 1.828E+01

AVE. CONTAMINANT CONCENTRATION IN GROUNDWATER (UG/ML) 5.925E-06

**********EXECUTION COMPLETED**********

APPENDIX E

SESOIL MODELING OUTPUT - NAPHTHALENE

```
*****************************************************************************************
******
*****                                                    *****
***** SESOIL-84 :  SEASONAL CYCLES OF WATER, SEDIMENT, AND POLLUTANTS IN SOIL
ENVIRONMENTS      *****
*****                                                    *****
***** DEVELOPERS:  M. BONAZOUNTAS,ARTHUR D. LITTLE INC.  ,(617)864-5770,X5871
*****
*****          J. WAGNER    ,DIS/ADLPIPE, INC.     ,(617)492-1991,X5820              *****
*****                                                    *****
***** MODIFIED EXTENSIVELY BY:                                          *****
***** D.M. HETRICK                                              *****
***** OAK RIDGE NATIONAL LABORATORY                                          *****
***** (615) 576-7556                                          *****
***** VERSION   : JANUARY 1995                                          *****
*****                                                    *****

*****************************************************************************************
******
```

****** MONTHLY SESOIL MODEL OPERATION ******
MONTHLY SITE SPECIFIC SIMULATION

REGION : BREA DAM
SOIL TYPE : Silty Sand
COMPOUND : Naphthalene
WASHLOAD DATA :
APPLICATION AREA: Naphthalene Simulation

WARNING- SOIL PERMEABILITY VARYS CONSIDERABLY AMONG LAYERS
SESOIL MAY NOT BE ACCURATE FOR SUCH AN INHOMOGENEOUS COLUMN

WARNING- SOIL PERMEABILITY VARYS CONSIDERABLY AMONG LAYERS
SESOIL MAY NOT BE ACCURATE FOR SUCH AN INHOMOGENEOUS COLUMN

GENERAL INPUT PARAMETERS
==========

-- SOIL INPUT PARAMETERS --

SOIL DENSITY (G/CM**3): 1.49
INTRINSIC PERMEABILITY (CM**2): .000
DISCONNECTEDNESS INDEX (-): 3.90
POROSITY (-): .280
ORGANIC CARBON CONTENT (%): .930E-01
CATION EXCHANGE CAPACITY (MILLI EQ./100G DRY SOIL): .000
FREUNDLICH EXPONENT (-): 1.00

1

-- CHEMICAL INPUT PARAMETERS --

SOLUBILITY (UG/ML): 31.0
DIFFUSION COEFFICIENT IN AIR (CM**2/SEC): .840E-01
HENRYS LAW CONSTANT (M**3-ATM/MOLE): .483E-03
ADSORPTION COEFFICIENT ON ORGANIC CARBON(KOC): 871.
ADSORPTION COEFFICIENT ON SOIL (K): .000
MOLECULAR WEIGHT (G/MOL): 128.
VALENCE (-): .000
NEUTRAL HYDROLYSIS CONSTANT (/DAY): .000
BASE HYDROLYSIS CONSTANT (L/MOL-DAY): .000
ACID HYDROLYSIS CONSTANT (L/MOL-DAY): .000
DEGRADATION RATE IN MOISTURE (/DAY): .000
DEGRADATION RATE ON SOIL (/DAY): .000
LIGAND-POLLUTANT STABILITY CONSTANT (-): .000
NO. MOLES LIGAND/MOLE POLLUTANT (-): .000
LIGAND MOLECULAR WEIGHT (G/MOL): .000

-- APPLICATION INPUT PARAMETERS --

NUMBER OF SOIL LAYERS: 4
YEARS TO BE SIMULATED: 200
AREA (CM**2): 0.500E+07
APPLICATION AREA LATITUDE (DEG.): 33.9
SPILL (1) OR STEADY APPLICATION (0): 1
MODIFIED SUMMERS MODEL USED (1) OR NOT (0) FOR GWR. CONC.: 1
INITIAL CHEMICAL CONCENTRATIONS GIVEN (1) OR NOT GIVEN (0) 1
DEPTHS (CM): 0.70E+03 91. 0.40E+03 0.64E+03
NUMBER OF SUBLAYERS/LAYER 4 4 4 4
PH (CM): 0.00 0.00 0.00 0.00
INTRINSIC PERMEABILITIES (CM**2): 0.24E-07 0.94E-09 0.36E-10 0.81E-07
KDEL RATIOS (-): 1.0 1.0 1.0
KDES RATIOS (-): 1.0 1.0 1.0
OC RATIOS (-): 0.10 0.40 1.0
CEC RATIOS (-): 1.0 1.0 1.0
FRN RATIOS(-): 1.0 1.0 1.0
ADS RATIOS(-): 1.0 1.0 1.0
1

YEAR - 1 MONTHLY INPUT PARAMETERS
======== ==========

-- CLIMATIC INPUT PARAMETERS --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TEMP. (DEG C)	17.720	14.110	11.390	10.610	11.390	12.170	14.110	16.280	18.610	21.890	22.110	20.940
CLOUD CVR (FRAC.)	0.350	0.400	0.500	0.500	0.450	0.500	0.500	0.450	0.400	0.300	0.250	0.250
REL. HUM.(FRAC.)	0.650	0.550	0.600	0.650	0.600	0.600	0.700	0.600	0.650	0.550	0.650	0.650

ALBEDO (-) 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190 0.190
0.190
EVAPOT. (CM/DAY) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000
0.000

PRECIP. (CM) 0.530 4.020 4.390 8.100 6.020 4.900 2.540 0.450 0.090 0.030 0.260
0.680
M.TIME RAIN(DAYS) 0.100 0.400 0.430 0.520 0.410 0.340 0.280 0.110 0.029 0.014 0.010
0.081
M. STORM NO. (-) 0.550 2.000 2.410 3.500 2.700 2.970 2.000 0.390 0.130 0.090 0.090
0.320
M. SEASON (DAYS) 30.400 30.400 30.400 30.400 30.400 30.400 30.400 30.400 30.400 30.400
30.400 30.400

INITIAL POLLUTANT CONCENTRATIONS IN UG/ML,INPUT FOR MONTH 12 OF YEAR 1

LAYER 1:
SUBLAYER 1 2 3 4
INITIAL CONC. (UG/ML) 3.58E+00 3.58E+00 3.58E+00 3.58E+00

LAYER 2:
SUBLAYER 1 2 3 4
INITIAL CONC. (UG/ML) 0.00E+00 0.00E+00 0.00E+00 0.00E+00

LAYER 3:
SUBLAYER 1 2 3 4
INITIAL CONC. (UG/ML) 0.00E+00 0.00E+00 0.00E+00 0.00E+00

LAYER 4:
SUBLAYER 1 2 3 4
INITIAL CONC. (UG/ML) 0.00E+00 0.00E+00 0.00E+00 0.00E+00

-- POLLUTANT INPUT PARAMETERS --

OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG
SEP

POL. INP-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

VOLATILIZATION MULT.-1 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00
1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00
SURFACE RUNOFF MULT. 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
POL. IN RAIN (FRAC-SL) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-2 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00
1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00

POL. INP-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-3 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00
1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00

POL. INP-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-L 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00
1.00E+00 1.00E+00 1.00E+00 1.00E+00 1.00E+00
1

YEAR - 2 MONTHLY INPUT PARAMETERS
======== ==========

-- CLIMATIC INPUT PARAMETERS ARE SAME AS LAST YEAR

-- POLLUTANT INPUT PARAMETERS --

OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG
SEP

POL. INP-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-1 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-1 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SURFACE RUNOFF MULT. 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
POL. IN RAIN (FRAC-SL) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-2 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-2 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-3 (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-3 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

POL. INP-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
TRNSFORMD-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
SINKS-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
LIG.INPUT-L (UG/CM**2) 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
VOLATILIZATION MULT.-L 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
1

YEAR - 3 MONTHLY INPUT PARAMETERS
======== ==========

-- CLIMATIC INPUT PARAMETERS ARE SAME AS LAST YEAR

-- POLLUTANT INPUT PARAMETERS ARE SAME AS LAST YEAR

--MODIFIED SUMMERS MODEL PARAMETERS --
(INPUT FOR CALCULATION OF CONTAMINANT IN GROUNDWATER)

SATURATED HYDRAULIC CONDUCTIVITY (CM/DAY): 8.64E+02
HORIZONTAL HYDRAULIC GRADIENT: 6.00E-02
THICKNESS OF SATURATED CONE (CM): 3.05E+02
WIDTH OF CONTAMINATED ZONE PERPENDICULAR TO FLOW (CM): 1.98E+03
BACKGROUND CONTAMINANT CONCENTRATION IN AQUIFER (UG/ML): 0.00E+00

1

YEAR - 1 MONTHLY RESULTS (OUTPUT)
======== ==========

-- HYDROLOGIC CYCLE COMPONENTS --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MOIS. IN L1 (%)	7.881	8.497	9.253	11.045	11.045	10.569	9.729	9.029	8.581	8.245	7.965	7.685
MOIS. BELOW L1 (%)	7.881	8.497	9.253	11.045	11.045	10.569	9.729	9.029	8.581	8.245	7.965	7.685
PRECIPATION (CM)	0.577	4.009	4.377	8.046	6.071	4.890	2.552	0.477	0.104	0.062	0.309	0.685
NET INFILT. (CM)	0.488	3.319	3.710	6.351	4.643	4.064	2.274	0.379	0.078	0.054	0.051	0.392
EVAPOTRANS. (CM)	1.215	2.410	2.475	3.109	4.117	4.390	3.344	1.358	0.726	0.574	0.535	0.913
MOIS. RETEN (CM)	-0.640	0.938	1.152	2.730	0.000	-0.725	-1.280	-1.066	-0.682	-0.512	-0.427	-0.427
SUR. RUNOFF (CM)	0.089	0.690	0.667	1.695	1.428	0.826	0.278	0.098	0.026	0.000	0.258	0.293
GRW. RUNOFF (CM)	-0.087	-0.030	0.083	0.512	0.527	0.399	0.209	0.088	0.035	-0.009	-0.057	-0.095
YIELD (CM)	0.002	0.660	0.750	2.206	1.954	1.225	0.487	0.185	0.061	-0.001	0.201	0.199
PAU/MPA (GZU)	1.089	0.997	0.997	0.993	1.008	0.998	1.005	1.060	1.154	2.058	1.189	1.008
PA/MPA (GZ)	1.089	0.997	0.997	0.993	1.008	0.998	1.005	1.060	1.154	2.058	1.189	1.008

1 -- POLLUTANT MASS INPUT TO COLUMN (UG) - INCLUDES INITIAL POLLUTANT CONCENTRATIONS --

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	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
PRECIP.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD UPPER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.255E+10
LOAD ZONE 2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD ZONE 3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD LOWER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
TOTAL INPUT	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.255E+10

0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

UPPER SOIL ZONE:

SUBLAYER 1

VOLATILIZED	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.860E+07
IN SOIL MOI	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.404E+08
ADS ON SOIL	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.205E+09
IN SOIL AIR	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.349E+06

SUBLAYER 2

DIFFUSED UP	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.910E+06
IN SOIL MOI	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.855E+08
ADS ON SOIL	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.913E+09
IN SOIL AIR	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.707E+06

SUBLAYER 3

DIFFUSED UP 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 2.982E+05
IN SOIL MOI 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 1.924E+08
ADS ON SOIL 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 3.021E+09
IN SOIL AIR 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 1.007E+07

SUBLAYER 4

DIFFUSED UP 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 2.150E+06
IN SOIL MOI 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 2.294E+08
ADS ON SOIL 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 3.602E+09
IN SOIL AIR 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 1.200E+07

SOIL ZONE 2:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SOIL ZONE 3:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

-- POLLUTANT CONCENTRATIONS (UG/ML) OR (UG/G) -- NOTE: IF CONCENTRATIONS ARE ZERO FOR EACH MONTH, THEY ARE NOT PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

MOISTURE 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 2.085E+00
%SOLUBILITY 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 6.727E+00
ADSORBED 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 1.689E+00
SOIL AIR 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 4.129E-02

SUBLAYER 2

MOISTURE 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 2.754E+00
%SOLUBILITY 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 8.885E+00
ADSORBED 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 2.231E+00
SOIL AIR 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 5.453E-02

SUBLAYER 3

MOISTURE 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 2.857E+00
%SOLUBILITY 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 9.216E+00
ADSORBED 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 2.314E+00
SOIL AIR 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 5.656E-02

SUBLAYER 4

MOISTURE 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 3.406E+00

%SOLUBILITY 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 1.099E+01
ADSORBED 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 2.759E+00
SOIL AIR 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 6.743E-02

SOIL ZONE 2:

SOIL ZONE 3:

LOWER SOIL ZONE:

POL DEP CM 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 6.252E+02
1 YEAR - 1 ANNUAL SUMMARY REPORT
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-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 1.255E+10
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 9.127
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 9.127
TOTAL PRECIPITATION (CM) 32.160
TOTAL INFILTRATION (CM) 25.804
TOTAL EVAPOTRANSPIRATION (CM) 25.167
TOTAL SURFACE RUNOFF (CM) 6.347
TOTAL GRW RUNOFF (CM) 1.575
TOTAL MOISTURE RETENTION (CM) -0.938
TOTAL YIELD (CM) 7.930
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

TOTAL VOLATILIZED 1.860E+07

SUBLAYER 2

TOTAL DIFFUSED (UP) 2.910E+06

SUBLAYER 3

TOTAL DIFFUSED (UP) 2.982E+05

SUBLAYER 4

TOTAL DIFFUSED (UP) 2.150E+06

SOIL ZONE 2:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SOIL ZONE 3:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.738E-01
ADSORBED SOIL (UG/G) 1.408E-01
SOIL AIR (UG/ML) 3.440E-03

SUBLAYER 2

SOIL MOISTURE (UG/ML) 2.295E-01
ADSORBED SOIL (UG/G) 1.859E-01
SOIL AIR (UG/ML) 4.544E-03

SUBLAYER 3

SOIL MOISTURE (UG/ML) 2.381E-01
ADSORBED SOIL (UG/G) 1.928E-01
SOIL AIR (UG/ML) 4.713E-03

SUBLAYER 4

SOIL MOISTURE (UG/ML) 2.838E-01
ADSORBED SOIL (UG/G) 2.299E-01
SOIL AIR (UG/ML) 5.619E-03

SOIL ZONE 2:

SOIL ZONE 3:

LOWER SOIL ZONE:

MAX. POLL. DEPTH (M) 6.252E+00

1 YEAR - 10 ANNUAL SUMMARY REPORT

-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763

0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SOIL ZONE 2:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SOIL ZONE 3:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

---

UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 2.430E-10
SOIL AIR (UG/ML) 6.086E-12

SUBLAYER 2

SOIL MOISTURE (UG/ML) 6.000E-10
ADSORBED SOIL (UG/G) 4.860E-10
SOIL AIR (UG/ML) 1.217E-11

SUBLAYER 3

SOIL MOISTURE (UG/ML) 9.000E-10
ADSORBED SOIL (UG/G) 7.290E-10
SOIL AIR (UG/ML) 1.826E-11

SUBLAYER 4

SOIL MOISTURE (UG/ML) 1.300E-09
ADSORBED SOIL (UG/G) 1.053E-09
SOIL AIR (UG/ML) 2.637E-11

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.083E-09
ADSORBED SOIL (UG/G) 1.688E-10
SOIL AIR (UG/ML) 4.270E-11

SUBLAYER 2

SOIL MOISTURE (UG/ML) 1.500E-09
ADSORBED SOIL (UG/G) 1.215E-10
SOIL AIR (UG/ML) 3.069E-11

SUBLAYER 3

SOIL MOISTURE (UG/ML) 1.250E-09
ADSORBED SOIL (UG/G) 1.013E-10
SOIL AIR (UG/ML) 2.549E-11

SUBLAYER 4

SOIL MOISTURE (UG/ML) 1.000E-09
ADSORBED SOIL (UG/G) 8.100E-11
SOIL AIR (UG/ML) 2.029E-11

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 1.220E+01
ADSORBED SOIL (UG/G) 3.954E+00
SOIL AIR (UG/ML) 2.476E-01

SUBLAYER 2

SOIL MOISTURE (UG/ML) 1.649E+01
ADSORBED SOIL (UG/G) 5.343E+00
SOIL AIR (UG/ML) 3.345E-01

SUBLAYER 3

SOIL MOISTURE (UG/ML) 1.022E+01
ADSORBED SOIL (UG/G) 3.313E+00

SOIL AIR (UG/ML) 2.073E-01

SUBLAYER 4

SOIL MOISTURE (UG/ML) 3.828E+00
ADSORBED SOIL (UG/G) 1.240E+00
SOIL AIR (UG/ML) 7.758E-02

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.158E-01
ADSORBED SOIL (UG/G) 2.558E-01
SOIL AIR (UG/ML) 6.399E-03

MAX. POLL. DEPTH (M) 1.214E+01

YEAR - 100 MONTHLY RESULTS (OUTPUT)
======== ==========

-- HYDROLOGIC CYCLE COMPONENTS --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MOIS. IN L1 (%)	7.405	8.161	9.001	10.849	10.905	10.485	9.673	9.001	8.553	8.217	7.965	7.685
MOIS. BELOW L1 (%)	7.405	8.161	9.001	10.849	10.905	10.485	9.673	9.001	8.553	8.217	7.965	7.685
PRECIPATION (CM)	0.577	3.988	4.381	8.036	6.021	4.888	2.542	0.512	0.090	0.051	0.566	0.685
NET INFILT. (CM)	0.490	3.313	3.723	6.362	4.615	4.066	2.266	0.407	0.068	0.044	0.094	0.392
EVAPOTRANS. (CM)	1.064	2.241	2.405	3.094	4.046	4.331	3.306	1.349	0.720	0.570	0.535	0.913
MOIS. RETEN (CM)	-0.427	1.152	1.280	2.815	0.085	-0.640	-1.237	-1.024	-0.682	-0.512	-0.384	-0.427
SUR. RUNOFF (CM)	0.087	0.675	0.658	1.675	1.406	0.822	0.276	0.105	0.022	0.000	0.472	0.293
GRW. RUNOFF (CM)	-0.148	-0.080	0.038	0.453	0.483	0.375	0.196	0.082	0.030	-0.014	-0.057	-0.095
YIELD (CM)	-0.061	0.595	0.696	2.128	1.889	1.197	0.472	0.187	0.052	-0.007	0.415	0.199
PAU/MPA (GZU)	1.088	0.992	0.998	0.992	1.000	0.998	1.001	1.138	1.002	1.705	2.177	1.008
PA/MPA (GZ)	1.088	0.992	0.998	0.992	1.000	0.998	1.001	1.138	1.002	1.705	2.177	1.008

1 -- POLLUTANT MASS INPUT TO COLUMN (UG) --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
PRECIP.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD UPPER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD ZONE 2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD ZONE 3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD LOWER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TOTAL INPUT 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

UPPER SOIL ZONE:

SUBLAYER 1

IN SOIL MOI 1.947E-02 2.145E-02 2.366E-02 2.852E-02 2.867E-02 2.756E-02 2.543E-02 2.366E-02 2.248E-02 2.160E-02 2.094E-02 2.020E-02
ADS ON SOIL 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01
IN SOIL AIR 1.090E-03 1.063E-03 1.028E-03 9.399E-04 9.351E-04 9.564E-04 9.817E-04 1.010E-03 1.025E-03 1.027E-03 1.039E-03 1.057E-03

SUBLAYER 2

IN SOIL MOI 3.893E-02 4.291E-02 4.732E-02 5.704E-02 5.733E-02 5.513E-02 5.086E-02 4.732E-02 4.497E-02 4.320E-02 4.188E-02 4.040E-02
ADS ON SOIL 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01
IN SOIL AIR 2.180E-03 2.126E-03 2.056E-03 1.880E-03 1.870E-03 1.913E-03 1.963E-03 2.019E-03 2.050E-03 2.054E-03 2.078E-03 2.115E-03

SUBLAYER 3

IN SOIL MOI 5.840E-02 6.436E-02 7.099E-02 8.556E-02 8.600E-02 8.269E-02 7.628E-02 7.099E-02 6.745E-02 6.480E-02 6.282E-02 6.061E-02
ADS ON SOIL 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01
IN SOIL AIR 3.269E-03 3.190E-03 3.084E-03 2.820E-03 2.805E-03 2.869E-03 2.945E-03 3.029E-03 3.075E-03 3.080E-03 3.118E-03 3.172E-03

SUBLAYER 4

IN SOIL MOI 8.435E-02 9.297E-02 1.025E-01 1.236E-01 1.242E-01 1.194E-01 1.102E-01 1.025E-01 9.743E-02 9.360E-02 9.073E-02 8.754E-02
ADS ON SOIL 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00
IN SOIL AIR 4.722E-03 4.607E-03 4.455E-03 4.073E-03 4.052E-03 4.144E-03 4.254E-03 4.375E-03 4.441E-03 4.449E-03 4.503E-03 4.581E-03

SOIL ZONE 2:

SUBLAYER 1

IN SOIL MOI 8.423E-03 1.857E-02 2.048E-02 4.936E-02 4.962E-02 4.771E-02 3.301E-02 1.024E-02 9.729E-03 9.347E-03 9.060E-03 8.742E-03
ADS ON SOIL 1.373E-02 2.746E-02 2.746E-02 5.492E-02 5.492E-02 5.492E-02 4.119E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02

IN SOIL AIR 4.716E-04 9.201E-04 8.898E-04 1.627E-03 1.619E-03 1.655E-03 1.274E-03 4.369E-04 4.435E-04 4.443E-04 4.497E-04 4.575E-04

SUBLAYER 2

IN SOIL MOI 8.423E-03 9.283E-03 1.024E-02 3.702E-02 3.721E-02 3.578E-02 1.100E-02 1.024E-02 9.729E-03 9.347E-03 9.060E-03 8.742E-03
ADS ON SOIL 1.373E-02 1.373E-02 1.373E-02 4.119E-02 4.119E-02 4.119E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02
IN SOIL AIR 4.716E-04 4.601E-04 4.449E-04 1.220E-03 1.214E-03 1.242E-03 4.248E-04 4.369E-04 4.435E-04 4.443E-04 4.497E-04 4.575E-04

SUBLAYER 3

IN SOIL MOI 8.423E-03 9.283E-03 1.024E-02 2.468E-02 2.481E-02 2.385E-02 1.100E-02 1.024E-02 9.729E-03 9.347E-03 9.060E-03 8.742E-03
ADS ON SOIL 1.373E-02 1.373E-02 1.373E-02 2.746E-02 2.746E-02 2.746E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02
IN SOIL AIR 4.716E-04 4.601E-04 4.449E-04 8.134E-04 8.093E-04 8.277E-04 4.248E-04 4.369E-04 4.435E-04 4.443E-04 4.497E-04 4.575E-04

SUBLAYER 4

IN SOIL MOI 8.423E-03 9.283E-03 1.024E-02 1.234E-02 1.240E-02 1.193E-02 1.100E-02 1.024E-02 9.729E-03 9.347E-03 9.060E-03 8.742E-03
ADS ON SOIL 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02
IN SOIL AIR 4.716E-04 4.601E-04 4.449E-04 4.067E-04 4.046E-04 4.138E-04 4.248E-04 4.369E-04 4.435E-04 4.443E-04 4.497E-04 4.575E-04

SOIL ZONE 3:

SUBLAYER 1

IN SOIL MOI 2.897E+02 3.090E+02 3.285E+02 3.694E+02 3.605E+02 3.403E+02 3.139E+02 2.946E+02 2.821E+02 2.726E+02 2.651E+02 2.561E+02
ADS ON SOIL 1.888E+03 1.828E+03 1.762E+03 1.644E+03 1.596E+03 1.567E+03 1.567E+03 1.580E+03 1.592E+03 1.601E+03 1.607E+03 1.609E+03
IN SOIL AIR 1.622E+01 1.531E+01 1.427E+01 1.217E+01 1.176E+01 1.181E+01 1.212E+01 1.257E+01 1.286E+01 1.296E+01 1.316E+01 1.340E+01

SUBLAYER 2

IN SOIL MOI 1.020E+04 1.090E+04 1.163E+04 1.314E+04 1.286E+04 1.218E+04 1.125E+04 1.056E+04 1.011E+04 9.762E+03 9.497E+03 9.185E+03
ADS ON SOIL 6.649E+04 6.449E+04 6.237E+04 5.845E+04 5.693E+04 5.607E+04 5.613E+04 5.663E+04 5.704E+04 5.736E+04 5.756E+04 5.770E+04
IN SOIL AIR 5.710E+02 5.403E+02 5.052E+02 4.329E+02 4.195E+02 4.225E+02 4.342E+02 4.506E+02 4.606E+02 4.640E+02 4.713E+02 4.807E+02

SUBLAYER 3

IN SOIL MOI 1.620E+05 1.736E+05 1.857E+05 2.108E+05 2.070E+05 1.966E+05 1.819E+05 1.708E+05 1.635E+05 1.580E+05 1.537E+05 1.487E+05

ADS ON SOIL 1.056E+06 1.027E+06 9.961E+05 9.379E+05 9.166E+05 9.053E+05 9.079E+05 9.162E+05 9.228E+05 9.280E+05 9.315E+05 9.340E+05
IN SOIL AIR 9.069E+03 8.604E+03 8.069E+03 6.946E+03 6.754E+03 6.822E+03 7.023E+03 7.289E+03 7.452E+03 7.508E+03 7.627E+03 7.781E+03

SUBLAYER 4

IN SOIL MOI 1.539E+06 1.654E+06 1.774E+06 2.023E+06 1.993E+06 1.898E+06 1.759E+06 1.653E+06 1.582E+06 1.528E+06 1.487E+06 1.439E+06
ADS ON SOIL 1.003E+07 9.782E+06 9.514E+06 9.000E+06 8.824E+06 8.741E+06 8.781E+06 8.864E+06 8.928E+06 8.979E+06 9.014E+06 9.042E+06
IN SOIL AIR 8.614E+04 8.195E+04 7.707E+04 6.665E+04 6.502E+04 6.587E+04 6.792E+04 7.052E+04 7.210E+04 7.264E+04 7.381E+04 7.532E+04

LOWER SOIL ZONE:

SUBLAYER 1

IN SOIL MOI 1.295E+08 1.413E+08 1.542E+08 1.815E+08 1.811E+08 1.736E+08 1.605E+08 1.500E+08 1.430E+08 1.377E+08 1.337E+08 1.292E+08
ADS ON SOIL 2.111E+09 2.090E+09 2.067E+09 2.020E+09 2.004E+09 1.998E+09 2.003E+09 2.012E+09 2.018E+09 2.023E+09 2.027E+09 2.030E+09
IN SOIL AIR 7.252E+06 7.005E+06 6.698E+06 5.983E+06 5.907E+06 6.022E+06 6.198E+06 6.402E+06 6.519E+06 6.547E+06 6.638E+06 6.763E+06

SUBLAYER 2

IN SOIL MOI 5.881E+08 6.451E+08 7.077E+08 8.430E+08 8.483E+08 8.193E+08 7.611E+08 7.119E+08 6.788E+08 6.539E+08 6.350E+08 6.141E+08
ADS ON SOIL 9.586E+09 9.540E+09 9.489E+09 9.378E+09 9.389E+09 9.431E+09 9.496E+09 9.546E+09 9.579E+09 9.604E+09 9.623E+09 9.644E+09
IN SOIL AIR 3.293E+07 3.197E+07 3.075E+07 2.778E+07 2.767E+07 2.843E+07 2.938E+07 3.038E+07 3.094E+07 3.108E+07 3.152E+07 3.214E+07

SUBLAYER 3

SUBLAYER 4

-- POLLUTANT CONCENTRATIONS (UG/ML) OR (UG/G) -- NOTE: IF CONCENTRATIONS ARE ZERO FOR EACH MONTH, THEY ARE NOT PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

MOISTURE 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10

%SOLUBILITY 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10
ADSORBED 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10
SOIL AIR 6.039E-12 6.116E-12 6.176E-12 6.254E-12 6.243E-12 6.231E-12 6.113E-12 6.065E-12 6.015E-12 5.923E-12 5.919E-12 5.939E-12

SUBLAYER 2

MOISTURE 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10
%SOLUBILITY 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09
ADSORBED 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10
SOIL AIR 1.208E-11 1.223E-11 1.235E-11 1.251E-11 1.249E-11 1.246E-11 1.223E-11 1.213E-11 1.203E-11 1.185E-11 1.184E-11 1.188E-11

SUBLAYER 3

MOISTURE 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10
%SOLUBILITY 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09
ADSORBED 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10
SOIL AIR 1.812E-11 1.835E-11 1.853E-11 1.876E-11 1.873E-11 1.869E-11 1.834E-11 1.820E-11 1.804E-11 1.777E-11 1.776E-11 1.782E-11

SUBLAYER 4

MOISTURE 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09
%SOLUBILITY 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09
ADSORBED 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09
SOIL AIR 2.617E-11 2.650E-11 2.676E-11 2.710E-11 2.705E-11 2.700E-11 2.649E-11 2.628E-11 2.606E-11 2.567E-11 2.565E-11 2.574E-11

SOIL ZONE 2:

SUBLAYER 1

MOISTURE 1.000E-09 2.000E-09 2.000E-09 4.000E-09 4.000E-09 4.000E-09 3.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09
%SOLUBILITY 3.226E-09 6.452E-09 6.452E-09 1.290E-08 1.290E-08 1.290E-08 9.677E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09
ADSORBED 8.100E-11 1.620E-10 1.620E-10 3.240E-10 3.240E-10 3.240E-10 2.430E-10 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11
SOIL AIR 2.013E-11 4.077E-11 4.117E-11 8.339E-11 8.324E-11 8.309E-11 6.113E-11 2.022E-11 2.005E-11 1.974E-11 1.973E-11 1.980E-11

SUBLAYER 2

MOISTURE 1.000E-09 1.000E-09 1.000E-09 3.000E-09 3.000E-09 3.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09
%SOLUBILITY 3.226E-09 3.226E-09 3.226E-09 9.677E-09 9.677E-09 9.677E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09
ADSORBED 8.100E-11 8.100E-11 8.100E-11 2.430E-10 2.430E-10 2.430E-10 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11
SOIL AIR 2.013E-11 2.039E-11 2.059E-11 6.254E-11 6.243E-11 6.231E-11 2.038E-11 2.022E-11 2.005E-11 1.974E-11 1.973E-11 1.980E-11

SUBLAYER 3

MOISTURE 1.000E-09 1.000E-09 1.000E-09 2.000E-09 2.000E-09 2.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09
%SOLUBILITY 3.226E-09 3.226E-09 3.226E-09 6.452E-09 6.452E-09 6.452E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09
ADSORBED 8.100E-11 8.100E-11 8.100E-11 1.620E-10 1.620E-10 1.620E-10 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11
SOIL AIR 2.013E-11 2.039E-11 2.059E-11 4.169E-11 4.162E-11 4.154E-11 2.038E-11 2.022E-11 2.005E-11 1.974E-11 1.973E-11 1.980E-11

SUBLAYER 4

MOISTURE 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09
%SOLUBILITY 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09
ADSORBED 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11
SOIL AIR 2.013E-11 2.039E-11 2.059E-11 2.085E-11 2.081E-11 2.077E-11 2.038E-11 2.022E-11 2.005E-11 1.974E-11 1.973E-11 1.980E-11

SOIL ZONE 3:

SUBLAYER 1

MOISTURE 7.902E-06 7.648E-06 7.373E-06 6.879E-06 6.678E-06 6.556E-06 6.556E-06 6.611E-06 6.662E-06 6.701E-06 6.723E-06 6.733E-06
%SOLUBILITY 2.549E-05 2.467E-05 2.379E-05 2.219E-05 2.154E-05 2.115E-05 2.115E-05 2.133E-05 2.149E-05 2.162E-05 2.169E-05 2.172E-05
ADSORBED 2.560E-06 2.478E-06 2.389E-06 2.229E-06 2.164E-06 2.124E-06 2.124E-06 2.142E-06 2.159E-06 2.171E-06 2.178E-06 2.182E-06
SOIL AIR 1.591E-07 1.559E-07 1.518E-07 1.434E-07 1.390E-07 1.362E-07 1.336E-07 1.337E-07 1.336E-07 1.323E-07 1.327E-07 1.333E-07

SUBLAYER 2

MOISTURE 2.782E-04 2.699E-04 2.610E-04 2.446E-04 2.382E-04 2.346E-04 2.349E-04 2.370E-04 2.387E-04 2.400E-04 2.409E-04 2.414E-04
%SOLUBILITY 8.976E-04 8.705E-04 8.418E-04 7.890E-04 7.685E-04 7.568E-04 7.577E-04 7.644E-04 7.699E-04 7.742E-04 7.770E-04 7.788E-04
ADSORBED 9.015E-05 8.744E-05 8.456E-05 7.925E-05 7.719E-05 7.602E-05 7.611E-05 7.678E-05 7.734E-05 7.777E-05 7.805E-05 7.823E-05

SOIL AIR 5.601E-06 5.502E-06 5.372E-06 5.099E-06 4.958E-06 4.873E-06 4.786E-06 4.791E-06 4.785E-06 4.739E-06 4.753E-06 4.780E-06

SUBLAYER 3

MOISTURE 4.419E-03 4.298E-03 4.168E-03 3.925E-03 3.835E-03 3.788E-03 3.799E-03 3.834E-03 3.862E-03 3.883E-03 3.898E-03 3.908E-03
%SOLUBILITY 1.426E-02 1.386E-02 1.345E-02 1.266E-02 1.237E-02 1.222E-02 1.225E-02 1.237E-02 1.246E-02 1.253E-02 1.257E-02 1.261E-02
ADSORBED 1.432E-03 1.392E-03 1.351E-03 1.272E-03 1.243E-03 1.227E-03 1.231E-03 1.242E-03 1.251E-03 1.258E-03 1.263E-03 1.266E-03
SOIL AIR 8.896E-05 8.762E-05 8.580E-05 8.182E-05 7.981E-05 7.869E-05 7.741E-05 7.751E-05 7.742E-05 7.667E-05 7.691E-05 7.738E-05

SUBLAYER 4

MOISTURE 4.198E-02 4.093E-02 3.981E-02 3.766E-02 3.692E-02 3.658E-02 3.674E-02 3.709E-02 3.736E-02 3.757E-02 3.772E-02 3.784E-02
%SOLUBILITY 1.354E-01 1.320E-01 1.284E-01 1.215E-01 1.191E-01 1.180E-01 1.185E-01 1.196E-01 1.205E-01 1.212E-01 1.217E-01 1.220E-01
ADSORBED 1.360E-02 1.326E-02 1.290E-02 1.220E-02 1.196E-02 1.185E-02 1.191E-02 1.202E-02 1.211E-02 1.217E-02 1.222E-02 1.226E-02
SOIL AIR 8.450E-04 8.345E-04 8.196E-04 7.851E-04 7.684E-04 7.598E-04 7.487E-04 7.499E-04 7.490E-04 7.418E-04 7.442E-04 7.490E-04

LOWER SOIL ZONE:

SUBLAYER 1

MOISTURE 2.187E+00 2.165E+00 2.141E+00 2.092E+00 2.076E+00 2.069E+00 2.074E+00 2.083E+00 2.090E+00 2.095E+00 2.099E+00 2.102E+00
%SOLUBILITY 7.054E+00 6.983E+00 6.906E+00 6.747E+00 6.695E+00 6.674E+00 6.692E+00 6.720E+00 6.742E+00 6.759E+00 6.771E+00 6.781E+00
ADSORBED 1.771E+00 1.754E+00 1.734E+00 1.694E+00 1.681E+00 1.676E+00 1.680E+00 1.688E+00 1.693E+00 1.697E+00 1.700E+00 1.703E+00
SOIL AIR 4.402E-02 4.413E-02 4.407E-02 4.361E-02 4.319E-02 4.298E-02 4.227E-02 4.212E-02 4.190E-02 4.137E-02 4.141E-02 4.162E-02

SUBLAYER 2

MOISTURE 9.928E+00 9.880E+00 9.828E+00 9.712E+00 9.724E+00 9.767E+00 9.835E+00 9.886E+00 9.921E+00 9.946E+00 9.966E+00 9.988E+00
%SOLUBILITY 3.203E+01 3.187E+01 3.170E+01 3.133E+01 3.137E+01 3.151E+01 3.173E+01 3.189E+01 3.200E+01 3.209E+01 3.215E+01 3.222E+01
ADSORBED 8.042E+00 8.003E+00 7.961E+00 7.867E+00 7.877E+00 7.912E+00 7.966E+00 8.008E+00 8.036E+00 8.057E+00 8.073E+00 8.091E+00
SOIL AIR 1.998E-01 2.014E-01 2.023E-01 2.025E-01 2.023E-01 2.029E-01 2.004E-01 1.999E-01 1.989E-01 1.964E-01 1.966E-01 1.977E-01

POL DEP CM 1.488E+03 1.488E+03 1.489E+03 1.490E+03 1.490E+03 1.491E+03 1.491E+03 1.491E+03 1.491E+03 1.491E+03 1.491E+03 1.491E+03

1 YEAR - 100 ANNUAL SUMMARY REPORT

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-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265
TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SOIL ZONE 2:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SOIL ZONE 3:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 2.430E-10
SOIL AIR (UG/ML) 6.086E-12

SUBLAYER 2

SOIL MOISTURE (UG/ML) 6.000E-10
ADSORBED SOIL (UG/G) 4.860E-10
SOIL AIR (UG/ML) 1.217E-11

SUBLAYER 3

SOIL MOISTURE (UG/ML) 9.000E-10
ADSORBED SOIL (UG/G) 7.290E-10

SOIL AIR (UG/ML) 1.826E-11

SUBLAYER 4

SOIL MOISTURE (UG/ML) 1.300E-09
ADSORBED SOIL (UG/G) 1.053E-09
SOIL AIR (UG/ML) 2.637E-11

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.083E-09
ADSORBED SOIL (UG/G) 1.688E-10
SOIL AIR (UG/ML) 4.270E-11

SUBLAYER 2

SOIL MOISTURE (UG/ML) 1.500E-09
ADSORBED SOIL (UG/G) 1.215E-10
SOIL AIR (UG/ML) 3.069E-11

SUBLAYER 3

SOIL MOISTURE (UG/ML) 1.250E-09
ADSORBED SOIL (UG/G) 1.013E-10
SOIL AIR (UG/ML) 2.549E-11

SUBLAYER 4

SOIL MOISTURE (UG/ML) 1.000E-09
ADSORBED SOIL (UG/G) 8.100E-11
SOIL AIR (UG/ML) 2.029E-11

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 6.919E-06
ADSORBED SOIL (UG/G) 2.242E-06
SOIL AIR (UG/ML) 1.404E-07

SUBLAYER 2

SOIL MOISTURE (UG/ML) 2.466E-04
ADSORBED SOIL (UG/G) 7.991E-05
SOIL AIR (UG/ML) 5.003E-06

SUBLAYER 3

SOIL MOISTURE (UG/ML) 3.968E-03
ADSORBED SOIL (UG/G) 1.286E-03
SOIL AIR (UG/ML) 8.050E-05

SUBLAYER 4

SOIL MOISTURE (UG/ML) 3.818E-02
ADSORBED SOIL (UG/G) 1.237E-02
SOIL AIR (UG/ML) 7.746E-04

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.106E+00
ADSORBED SOIL (UG/G) I.706E+00
SOIL AIR (UG/ML) 4.272E-02

SUBLAYER 2

SOIL MOISTURE (UG/ML) 9.865E+00
ADSORBED SOIL (UG/G) 7.991E+00
SOIL AIR (UG/ML) 2.001E-01

MAX. POLL. DEPTH (M) 1.491E+01

YEAR - 200 MONTHLY RESULTS (OUTPUT)
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-- HYDROLOGIC CYCLE COMPONENTS --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MOIS. IN L1 (%)	7.405	8.161	9.001	10.849	10.905	10.485	9.673	9.001	8.553	8.217	7.965	7.685
MOIS. BELOW L1 (%)	7.405	8.161	9.001	10.849	10.905	10.485	9.673	9.001	8.553	8.217	7.965	7.685
PRECIPATION (CM)	0.577	3.988	4.381	8.036	6.021	4.888	2.542	0.512	0.090	0.051	0.566	0.685
NET INFILT. (CM)	0.490	3.313	3.723	6.362	4.615	4.066	2.266	0.407	0.068	0.044	0.094	0.392
EVAPOTRANS. (CM)	1.064	2.241	2.405	3.094	4.046	4.331	3.306	1.349	0.720	0.570	0.535	0.913
MOIS. RETEN (CM)	-0.427	1.152	1.280	2.815	0.085	-0.640	-1.237	-1.024	-0.682	-0.512	-0.384	-0.427
SUR. RUNOFF (CM)	0.087	0.675	0.658	1.675	1.406	0.822	0.276	0.105	0.022	0.000	0.472	0.293
GRW. RUNOFF (CM)	-0.148	-0.080	0.038	0.453	0.483	0.375	0.196	0.082	0.030	-0.014	-0.057	-0.095
YIELD (CM)	-0.061	0.595	0.696	2.128	1.889	1.197	0.472	0.187	0.052	-0.007	0.415	0.199
PAU/MPA (GZU)	1.088	0.992	0.998	0.992	1.000	0.998	1.001	1.138	1.002	1.705	2.177	1.008
PA/MPA (GZ)	1.088	0.992	0.998	0.992	1.000	0.998	1.001	1.138	1.002	1.705	2.177	1.008

1 -- POLLUTANT MASS INPUT TO COLUMN (UG) --

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
PRECIP.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD UPPER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD ZONE 2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD ZONE 3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
LOAD LOWER	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TOTAL INPUT 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

UPPER SOIL ZONE:

SUBLAYER 1

IN SOIL MOI 1.947E-02 2.145E-02 2.366E-02 2.852E-02 2.867E-02 2.756E-02 2.543E-02 2.366E-02 2.248E-02 2.160E-02 2.094E-02 2.020E-02
ADS ON SOIL 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01 3.173E-01
IN SOIL AIR 1.090E-03 1.063E-03 1.028E-03 9.399E-04 9.351E-04 9.564E-04 9.817E-04 1.010E-03 1.025E-03 1.027E-03 1.039E-03 1.057E-03

SUBLAYER 2

IN SOIL MOI 3.893E-02 4.291E-02 4.732E-02 5.704E-02 5.733E-02 5.513E-02 5.086E-02 4.732E-02 4.497E-02 4.320E-02 4.188E-02 4.040E-02
ADS ON SOIL 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01 6.346E-01
IN SOIL AIR 2.180E-03 2.126E-03 2.056E-03 1.880E-03 1.870E-03 1.913E-03 1.963E-03 2.019E-03 2.050E-03 2.054E-03 2.078E-03 2.115E-03

SUBLAYER 3

IN SOIL MOI 5.840E-02 6.436E-02 7.099E-02 8.556E-02 8.600E-02 8.269E-02 7.628E-02 7.099E-02 6.745E-02 6.480E-02 6.282E-02 6.061E-02
ADS ON SOIL 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01 9.518E-01
IN SOIL AIR 3.269E-03 3.190E-03 3.084E-03 2.820E-03 2.805E-03 2.869E-03 2.945E-03 3.029E-03 3.075E-03 3.080E-03 3.118E-03 3.172E-03

SUBLAYER 4

IN SOIL MOI 8.435E-02 9.297E-02 1.025E-01 1.236E-01 1.242E-01 1.194E-01 1.102E-01 1.025E-01 9.743E-02 9.360E-02 9.073E-02 8.754E-02
ADS ON SOIL 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00 1.375E+00
IN SOIL AIR 4.722E-03 4.607E-03 4.455E-03 4.073E-03 4.052E-03 4.144E-03 4.254E-03 4.375E-03 4.441E-03 4.449E-03 4.503E-03 4.581E-03

SOIL ZONE 2:

SUBLAYER 1

IN SOIL MOI 8.423E-03 1.857E-02 2.048E-02 4.936E-02 4.962E-02 4.771E-02 3.301E-02 1.024E-02 9.729E-03 9.347E-03 9.060E-03 8.742E-03
ADS ON SOIL 1.373E-02 2.746E-02 2.746E-02 5.492E-02 5.492E-02 5.492E-02 4.119E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02

IN SOIL AIR 4.716E-04 9.201E-04 8.898E-04 1.627E-03 1.619E-03 1.655E-03 1.274E-03 4.369E-04 4.435E-04 4.443E-04 4.497E-04 4.575E-04

SUBLAYER 2

IN SOIL MOI 8.423E-03 9.283E-03 1.024E-02 3.702E-02 3.721E-02 3.578E-02 1.100E-02 1.024E-02 9.729E-03 9.347E-03 9.060E-03 8.742E-03
ADS ON SOIL 1.373E-02 1.373E-02 1.373E-02 4.119E-02 4.119E-02 4.119E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02
IN SOIL AIR 4.716E-04 4.601E-04 4.449E-04 1.220E-03 1.214E-03 1.242E-03 4.248E-04 4.369E-04 4.435E-04 4.443E-04 4.497E-04 4.575E-04

SUBLAYER 3

IN SOIL MOI 8.423E-03 9.283E-03 1.024E-02 2.468E-02 2.481E-02 2.385E-02 1.100E-02 1.024E-02 9.729E-03 9.347E-03 9.060E-03 8.742E-03
ADS ON SOIL 1.373E-02 1.373E-02 1.373E-02 2.746E-02 2.746E-02 2.746E-02 I.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02
IN SOIL AIR 4.716E-04 4.601E-04 4.449E-04 8.134E-04 8.093E-04 8.277E-04 4.248E-04 4.369E-04 4.435E-04 4.443E-04 4.497E-04 4.575E-04

SUBLAYER 4

IN SOIL MOI 8.423E-03 9.283E-03 1.024E-02 1.234E-02 1.240E-02 1.193E-02 1.100E-02 1.024E-02 9.729E-03 9.347E-03 9.060E-03 8.742E-03
ADS ON SOIL 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02 1.373E-02
IN SOIL AIR 4.716E-04 4.601E-04 4.449E-04 4.067E-04 4.046E-04 4.138E-04 4.248E-04 4.369E-04 4.435E-04 4.443E-04 4.497E-04 4.575E-04

SOIL ZONE 3:

SUBLAYER 1

IN SOIL MOI 2.566E-01 2.828E-01 3.119E-01 3.759E-01 3.779E-01 3.633E-01 3.352E-01 3.119E-01 2.964E-01 2.847E-01 2.760E-01 2.663E-01
ADS ON SOIL 1.673E+00 1.673E+00 1.673E+00 1.673E+00 1.673E+00 1.673E+00 1.673E+00 1.673E+00 1.673E+00 1.673E+00 1.673E+00 1.673E+00
IN SOIL AIR 1.436E-02 1.401E-02 1.355E-02 1.239E-02 1.233E-02 1.261E-02 1.294E-02 1.331E-02 1.351E-02 1.353E-02 1.370E-02 1.394E-02

SUBLAYER 2

IN SOIL MOI 1.466E+00 1.576E+00 1.693E+00 1.933E+00 1.943E+00 1.868E+00 1.724E+00 1.604E+00 1.524E+00 1.464E+00 1.419E+00 1.369E+00
ADS ON SOIL 9.559E+00 9.320E+00 9.081E+00 8.603E+00 8.603E+00 8.603E+00 8.603E+00 8.603E+00 8.603E+00 8.603E+00 8.603E+00 8.603E+00
IN SOIL AIR 8.208E-02 7.808E-02 7.357E-02 6.371E-02 6.339E-02 6.483E-02 6.655E-02 6.845E-02 6.948E-02 6.960E-02 7.044E-02 7.167E-02

SUBLAYER 3

IN SOIL MOI 7.698E+00 8.362E+00 9.089E+00 1.058E+01 1.058E+01 1.022E+01 9.529E+00 8.956E+00 8.552E+00 8.257E+00 8.043E+00 7.799E+00

ADS ON SOIL 5.018E+01 4.947E+01 4.875E+01 4.708E+01 4.684E+01 4.708E+01 4.756E+01 4.803E+01 4.827E+01 4.851E+01 4.875E+01 4.899E+01
IN SOIL AIR 4.309E-01 4.144E-01 3.949E-01 3.487E-01 3.451E-01 3.548E-01 3.679E-01 3.822E-01 3.898E-01 3.925E-01 3.992E-01 4.081E-01

SUBLAYER 4

IN SOIL MOI 3.545E+01 3.801E+01 4.066E+01 4.643E+01 4.580E+01 4.357E+01 4.040E+01 3.801E+01 3.637E+01 3.514E+01 3.418E+01 3.313E+01
ADS ON SOIL 2.311E+02 2.249E+02 2.181E+02 2.066E+02 2.027E+02 2.006E+02 2.016E+02 2.038E+02 2.053E+02 2.065E+02 2.072E+02 2.081E+02
IN SOIL AIR 1.984E+00 1.884E+00 1.767E+00 1.530E+00 1.494E+00 1.512E+00 1.560E+00 1.622E+00 1.658E+00 1.670E+00 1.697E+00 1.734E+00

LOWER SOIL ZONE:

SUBLAYER 1

IN SOIL MOI 2.714E+06 2.961E+06 3.229E+06 3.802E+06 3.792E+06 3.634E+06 3.361E+06 3.141E+06 2.995E+06 2.884E+06 2.801E+06 2.706E+06
ADS ON SOIL 4.423E+07 4.379E+07 4.330E+07 4.230E+07 4.197E+07 4.183E+07 4.194E+07 4.212E+07 4.226E+07 4.236E+07 4.244E+07 4.250E+07
IN SOIL AIR 1.519E+05 1.467E+05 1.403E+05 1.253E+05 1.237E+05 1.261E+05 1.298E+05 1.340E+05 1.365E+05 1.371E+05 1.390E+05 1.416E+05

SUBLAYER 2

IN SOIL MOI 5.940E+07 6.491E+07 7.092E+07 8.374E+07 8.369E+07 8.035E+07 7.440E+07 6.954E+07 6.629E+07 6.385E+07 6.200E+07 5.993E+07
ADS ON SOIL 9.681E+08 9.599E+08 9.509E+08 9.316E+08 9.263E+08 9.249E+08 9.283E+08 9.324E+08 9.354E+08 9.378E+08 9.395E+08 9.411E+08
IN SOIL AIR 3.325E+06 3.217E+06 3.081E+06 2.760E+06 2.730E+06 2.788E+06 2.872E+06 2.967E+06 3.022E+06 3.035E+06 3.077E+06 3.136E+06

SUBLAYER 3

IN SOIL MOI 3.308E+08 3.622E+08 3.964E+08 4.697E+08 4.705E+08 4.527E+08 4.196E+08 3.923E+08 3.740E+08 3.602E+08 3.498E+08 3.382E+08
ADS ON SOIL 5.392E+09 5.356E+09 5.316E+09 5.225E+09 5.207E+09 5.211E+09 5.236E+09 5.260E+09 5.278E+09 5.291E+09 5.301E+09 5.312E+09
IN SOIL AIR 1.852E+07 1.795E+07 1.723E+07 1.548E+07 1.535E+07 1.571E+07 1.620E+07 1.674E+07 1.705E+07 1.712E+07 1.736E+07 1.770E+07

SUBLAYER 4

IN SOIL MOI 3.231E+08 3.545E+08 3.892E+08 4.648E+08 4.689E+08 4.538E+08 4.220E+08 3.948E+08 3.765E+08 3.627E+08 3.523E+08 3.407E+08
ADS ON SOIL 5.266E+09 5.243E+09 5.219E+09 5.171E+09 5.190E+09 5.223E+09 5.265E+09 5.294E+09 5.313E+09 5.327E+09 5.338E+09 5.350E+09
IN SOIL AIR 1.809E+07 1.757E+07 1.691E+07 1.532E+07 1.530E+07 1.574E+07 1.629E+07 1.685E+07 1.716E+07 1.724E+07 1.748E+07 1.783E+07

-- POLLUTANT CONCENTRATIONS (UG/ML) OR (UG/G) -- NOTE: IF CONCENTRATIONS ARE ZERO FOR EACH MONTH, THEY ARE NOT PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

MOISTURE 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10 3.000E-10
%SOLUBILITY 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10 9.677E-10
ADSORBED 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10 2.430E-10
SOIL AIR . 6.039E-12 6.116E-12 6.176E-12 6.254E-12 6.243E-12 6.231E-12 6.113E-12 6.065E-12 6.015E-12 5.923E-12 5.919E-12 5.939E-12

SUBLAYER 2

MOISTURE 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10 6.000E-10
%SOLUBILITY 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09 1.935E-09
ADSORBED 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10 4.860E-10
SOIL AIR 1.208E-11 1.223E-11 1.235E-11 1.251E-11 1.249E-11 1.246E-11 1.223E-11 1.213E-11 1.203E-11 1.185E-11 1.184E-11 1.188E-11

SUBLAYER 3

MOISTURE 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10 9.000E-10
%SOLUBILITY 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09 2.903E-09
ADSORBED 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10 7.290E-10
SOIL AIR 1.812E-11 1.835E-11 1.853E-11 1.876E-11 1.873E-11 1.869E-11 1.834E-11 1.820E-11 1.804E-11 1.777E-11 1.776E-11 1.782E-11

SUBLAYER 4

MOISTURE 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09 1.300E-09
%SOLUBILITY 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09 4.194E-09
ADSORBED 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09 1.053E-09
SOIL AIR 2.617E-11 2.650E-11 2.676E-11 2.710E-11 2.705E-11 2.700E-11 2.649E-11 2.628E-11 2.606E-11 2.567E-11 2.565E-11 2.574E-11

SOIL ZONE 2:

SUBLAYER 1

MOISTURE 1.000E-09 2.000E-09 2.000E-09 4.000E-09 4.000E-09 4.000E-09 3.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09
%SOLUBILITY 3.226E-09 6.452E-09 6.452E-09 1.290E-08 1.290E-08 1.290E-08 9.677E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09
ADSORBED 8.100E-11 1.620E-10 1.620E-10 3.240E-10 3.240E-10 3.240E-10 2.430E-10 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11
SOIL AIR 2.013E-11 4.077E-11 4.117E-11 8.339E-11 8.324E-11 8.309E-11 6.113E-11 2.022E-11 2.005E-11 1.974E-11 1.973E-11 1.980E-11

SUBLAYER 2

MOISTURE 1.000E-09 1.000E-09 1.000E-09 3.000E-09 3.000E-09 3.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09
%SOLUBILITY 3.226E-09 3.226E-09 3.226E-09 9.677E-09 9.677E-09 9.677E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09
ADSORBED 8.100E-11 8.100E-11 8.100E-11 2.430E-10 2.430E-10 2.430E-10 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11
SOIL AIR 2.013E-11 2.039E-11 2.059E-11 6.254E-11 6.243E-11 6.231E-11 2.038E-11 2.022E-11 2.005E-11 1.974E-11 1.973E-11 1.980E-11

SUBLAYER 3

MOISTURE 1.000E-09 1.000E-09 1.000E-09 2.000E-09 2.000E-09 2.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09
%SOLUBILITY 3.226E-09 3.226E-09 3.226E-09 6.452E-09 6.452E-09 6.452E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09
ADSORBED 8.100E-11 8.100E-11 8.100E-11 1.620E-10 1.620E-10 1.620E-10 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11
SOIL AIR 2.013E-11 2.039E-11 2.059E-11 4.169E-11 4.162E-11 4.154E-11 2.038E-11 2.022E-11 2.005E-11 1.974E-11 1.973E-11 1.980E-11

SUBLAYER 4

MOISTURE 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09 1.000E-09
%SOLUBILITY 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09 3.226E-09
ADSORBED 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11 8.100E-11
SOIL AIR 2.013E-11 2.039E-11 2.059E-11 2.085E-11 2.081E-11 2.077E-11 2.038E-11 2.022E-11 2.005E-11 1.974E-11 1.973E-11 1.980E-11

SOIL ZONE 3:

SUBLAYER 1

MOISTURE 7.000E-09 7.000E-09 7.000E-09 7.000E-09 7.000E-09 7.000E-09 7.000E-09 7.000E-09 7.000E-09 7.000E-09 7.000E-09 7.000E-09
%SOLUBILITY 2.258E-08 2.258E-08 2.258E-08 2.258E-08 2.258E-08 2.258E-08 2.258E-08 2.258E-08 2.258E-08 2.258E-08 2.258E-08 2.258E-08
ADSORBED 2.268E-09 2.268E-09 2.268E-09 2.268E-09 2.268E-09 2.268E-09 2.268E-09 2.268E-09 2.268E-09 2.268E-09 2.268E-09 2.268E-09

SOIL AIR 1.409E-10 1.427E-10 1.441E-10 1.459E-10 1.457E-10 1.454E-10 1.426E-10 1.415E-10 1.403E-10 1.382E-10 1.381E-10 1.386E-10

SUBLAYER 2

MOISTURE 4.000E-08 3.900E-08 3.800E-08 3.600E-08 3.600E-08 3.600E-08 3.600E-08 3.600E-08 3.600E-08 3.600E-08 3.600E-08 3.600E-08
%SOLUBILITY 1.290E-07 1.258E-07 1.226E-07 1.161E-07 1.161E-07 1.161E-07 1.161E-07 1.161E-07 1.161E-07 1.161E-07 1.161E-07 1.161E-07
ADSORBED 1.296E-08 1.264E-08 1.231E-08 1.166E-08 1.166E-08 1.166E-08 1.166E-08 1.166E-08 1.166E-08 1.166E-08 1.166E-08 1.166E-08
SOIL AIR 8.052E-10 7.951E-10 7.823E-10 7.505E-10 7.491E-10 7.478E-10 7.336E-10 7.278E-10 7.217E-10 7.108E-10 7.103E-10 7.127E-10

SUBLAYER 3

MOISTURE 2.100E-07 2.070E-07 2.040E-07 1.970E-07 1.960E-07 1.970E-07 1.990E-07 2.010E-07 2.020E-07 2.030E-07 2.040E-07 2.050E-07
%SOLUBILITY 6.774E-07 6.677E-07 6.581E-07 6.355E-07 6.323E-07 6.355E-07 6.419E-07 6.484E-07 6.516E-07 6.548E-07 6.581E-07 6.613E-07
ADSORBED 6.804E-08 6.707E-08 6.610E-08 6.383E-08 6.351E-08 6.383E-08 6.448E-08 6.513E-08 6.545E-08 6.577E-08 6.610E-08 6.642E-08
SOIL AIR 4.227E-09 4.220E-09 4.199E-09 4.107E-09 4.079E-09 4.092E-09 4.055E-09 4.064E-09 4.050E-09 4.008E-09 4.025E-09 4.059E-09

SUBLAYER 4

MOISTURE 9.670E-07 9.410E-07 9.125E-07 8.646E-07 8.484E-07 8.395E-07 8.437E-07 8.530E-07 8.590E-07 8.640E-07 8.670E-07 8.710E-07
%SOLUBILITY 3.119E-06 3.035E-06 2.944E-06 2.789E-06 2.737E-06 2.708E-06 2.722E-06 2.752E-06 2.771E-06 2.787E-06 2.797E-06 2.810E-06
ADSORBED 3.133E-07 3.049E-07 2.957E-07 2.801E-07 2.749E-07 2.720E-07 2.734E-07 2.764E-07 2.783E-07 2.799E-07 2.809E-07 2.822E-07
SOIL AIR 1.947E-08 1.918E-08 1.878E-08 1.802E-08 1.765E-08 1.744E-08 1.719E-08 1.725E-08 1.722E-08 1.706E-08 1.711E-08 1.724E-08

LOWER SOIL ZONE:

SUBLAYER 1

MOISTURE 4.581E-02 4.535E-02 4.485E-02 4.381E-02 4.347E-02 4.333E-02 4.344E-02 4.362E-02 4.376E-02 4.387E-02 4.395E-02 4.402E-02
%SOLUBILITY 1.478E-01 1.463E-01 1.447E-01 1.413E-01 1.402E-01 1.398E-01 1.401E-01 1.407E-01 1.412E-01 1.415E-01 1.418E-01 1.420E-01
ADSORBED 3.711E-02 3.674E-02 3.633E-02 3.549E-02 3.521E-02 3.510E-02 3.519E-02 3.534E-02 3.545E-02 3.554E-02 3.560E-02 3.565E-02
SOIL AIR 9.222E-04 9.246E-04 9.232E-04 9.133E-04 9.045E-04 8.999E-04 8.851E-04 8.819E-04 8.774E-04 8.662E-04 8.672E-04 8.714E-04

SUBLAYER 2

MOISTURE 1.003E+00 9.942E-01 9.848E-01 9.649E-01 9.593E-01 9.579E-01 9.614E-01 9.657E-01 9.688E-01 9.713E-01 9.730E-01 9.747E-01

%SOLUBILITY 3.234E+00 3.207E+00 3.177E+00 3.113E+00 3.095E+00 3.090E+00 3.101E+00 3.115E+00 3.125E+00 3.133E+00 3.139E+00 3.144E+00
ADSORBED 8.122E-01 8.053E-01 7.977E-01 7.816E-01 7.771E-01 7.760E-01 7.788E-01 7.822E-01 7.848E-01 7.868E-01 7.882E-01 7.895E-01
SOIL AIR 2.018E-02 2.027E-02 2.027E-02 2.011E-02 1.996E-02 1.990E-02 1.959E-02 1.952E-02 1.942E-02 1.918E-02 1.920E-02 1.930E-02

SUBLAYER 3

MOISTURE 5.584E+00 5.547E+00 5.505E+00 5.412E+00 5.393E+00 5.397E+00 5.423E+00 5.448E+00 5.466E+00 5.480E+00 5.490E+00 5.501E+00
%SOLUBILITY 1.801E+01 1.789E+01 1.776E+01 1.746E+01 1.740E+01 1.741E+01 1.749E+01 1.757E+01 1.763E+01 1.768E+01 1.771E+01 1.775E+01
ADSORBED 4.523E+00 4.493E+00 4.460E+00 4.384E+00 4.369E+00 4.372E+00 4.393E+00 4.413E+00 4.428E+00 4.439E+00 4.447E+00 4.456E+00
SOIL AIR · 1.124E-01 1.131E-01 1.133E-01 1.128E-01 1.122E-01 1.121E-01 1.105E-01 1.101E-01 1.096E-01 1.082E-01 1.083E-01 1.089E-01

SUBLAYER 4

MOISTURE 5.453E+00 5.430E+00 5.405E+00 5.356E+00 5.375E+00 5.410E+00 5.453E+00 5.483E+00 5.503E+00 5.517E+00 5.528E+00 5.541E+00
%SOLUBILITY 1.759E+01 1.752E+01 1.744E+01 1.728E+01 1.734E+01 1.745E+01 1.759E+01 1.769E+01 1.775E+01 1.780E+01 1.783E+01 1.787E+01
ADSORBED 4.417E+00 4.398E+00 4.378E+00 4.338E+00 4.354E+00 4.382E+00 4.417E+00 4.442E+00 4.457E+00 4.469E+00 4.478E+00 4.488E+00
SOIL AIR 1.098E-01 1.107E-01 1.113E-01 1.116E-01 1.118E-01 1.124E-01 1.111E-01 1.109E-01 1.103E-01 1.089E-01 1.091E-01 1.097E-01

POL DEP CM 1.796E+03 1.796E+03 1.797E+03 1.798E+03 1.798E+03 1.799E+03 1.799E+03 1.799E+03 1.799E+03 1.799E+03 1.799E+03 1.799E+03
1 YEAR - 200 ANNUAL SUMMARY REPORT
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-- TOTAL INPUTS (UG) --

UPPER SOIL ZONE 0.000E+00
SOIL ZONE 2 0.000E+00
SOIL ZONE 3 0.000E+00
LOWER SOIL ZONE 0.000E+00

-- HYDROLOGIC CYCLE COMPONENTS --

AVERAGE SOIL MOISTURE ZONE 1 (%) 8.992
AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 8.992
TOTAL PRECIPITATION (CM) 32.338
TOTAL INFILTRATION (CM) 25.841
TOTAL EVAPOTRANSPIRATION (CM) 24.575
TOTAL SURFACE RUNOFF (CM) 6.491
TOTAL GRW RUNOFF (CM) 1.265

TOTAL MOISTURE RETENTION (CM) 0.001
TOTAL YIELD (CM) 7.763
0 -- POLLUTANT MASS DISTRIBUTION IN COLUMN (UG) -- NOTE: IF COMPONENT IS ZERO EACH MONTH, IT IS NOT PRINTED

FOR FINAL MASS IN SOIL MOI., ADS. ON SOIL, SOIL AIR, IMMOBIL CEC, COMPLEXED, AND PURE PHASE FOR EACH SUBLAYER, SEE ABOVE (MONTH SEP)

UPPER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SOIL ZONE 2:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

SOIL ZONE 3:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

LOWER SOIL ZONE:

SUBLAYER 1

SUBLAYER 2

SUBLAYER 3

SUBLAYER 4

1 -- AVERAGE POLLUTANT CONCENTRATIONS -- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

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UPPER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 3.000E-10
ADSORBED SOIL (UG/G) 2.430E-10
SOIL AIR (UG/ML) 6.086E-12

SUBLAYER 2

SOIL MOISTURE (UG/ML) 6.000E-10
ADSORBED SOIL (UG/G) 4.860E-10
SOIL AIR (UG/ML) 1.217E-11

SUBLAYER 3

SOIL MOISTURE (UG/ML) 9.000E-10
ADSORBED SOIL (UG/G) 7.290E-10
SOIL AIR (UG/ML) 1.826E-11

SUBLAYER 4

SOIL MOISTURE (UG/ML) 1.300E-09
ADSORBED SOIL (UG/G) 1.053E-09
SOIL AIR (UG/ML) 2.637E-11

SOIL ZONE 2:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 2.083E-09
ADSORBED SOIL (UG/G) 1.688E-10
SOIL AIR (UG/ML) 4.270E-11

SUBLAYER 2

SOIL MOISTURE (UG/ML) 1.500E-09
ADSORBED SOIL (UG/G) 1.215E-10

SOIL AIR (UG/ML) 3.069E-11

SUBLAYER 3

SOIL MOISTURE (UG/ML) 1.250E-09
ADSORBED SOIL (UG/G) 1.013E-10
SOIL AIR (UG/ML) 2.549E-11

SUBLAYER 4

SOIL MOISTURE (UG/ML) 1.000E-09
ADSORBED SOIL (UG/G) 8.100E-11
SOIL AIR (UG/ML) 2.029E-11

SOIL ZONE 3:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 7.000E-09
ADSORBED SOIL (UG/G) 2.268E-09
SOIL AIR (UG/ML) 1.420E-10

SUBLAYER 2

SOIL MOISTURE (UG/ML) 3.675E-08
ADSORBED SOIL (UG/G) 1.191E-08
SOIL AIR (UG/ML) 7.456E-10

SUBLAYER 3

SOIL MOISTURE (UG/ML) 2.021E-07
ADSORBED SOIL (UG/G) 6.548E-08
SOIL AIR (UG/ML) 4.099E-09

SUBLAYER 4

SOIL MOISTURE (UG/ML) 8.776E-07
ADSORBED SOIL (UG/G) 2.843E-07
SOIL AIR (UG/ML) 1.780E-08

LOWER SOIL ZONE:

SUBLAYER 1

SOIL MOISTURE (UG/ML) 4.411E-02
ADSORBED SOIL (UG/G) 3.573E-02
SOIL AIR (UG/ML) 8.947E-04

SUBLAYER 2

SOIL MOISTURE (UG/ML) 9.732E-01
ADSORBED SOIL (UG/G) 7.883E-01
SOIL AIR (UG/ML) 1.974E-02

SUBLAYER 3

SOIL MOISTURE (UG/ML) 5.471E+00
ADSORBED SOIL (UG/G) 4.431E+00
SOIL AIR (UG/ML) 1.110E-01

SUBLAYER 4

SOIL MOISTURE (UG/ML) 5.454E+00
ADSORBED SOIL (UG/G) 4.418E+00
SOIL AIR (UG/ML) 1.106E-01

MAX. POLL. DEPTH (M) 1.799E+01

**********EXECUTION COMPLETED**********