Results of a Limited Health Risk Assessment and Ground-Water Modeling
6085 Scarlet Court
Dublin, California

March 6, 1996
3896.00-40

Prepared for
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1.0 INTRODUCTION

This report presents the results of a limited human health risk assessment (HRA) and ground-water modeling conducted for the 6085 Scarlet Court site in Dublin, California ("the Site"; Figure 1). This report was prepared on behalf of Mr. Arlen Ness for submittal to the Alameda County Health Care Services Agency Department of Environmental Health (ACHA).

1.1 Background

Three underground petroleum storage tanks (USTs) were removed from the Site in 1990. Results of subsequent hydrogeologic investigations conducted at the Site indicated that soil and shallow ground water in the vicinity of the USTs had been affected by petroleum hydrocarbons released from the USTs.

Approximately 1,000 cubic yards of petroleum-affected soil and 400 cubic yards of overburden were excavated from the former UST locations and stockpiled on site during 1994. Results of soil and ground-water sampling conducted in the immediate vicinity of the excavation indicated that, while the majority of petroleum-affected soil had been removed, some petroleum-affected soil remained in place.

Ground-water modeling was conducted during July 1995 to evaluate whether the concentrations of petroleum hydrocarbons left in soil at the Site warranted further remedial measures. Results of this modeling indicated that petroleum-affected soil at the Site would not result in concentrations of benzene in ground water in excess of the 10 parts per billion (ppb) cleanup level set by the ACHA.

Results of that computer modeling are summarized along with the results of investigations and remedial measures conducted at the Site in the report entitled "Results of Soil and Ground-Water Investigations and Remedial Activities, 6085 Scarlet Court, Dublin, California", dated and submitted to the ACHA on July 18, 1995 (Levine·Fricke 1995). The ACHA has requested additional data for the modeling that was conducted (e.g., output files, etc.).

Future land use at the Site is anticipated to be commercial, including construction of a warehouse-type building over the former tank locations. Construction activities reportedly will include installation of a vapor barrier beneath this building to address moisture and petroleum vapors that could potentially migrate from subsurface soils. The ACHA has requested that an HRA be conducted before the Site is developed to evaluate the heath risk associated with inhalation of vapors from petroleum-affected soil into ambient air (personal communication, James Lutton of Levine·Fricke and eva chu of the ACHA).

1.2 Objectives and Scope of Work

The objective of the HRA was to calculate the risk to human health associated with inhalation of vapors from petroleum-affected soil left in place at the Site. This exposure pathway was selected by the ACHA and is based on the anticipated future land use at the Site (e.g., commercial development with construction using a vapor barrier).

The methodologies of the American Society for Testing and Materials (ASTM 1994) and the US EPA (1989) were used to conduct a "Tier II"- type health risk calculation. A description of the methods and results of that calculation are presented in Section 2.0.

Additionally, this report responds to the ACHA's request for additional ground-water modeling data. Those additional data are presented in Section 3.0.

2.0 LIMITED HEALTH RISK ASSESSMENT

A "Tier II"-type limited HRA was conducted to evaluate the health risk associated with petroleum-affected soil that has been left in place at the Site. The risk associated with inhalation of vapors from petroleum hydrocarbon-affected soil beneath the Site was calculated using methods included in ASTM 1994 and EPA 1989. Conservative assumptions were used in this evaluation, resulting in a calculated risk that is likely much higher than the actual risk at the Site.

The risk associated with inhalation of vapors from petroleum-affected soil was calculated using the following three steps:

Step 1: The concentrations of benzene, toluene, ethylbenzene and xylene (BTEX compounds) in ambient air at the Site were calculated using a vapor transport model.

Step 2: The human intake of BTEX compounds resulting from long-term exposure to that ambient air was calculated using the methodology of EPA 1989.

Step 3: The human health risk associated with the intake from Step 2 was calculated using the methodology of EPA 1989.

2.1 Calculation of the Concentration of BTEX Compounds in Ambient Air

The concentration of BTEX compounds in ambient air was calculated using

$$C_{air} = (C_{soil})\left(\frac{H\rho_{soil}}{(\theta_{water} + k_d\rho_{soil} + H\theta_{air})\left(1+\left(\frac{U_{air}\delta_{air}L_{soil}}{D_{soil}W}\right)\right)}\right)(10^3) \qquad \text{ASTM 1994}$$

The diffusion coefficient through soil (D_{soil}) was calculated using:

$$D_{soil} = D_{air}\left(\frac{\theta_{air}^{3.33}}{\theta_{totla}^{3\,33}}\right) + D_{water}\left(\frac{\theta_{water}^{3.33}}{\theta_{total}^{3.33}}\right) \qquad \text{ASTM, 1994}$$

The effective diffusion coefficient in water (D_{water}) was calculated using:

$$D_{water} = \frac{2.74x10^{-4}}{m^{0.71}} \qquad \text{Swarzenbach 1993}$$

Finally, the soil/water distribution coefficient was calculated using:

$$K_d = K_{oc} * f_{oc}$$

The definitions for these terms and the input values used in this model are presented in the following table.

TABLE 1: Parameters Used to Calculate Concentrations of BTEX Compounds in Ambient Air

Parameter	Symbol	Units	Value	Comments
Concentration of BTEX compounds in ambient air	C_{air}	mg/m^3		calculated using above equations
Soil concentration	C_{soil}	mg/kg	chemical-specific	highest concentration detected in soil samples collected at the Site (see Table 2)
Henry's Law Constant	H	$atm\text{-}m^3/mol$	chemical-specific	from Montgomery and Welkolm 1992 (see Table 2)
Molecular	m	grams/mol	chemical-	from Montgomery and Welkolm 1992 (see Table

TABLE 1: Parameters Used to Calculate Concentrations of BTEX Compounds in Ambient Air

Parameter	Symbol	Units	Value	Comments
weight			specific	2)
Carbon-water sorption coefficient	K_{oc}	grams/gram	chemical-specific	from Montgomery and Welkolm 1992 (see Table 2)
Fraction of organic carbon	f_{oc}	unitless	0.0018	measured in field samples
Diffusion coefficient in air	D_{air}	cm^2/sec	chemical-specific	from Roy and Griffen 1990 (see Table 2)
Volumetric water content	θ_{water}	cm^3/cm^3	0.3341	ASTM 1994. (1)
Volumetric air content	θ_{air}	cm^3/cm^3	0.038	ASTM 1994. (1)
Mixing height	δ	cm	200	ASTM 1994
Wind speed	U	cm/sec	225	ASTM 1994
Depth to soil source	L	cm	244	shallowest depth that hydrocarbon-affected soil was detected in last sampling event.
Width of soil source	W	cm	2,286	based on size of excavation

(1) Water content data for samples collected from the Site indicated that the remaining petroleum-affected soil was 100% saturated. The values used for water content and air-filled porosity were taken from ASTM 1994 for capillary fringe soil.

TABLE 2: Chemical Properties of BTEX Compounds Used for Risk Calculations

Compound	Soil Concentration (C_{soil}) (mg/kg)	Henry's Law Constant (H) (atm/m^3-mol)	Molecular Weight (m) g/mol	Diffusion Coefficient in Air (D_{air}) (cm^2/sec)	Carbon-Water Sorption Coefficient (Koc) g/g
Benzene	14	0.00548	78.11	0.077	49
Toluene	64	0.0067	92.14	0.076	114.8
Ethylbenzene	33	0.0066	106.17	0.0658	95.5
Xylene	170	0.00535	106.17	0.071	128

Using the parameters listed in Tables 1 and 2, the following concentrations were calculated:

Chemical Concentration in Ambient Air

Benzene	8.13×10^{-5} mg/m^3
Toluene	3.44×10^{-4} mg/m^3
Ethylbenzene	1.65×10^{-4} mg/m^3
Xylene	6.46×10^{-4} mg/m^3

2.2 Calculation of Human Intake of Benzene Resulting from Long-Term Exposure to Ambient Air

The human intake of benzene in ambient air was calculated using:

$$Intake = \frac{CA * IR * ET * EF * ED}{BW * AT}$$ EPA 1989

Input parameters used for this calculation are provided on the following table.

TABLE 3: Input Parameters for Risk Calculation

Parameter	Symbol	Units	Value	Comments
Concentration of BTEX compounds in ambient air	CA	mg/m3		Calculated (see above discussion)

TABLE 3: Input Parameters for Risk Calculation

Parameter	Symbol	Units	Value	Comments
Inhalation rate, outdoor air	IR	m3/hr	0.83	US EPA 1989
Exposure time	ET	hours/day	12	Estimate for commercial setting
Exposure frequency	EF	days/yr	250	ASTM 1994
Exposure duration	ED	yr	25	Estimate for commercial setting
Body weight	BW	kg	70	EPA 1989
Averaging time (carcinogenic)	AT	days	25555	EPA 1989
Averaging time (non-carcinogenic)	AT	days	9125	EPA 1989
Unit risk factor for benzene	---------	$(mg/kg\text{-}day)^{-1}$	0.029	California EPA value
Reference concentration for toluene	RfC	(mg/kg-day)	0.4	EPA IRIS 1993
Reference concentration for ethylbenzene	RfC	(mg/kg-day)	0.1	EPA IRIS 1993
Reference concentration for xylene	RfC	(mg/kg-day)	2	EPA IRIS 1993

2.3 Calculation of the Human Health Risk Associated With the Calculated Intake

Step 3.1 Calculation of Risk Associated with Carcinogenic Endpoints

The individual excess lifetime cancer risk associated with the calculated ambient air concentration for benzene was determined using:

$$Risk = Intake * UnitRisk \qquad \text{EPA 1989}$$

Using a unit risk value for benzene of 0.029 $(mg/kg\text{-}day)^{-1}$, an individual excess lifetime cancer risk for benzene of $7.5x10^{-8}$ was calculated. This calculated risk is approximately 2 orders-of-magnitude lower than the California Department of Health Services value for "acceptable" risk of $1x10^{-6}$ and is two to four orders-of-magnitude lower than the EPA's target risk of $1x10^{-4}$ to $1x10^{-6}$.

Step 3.2 Calculation of the Risk Associated with Non-Carcinogenic Endpoints

The individual hazard quotient associated with the calculated ambient air concentrations was determined using:

Hazard Quotient = Intake/Reference Concentration *EPA 1989*

The calculated hazard quotient for toluene, ethylbenzene, and xylene was added to achieve a total hazard quotient for non-carcinogenic risk.

The following hazard quotients were calculated:

TABLE 4: Calculated Hazard Quotients for Non-Carcinogenic Endpoints

Compound	Calculated Hazard Quotient
Toluene	2.52×10^{-5}
Ethylbenzene	4.85×10^{-5}
Xylene	9.48×10^{-6}
Total Hazard Quotient	8.32×10^{-5}

The calculated total hazard quotient is several orders-of-magnitude lower than the target hazard quotient of 1. Those data, when considered with the results of the risk calculation for benzene, indicate that the risk associated with petroleum-affected soil beneath the Site is not significant.

3.0 GROUND-WATER MODELING

Computer modeling was conducted to evaluate the threat to ground water associated with petroleum-affected soil left in place after completion of remedial measures at the Site. A regulatory cleanup goal of 10 ppb benzene was set for shallow ground water at the Site by the ACHA (personal communication: James Lutton of Levine•Fricke and Ms. eva chu of the ACHA). Data from computer modeling was used to help assess whether remaining petroleum-affected soil at the Site would likely result in concentrations of benzene in shallow ground water greater than the regulatory cleanup level.

3.1 Methods

The analytical transient three-dimensional model AT123D was used for this evaluation. AT123D was developed for the U.S. EPA in 1981 and was designed to estimate the transport of dissolved chemicals in ground water and examine the effects of advection, dispersion, chemical adsorption, and chemical dispersion. Benzene was used as the indicator chemical for this evaluation because benzene is generally the most toxic and mobile component of gasoline, and because the cleanup goal for shallow ground water was set for benzene.

AT123D requires input data that are grouped as follows: Aquifer Property Data, Chemical Property Data for the Benzene Source Area, and the Initial Mass Data for Benzene in the Aquifer. Input parameters used for the AT123D simulation are presented in the following table.

TABLE 5: Input Parameters Used for the AT123D Simulation

Parameter	Unit	Value	Comment
Source area	ft^2	2,500	based on area of excavation (approximately 50' x 50')
Source thickness	ft	10	based on field data
Aquifer thickness	ft	20	typical value for water table aquifer
Bulk density	g/cm^3	1.65	measured in samples collected from the Site
Porosity	unitless	0.40	measured in samples collected from the Site

Effective porosity	unitless	0.30	typical value
Concentration of benzene in soil source area	mg/kg (ppm)	6.1	highly conservative value; based on the average concentration of benzene detected prior to the final phase of excavation at the Site. Given that the highest concentration of benzene detected in soil samples collected during the Phase III investigation was 0.300 ppm (GP-2 and 20 feet bgs), use of the 6.1 ppm benzene concentration from the Phase II data was conservative (i.e., resulted in higher calculated ground-water concentrations)
Hydraulic conductivity of shallow saturated sediments	cm/sec	5×10^{-5}	conservative estimate. Based on the sediment type encountered at the Site (stiff, silty clay) this value is likely an overestimate of the actual hydraulic conductivity, resulting in higher simulated concentrations of benzene away from the source area than would be expected.
Solubility of benzene	mg/l	1780	Montgomery and Welkom 1990
Henry's Law Constant	atm-m^3/mol	0.08	Montgomery and Welkom 1990
Longitudinal dispersivity	m	10	literature estimate
Transverse dispersivity	m	5	literature estimate
Vertical dispersivity	m	1	literature estimate
1/2-life of benzene	1/day	0.002	literature estimate

This section summarizes the results of computer modeling using AT123D and the input parameters described above.

3.2 Ground-Water Modeling Results

Concentrations of benzene in ground water were calculated at the edge of the simulated source area and at 13, 26, and 40 feet downgradient from the simulated source area. The

26-foot point was simulated to represent ground-water quality at monitoring well 1R, located approximately 26 feet downgradient from the remedial excavation boundary. At each of these distances, concentrations of benzene were calculated at 3, 10 and 20 feet below the surface of the water table.

Simulated concentrations of benzene over time are summarized in the following table. Output files for the AT123D simulation are included in Appendix A.

TABLE 6: Simulated Concentrations of Benzene in Shallow Ground Water (ppm) [1]

Time (yr.)	Distance Downgradient from Edge of Source Area (ft)			
	0	13	26[2]	40
0.2	3.93	0	0	0
0.5	1.82	0.000043	0	0
1	0.91	0.00275	0	0
2	0.59	0.012	8.9×10^{-6}	0
3	0.13	0.012	8.8×10^{-5}	3.4×10^{-8}
4	0.05	0.008	0.00019	5.4×10^{-7}
5	0.02	0.005	0.00022	1.9×10^{-6}
8	0.002	0.0007	9.1 x 10-5	4.6×10^{-6}

Notes:

(1) These concentrations represent the simulated concentration of benzene at a depth of 3 feet below the surface of the water table.

(2) This distance away from the source area was simulated to represent the location of monitoring well MW-1R.

In general and as expected, simulated concentrations of benzene decreased away from the source area, and decreased with depth below the water table surface. A peak concentration of benzene of 0.22 ppb was calculated 25 feet downgradient from the source area, at a depth of 3 feet below the water table at simulated year 5. These modeling data indicate that the petroleum-affected soil left in place at the Site likely will not result in concentrations of benzene in shallow ground water at MW-1R greater than the regulatory cleanup goal of 10 ppb.

4.0 SUMMARY AND CONCLUSIONS

An HRA was conducted to quantitatively evaluate the risk associated with petroleum-affected soil left at the Site. The HRA consisted of calculating the carcinogenic and non-carcinogenic human heath risk associated with inhalation of vapors in ambient air that could potentially migrate from petroleum-affected soil underlying the Site. Using the methods and procedures provided in ASTM 1994 and EPA 1989, an individual excess

lifetime cancer risk of $7.5x10^{-8}$ was calculated. This calculated risk is approximately 2 orders-of-magnitude lower than the California Department of Health Services value for "acceptable" risk of $1x10^{-6}$ and is two to four orders-of-magnitude lower than the EPA's target risk of $1x\ 10^{-4}$ to $1x\ 10^{-6}$. The calculated total hazard quotient is several orders-of-magnitude lower than the target hazard quotient of 1. Those data, when considered with the results of the risk calculation for benzene, indicate that the risk associated with petroleum-affected soil beneath the Site is not significant.

Computer modeling was conducted to evaluate the threat to ground water associated with petroleum-affected soil left in place after completion of remedial measures at the Site. Results of this modeling indicate that the petroleum-affected soil left in place at the Site likely will not result in concentrations of benzene in shallow ground water at MW-1R greater than the regulatory cleanup goal of 10 ppb.

REFERENCES

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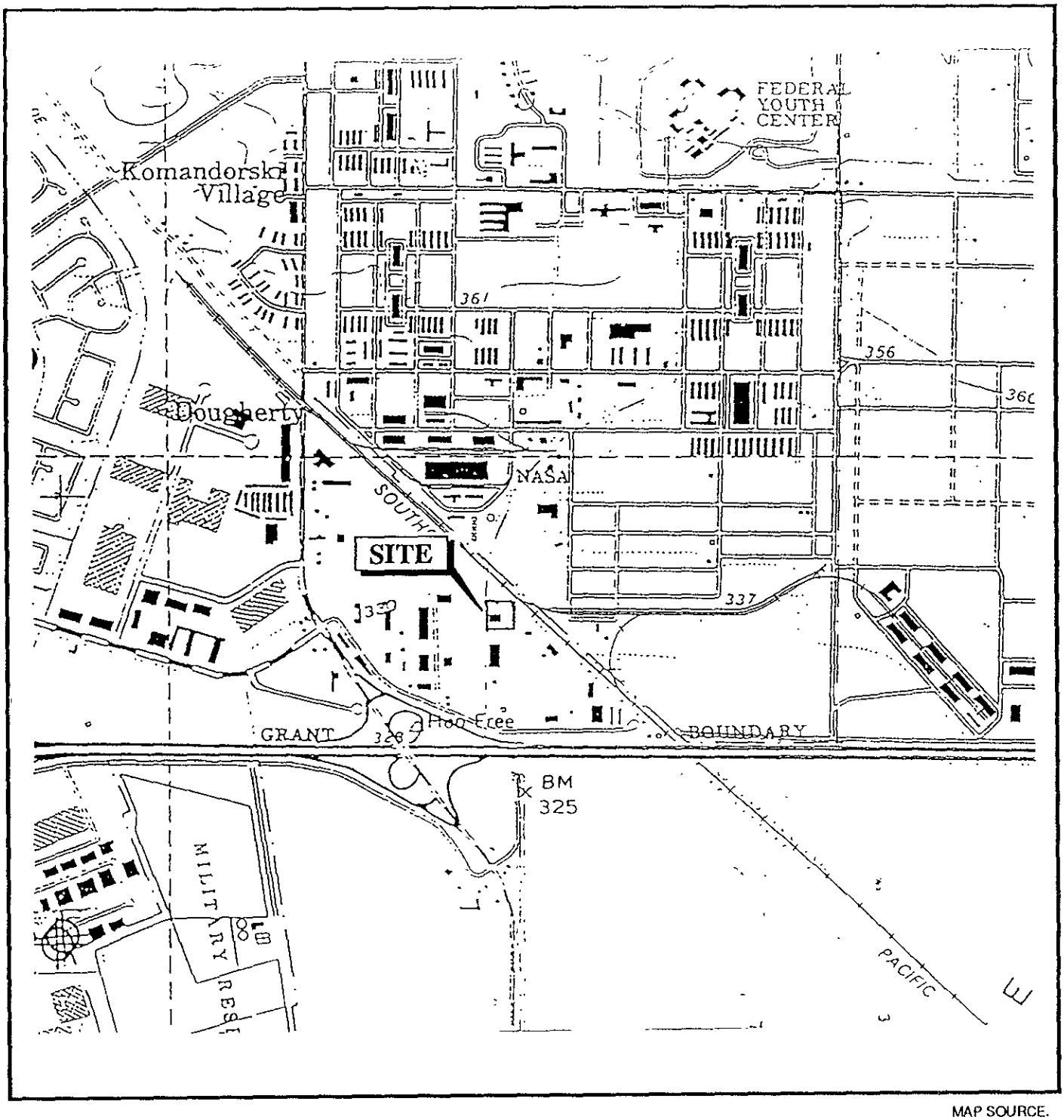

MAP SOURCE.
H_2OGEOL
Base from U.S.G.S. Dublin, California
7.5' Quadrangle

Figure 1 : SITE LOCATION

Project No. 3896
6085 Scarlett Court, Dublin, California

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021894 MJB JSC

APPENDIX A
COMPUTER OUTPUT FILES

04/19/95 11:22 am

April 19, 95 run 1

first step = 1 day

NO. OF POINTS IN X-DIRECTION	6
NO. OF POINTS IN Y-DIRECTION	5
NO. OF POINTS IN Z-DIRECTION	4
NO. OF ROOTS: NO. OF SERIES TERMS	400
NO. OF BEGINNING TIME STEP	3
NO. OF ENDING TIME STEP	37
NO. OF TIME INTERVALS FOR PRINTED OUT SOLUTION	2
INSTANTANEOUS SOURCE CONTROL = 0 FOR INSTANT SOURCE	0
SOURCE CONDITION CONTROL = 0 FOR STEADY SOURCE	0
INTERMITTENT OUTPUT CONTROL = 0 NO SUCH OUTPUT	1
CASE CONTROL =1 THERMAL, = 2 FOR CHEMICAL, = 3 RAD	2

AQUIFER DEPTH, = 0.0 FOR INFINITE DEEP (METERS)	0.6000E+01
AQUIFER WIDTH, = 0.0 FOR INFINITE WIDE (METERS)	0.2000E+04
BEGIN POINT OF X-SOURCE LOCATION (METERS)	-0.8000E+01
END POINT OF X-SOURCE LOCATION (METERS)	0.8000E+01
BEGIN POINT OF Y-SOURCE LOCATION (METERS)	-0.8000E+01
END POINT OF Y-SOURCE LOCATION (METERS)	0.8000E+01
BEGIN POINT OF Z-SOURCE LOCATION (METERS)	0.0000E+00
END POINT OF Z-SOURCE LOCATION (METERS)	0.3000E+01

POROSITY	0.3000E+00
HYDRAULIC CONDUCTIVITY (METER/HOUR)	0.1800E-02
HYDRAULIC GRADIENT	0.3000E-02
LONGITUDINAL DISPERSIVITY (METER)	0.1000E+02
LATERAL DISPERSIVITY (METER)	0.5000E+01
VERTICAL DISPERSIVITY (METER)	0.1000E+01
DISTRIBUTION COEFFICIENT, KD (M**3/KG)	0.1440E-03
HEAT EXCHANGE COEFFICIENT (KCAL/HR-M**2-DEGREE C)	0.0000E+00

MOLECULAR DIFFUSION MULTIPLY BY POROSITY (M**2/HR)	0.0000E+00
DECAY CONSTANT (PER HOUR)	0.8330E-04
BULK DENSITY OF THE SOIL (KG/M**3)	0.1650E+04
ACCURACY TOLERANCE FOR REACHING STEADY STATE	0.1000E-01
DENSITY OF WATER (KG/M**3)	0.1000E+04
TIME INTERVAL SIZE FOR THE DESIRED SOLUTION (HR)	0.7300E+03
DISCHARGE TIME (HR)	0.7300E+03
WASTE RELEASE RATE (KCAL/HR), (KG/HR), OR (CI/HR)	0.9480E+01

RETARDATION FACTOR	0.1792E+01
RETARDED DARCY VELOCITY (M/HR)	0.1004E-04
RETARDED LONGITUDINAL DISPERSION COEF. (M**2/HR)	0.1004E-03
RETARDED LATERAL DISPERSION COEFFICIENT (M**2/HR)	0.5022E-04
RETARDED VERTICAL DISPERSION COEFFICIENT (M**2/HR)	0.1004E-04

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.0000E+00 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Z = 1.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Z = 2.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Z = 3.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1460E+04 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.687E+01	0.687E+01	0.351E+01	0.000E+00	0.000E+00	0.000E+00
8.	0.747E+01	0.747E+01	0.382E+01	0.000E+00	0.000E+00	0.000E+00
0.	0.769E+01	0.769E+01	0.393E+01	0.000E+00	0.000E+00	0.000E+00
-8.	0.747E+01	0.747E+01	0.382E+01	0.000E+00	0.000E+00	0.000E+00
-16.	0.687E+01	0.687E+01	0.351E+01	0.000E+00	0.000E+00	0.000E+00

Z = 1.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.687E+01	0.687E+01	0.351E+01	0.000E+00	0.000E+00	0.000E+00
8.	0.747E+01	0.747E+01	0.382E+01	0.000E+00	0.000E+00	0.000E+00
0.	0.769E+01	0.769E+01	0.393E+01	0.000E+00	0.000E+00	0.000E+00
-8.	0.747E+01	0.747E+01	0.382E+01	0.000E+00	0.000E+00	0.000E+00
-16.	0.687E+01	0.687E+01	0.351E+01	0.000E+00	0.000E+00	0.000E+00

Z = 2.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.687E+01	0.687E+01	0.351E+01	0.000E+00	0.000E+00	0.000E+00
8.	0.747E+01	0.747E+01	0.382E+01	0.000E+00	0.000E+00	0.000E+00
0.	0.769E+01	0.769E+01	0.393E+01	0.000E+00	0.000E+00	0.000E+00
-8.	0.747E+01	0.747E+01	0.382E+01	0.000E+00	0.000E+00	0.000E+00
-16.	0.687E+01	0.687E+01	0.351E+01	0.000E+00	0.000E+00	0.000E+00

Z = 3.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.344E+01	0.344E+01	0.176E+01	0.000E+00	0.000E+00	0.000E+00
8.	0.374E+01	0.374E+01	0.191E+01	0.000E+00	0.000E+00	0.000E+00
0.	0.384E+01	0.384E+01	0.196E+01	0.000E+00	0.000E+00	0.000E+00
-8.	0.374E+01	0.374E+01	0.191E+01	0.000E+00	0.000E+00	0.000E+00
-16.	0.344E+01	0.344E+01	0.176E+01	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.2920E+04 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.457E+01	0.457E+01	0.235E+01	0.409E-06	0.000E+00	0.000E+00
8.	0.477E+01	0.477E+01	0.246E+01	0.426E-06	0.000E+00	0.000E+00
0.	0.484E+01	0.484E+01	0.249E+01	0.432E-06	0.000E+00	0.000E+00
-8.	0.477E+01	0.477E+01	0.246E+01	0.426E-06	0.000E+00	0.000E+00
-16.	0.457E+01	0.457E+01	0.235E+01	0.409E-06	0.000E+00	0.000E+00

Z = 1.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.457E+01	0.457E+01	0.235E+01	0.409E-06	0.000E+00	0.000E+00
8.	0.477E+01	0.477E+01	0.246E+01	0.426E-06	0.000E+00	0.000E+00
0.	0.484E+01	0.484E+01	0.249E+01	0.432E-06	0.000E+00	0.000E+00
-8.	0.477E+01	0.477E+01	0.246E+01	0.426E-06	0.000E+00	0.000E+00
-16.	0.457E+01	0.457E+01	0.235E+01	0.409E-06	0.000E+00	0.000E+00

Z = 2.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.457E+01	0.457E+01	0.235E+01	0.409E-06	0.000E+00	0.000E+00
8.	0.477E+01	0.477E+01	0.246E+01	0.426E-06	0.000E+00	0.000E+00
0.	0.484E+01	0.484E+01	0.249E+01	0.432E-06	0.000E+00	0.000E+00
-8.	0.477E+01	0.477E+01	0.246E+01	0.426E-06	0.000E+00	0.000E+00
-16.	0.457E+01	0.457E+01	0.235E+01	0.409E-06	0.000E+00	0.000E+00

Z = 3.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.229E+01	0.229E+01	0.118E+01	0.204E-06	0.000E+00	0.000E+00
8.	0.238E+01	0.238E+01	0.123E+01	0.213E-06	0.000E+00	0.000E+00
0.	0.242E+01	0.242E+01	0.125E+01	0.216E-06	0.000E+00	0.000E+00
-8.	0.238E+01	0.238E+01	0.123E+01	0.213E-06	0.000E+00	0.000E+00
-16.	0.229E+01	0.229E+01	0.118E+01	0.204E-06	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.4380E+04 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	0.	4.	8.	12.	16.	20.

16.	0.337E+01	0.337E+01	0.175E+01	0.416E-04	0.000E+00	0.000E+00
8.	0.347E+01	0.347E+01	0.180E+01	0.428E-04	0.000E+00	0.000E+00
0.	0.350E+01	0.350E+01	0.182E+01	0.432E-04	0.000E+00	0.000E+00
-8.	0.347E+01	0.347E+01	0.180E+01	0.428E-04	0.000E+00	0.000E+00
-16.	0.337E+01	0.337E+01	0.175E+01	0.416E-04	0.000E+00	0.000E+00

Z = 1.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.337E+01	0.337E+01	0.175E+01	0.416E-04	0.000E+00	0.000E+00
8.	0.347E+01	0.347E+01	0.180E+01	0.428E-04	0.000E+00	0.000E+00
0.	0.350E+01	0.350E+01	0.182E+01	0.432E-04	0.000E+00	0.000E+00
-8.	0.347E+01	0.347E+01	0.180E+01	0.428E-04	0.000E+00	0.000E+00
-16.	0.337E+01	0.337E+01	0.175E+01	0.416E-04	0.000E+00	0.000E+00

Z = 2.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.337E+01	0.337E+01	0.175E+01	0.416E-04	0.000E+00	0.000E+00
8.	0.347E+01	0.347E+01	0.180E+01	0.428E-04	0.000E+00	0.000E+00
0.	0.350E+01	0.350E+01	0.182E+01	0.432E-04	0.000E+00	0.000E+00
-8.	0.347E+01	0.347E+01	0.180E+01	0.428E-04	0.000E+00	0.000E+00
-16.	0.337E+01	0.337E+01	0.175E+01	0.416E-04	0.000E+00	0.000E+00

Z = 3.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.169E+01	0.169E+01	0.875E+00	0.208E-04	0.000E+00	0.000E+00
8.	0.173E+01	0.173E+01	0.900E+00	0.214E-04	0.000E+00	0.000E+00
0.	0.175E+01	0.175E+01	0.908E+00	0.216E-04	0.000E+00	0.000E+00
-8.	0.173E+01	0.173E+01	0.900E+00	0.214E-04	0.000E+00	0.000E+00
-16.	0.169E+01	0.169E+01	0.875E+00	0.208E-04	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.5840E+04 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.261E+01	0.261E+01	0.136E+01	0.358E-03	0.000E+00	0.000E+00
8.	0.267E+01	0.267E+01	0.139E+01	0.365E-03	0.000E+00	0.000E+00
0.	0.269E+01	0.269E+01	0.140E+01	0.368E-03	0.000E+00	0.000E+00
-8.	0.267E+01	0.267E+01	0.139E+01	0.365E-03	0.000E+00	0.000E+00

-16.	0.261E+01	0.261E+01	0.136E+01	0.358E-03	0.000E+00	0.000E+00

Z = 1.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.261E+01	0.261E+01	0.136E+01	0.358E-03	0.000E+00	0.000E+00
8.	0.267E+01	0.267E+01	0.139E+01	0.365E-03	0.000E+00	0.000E+00
0.	0.269E+01	0.269E+01	0.140E+01	0.368E-03	0.000E+00	0.000E+00
-8.	0.267E+01	0.267E+01	0.139E+01	0.365E-03	0.000E+00	0.000E+00
-16.	0.261E+01	0.261E+01	0.136E+01	0.358E-03	0.000E+00	0.000E+00

Z = 2.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.261E+01	0.261E+01	0.136E+01	0.357E-03	0.000E+00	0.000E+00
8.	0.266E+01	0.266E+01	0.139E+01	0.365E-03	0.000E+00	0.000E+00
0.	0.268E+01	0.268E+01	0.140E+01	0.367E-03	0.000E+00	0.000E+00
-8.	0.266E+01	0.266E+01	0.139E+01	0.365E-03	0.000E+00	0.000E+00
-16.	0.261E+01	0.261E+01	0.136E+01	0.357E-03	0.000E+00	0.000E+00

Z = 3.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.131E+01	0.131E+01	0.681E+00	0.179E-03	0.000E+00	0.000E+00
8.	0.133E+01	0.133E+01	0.696E+00	0.183E-03	0.000E+00	0.000E+00
0.	0.134E+01	0.134E+01	0.701E+00	0.184E-03	0.000E+00	0.000E+00
-8.	0.133E+01	0.133E+01	0.696E+00	0.183E-03	0.000E+00	0.000E+00
-16.	0.131E+01	0.131E+01	0.681E+00	0.179E-03	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7300E+04 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.208E+01	0.208E+01	0.109E+01	0.123E-02	0.000E+00	0.000E+00
8.	0.212E+01	0.212E+01	0.111E+01	0.125E-02	0.000E+00	0.000E+00
0.	0.213E+01	0.213E+01	0.112E+01	0.126E-02	0.000E+00	0.000E+00
-8.	0.212E+01	0.212E+01	0.111E+01	0.125E-02	0.000E+00	0.000E+00
-16.	0.208E+01	0.208E+01	0.109E+01	0.123E-02	0.000E+00	0.000E+00

Z = 1.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.208E+01	0.208E+01	0.109E+01	0.123E-02	0.000E+00	0.000E+00
8.	0.212E+01	0.212E+01	0.111E+01	0.125E-02	0.000E+00	0.000E+00
0.	0.213E+01	0.213E+01	0.112E+01	0.126E-02	0.000E+00	0.000E+00
-8.	0.212E+01	0.212E+01	0.111E+01	0.125E-02	0.000E+00	0.000E+00
-16.	0.208E+01	0.208E+01	0.109E+01	0.123E-02	0.000E+00	0.000E+00

Z = 2.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.207E+01	0.207E+01	0.109E+01	0.123E-02	0.000E+00	0.000E+00
8.	0.211E+01	0.211E+01	0.111E+01	0.125E-02	0.000E+00	0.000E+00
0.	0.212E+01	0.212E+01	0.111E+01	0.126E-02	0.000E+00	0.000E+00
-8.	0.211E+01	0.211E+01	0.111E+01	0.125E-02	0.000E+00	0.000E+00
-16.	0.207E+01	0.207E+01	0.109E+01	0.123E-02	0.000E+00	0.000E+00

Z = 3.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.104E+01	0.104E+01	0.546E+00	0.617E-03	0.000E+00	0.000E+00
8.	0.106E+01	0.106E+01	0.555E+00	0.627E-03	0.000E+00	0.000E+00
0.	0.106E+01	0.106E+01	0.558E+00	0.631E-03	0.000E+00	0.000E+00
-8.	0.106E+01	0.106E+01	0.555E+00	0.627E-03	0.000E+00	0.000E+00
-16.	0.104E+01	0.104E+01	0.546E+00	0.617E-03	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.8760E+04 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.169E+01	0.169E+01	0.890E+00	0.269E-02	0.000E+00	0.000E+00
8.	0.171E+01	0.171E+01	0.902E+00	0.273E-02	0.000E+00	0.000E+00
0.	0.172E+01	0.172E+01	0.907E+00	0.275E-02	0.000E+00	0.000E+00
-8.	0.171E+01	0.171E+01	0.902E+00	0.273E-02	0.000E+00	0.000E+00
-16.	0.169E+01	0.169E+01	0.890E+00	0.269E-02	0.000E+00	0.000E+00

Z = 1.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.169E+01	0.169E+01	0.890E+00	0.269E-02	0.000E+00	0.000E+00

8.	0.171E+01	0.171E+01	0.902E+00	0.273E-02	0.000E+00	0.000E+00
0.	0.172E+01	0.172E+01	0.907E+00	0.275E-02	0.000E+00	0.000E+00
-8.	0.171E+01	0.171E+01	0.902E+00	0.273E-02	0.000E+00	0.000E+00
-16.	0.169E+01	0.169E+01	0.890E+00	0.269E-02	0.000E+00	0.000E+00

Z = 2.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.168E+01	0.167E+01	0.882E+00	0.267E-02	0.000E+00	0.000E+00
8.	0.170E+01	0.170E+01	0.895E+00	0.271E-02	0.000E+00	0.000E+00
0.	0.171E+01	0.171E+01	0.899E+00	0.272E-02	0.000E+00	0.000E+00
-8.	0.170E+01	0.170E+01	0.895E+00	0.271E-02	0.000E+00	0.000E+00
-16.	0.168E+01	0.167E+01	0.882E+00	0.267E-02	0.000E+00	0.000E+00

Z = 3.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.845E+00	0.844E+00	0.445E+00	0.135E-02	0.000E+00	0.000E+00
8.	0.857E+00	0.856E+00	0.451E+00	0.137E-02	0.000E+00	0.000E+00
0.	0.861E+00	0.860E+00	0.453E+00	0.137E-02	0.000E+00	0.000E+00
-8.	0.857E+00	0.856E+00	0.451E+00	0.137E-02	0.000E+00	0.000E+00
-16.	0.845E+00	0.844E+00	0.445E+00	0.135E-02	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1022E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.139E+01	0.139E+01	0.734E+00	0.454E-02	0.000E+00	0.000E+00
8.	0.141E+01	0.140E+01	0.743E+00	0.459E-02	0.000E+00	0.000E+00
0.	0.141E+01	0.141E+01	0.746E+00	0.461E-02	0.000E+00	0.000E+00
-8.	0.141E+01	0.140E+01	0.743E+00	0.459E-02	0.000E+00	0.000E+00
-16.	0.139E+01	0.139E+01	0.734E+00	0.454E-02	0.000E+00	0.000E+00

Z = 1.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.139E+01	0.139E+01	0.734E+00	0.454E-02	0.000E+00	0.000E+00
8.	0.141E+01	0.140E+01	0.743E+00	0.459E-02	0.000E+00	0.000E+00
0.	0.141E+01	0.141E+01	0.746E+00	0.461E-02	0.000E+00	0.000E+00
-8.	0.141E+01	0.140E+01	0.743E+00	0.459E-02	0.000E+00	0.000E+00
-16.	0.139E+01	0.139E+01	0.734E+00	0.454E-02	0.000E+00	0.000E+00

Z = 2.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.137E+01	0.137E+01	0.724E+00	0.447E-02	0.000E+00	0.000E+00
8.	0.139E+01	0.138E+01	0.733E+00	0.453E-02	0.000E+00	0.000E+00
0.	0.139E+01	0.139E+01	0.736E+00	0.455E-02	0.000E+00	0.000E+00
-8.	0.139E+01	0.138E+01	0.733E+00	0.453E-02	0.000E+00	0.000E+00
-16.	0.137E+01	0.137E+01	0.724E+00	0.447E-02	0.000E+00	0.000E+00

Z = 3.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.695E+00	0.693E+00	0.367E+00	0.227E-02	0.000E+00	0.000E+00
8.	0.703E+00	0.702E+00	0.372E+00	0.230E-02	0.000E+00	0.000E+00
0.	0.706E+00	0.705E+00	0.373E+00	0.231E-02	0.000E+00	0.000E+00
-8.	0.703E+00	0.702E+00	0.372E+00	0.230E-02	0.000E+00	0.000E+00
-16.	0.695E+00	0.693E+00	0.367E+00	0.227E-02	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1168E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.115E+01	0.115E+01	0.612E+00	0.649E-02	0.137E-06	0.000E+00
8.	0.117E+01	0.116E+01	0.618E+00	0.656E-02	0.139E-06	0.000E+00
0.	0.117E+01	0.117E+01	0.621E+00	0.658E-02	0.139E-06	0.000E+00
-8.	0.117E+01	0.116E+01	0.618E+00	0.656E-02	0.139E-06	0.000E+00
-16.	0.115E+01	0.115E+01	0.612E+00	0.649E-02	0.137E-06	0.000E+00

Z = 1.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.115E+01	0.115E+01	0.612E+00	0.649E-02	0.137E-06	0.000E+00
8.	0.117E+01	0.116E+01	0.618E+00	0.656E-02	0.139E-06	0.000E+00
0.	0.117E+01	0.117E+01	0.621E+00	0.658E-02	0.139E-06	0.000E+00
-8.	0.117E+01	0.116E+01	0.618E+00	0.656E-02	0.139E-06	0.000E+00
-16.	0.115E+01	0.115E+01	0.612E+00	0.649E-02	0.137E-06	0.000E+00

Z = 2.00

Y	X = 0.	4.	8.	12.	16.	20.

16.	0.113E+01	0.113E+01	0.600E+00	0.636E-02	0.135E-06	0.000E+00
8.	0.114E+01	0.114E+01	0.606E+00	0.643E-02	0.136E-06	0.000E+00
0.	0.115E+01	0.114E+01	0.609E+00	0.646E-02	0.137E-06	0.000E+00
-8.	0.114E+01	0.114E+01	0.606E+00	0.643E-02	0.136E-06	0.000E+00
-16.	0.113E+01	0.113E+01	0.600E+00	0.636E-02	0.135E-06	0.000E+00

Z = 3.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.577E+00	0.575E+00	0.306E+00	0.325E-02	0.687E-07	0.000E+00
8.	0.583E+00	0.581E+00	0.309E+00	0.328E-02	0.695E-07	0.000E+00
0.	0.585E+00	0.583E+00	0.310E+00	0.329E-02	0.697E-07	0.000E+00
-8.	0.583E+00	0.581E+00	0.309E+00	0.328E-02	0.695E-07	0.000E+00
-16.	0.577E+00	0.575E+00	0.306E+00	0.325E-02	0.687E-07	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1314E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.965E+00	0.959E+00	0.514E+00	0.833E-02	0.604E-06	0.000E+00
8.	0.974E+00	0.968E+00	0.518E+00	0.841E-02	0.609E-06	0.000E+00
0.	0.977E+00	0.972E+00	0.520E+00	0.844E-02	0.611E-06	0.000E+00
-8.	0.974E+00	0.968E+00	0.518E+00	0.841E-02	0.609E-06	0.000E+00
-16.	0.965E+00	0.959E+00	0.514E+00	0.833E-02	0.604E-06	0.000E+00

Z = 1.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.965E+00	0.959E+00	0.513E+00	0.833E-02	0.604E-06	0.000E+00
8.	0.974E+00	0.968E+00	0.518E+00	0.841E-02	0.609E-06	0.000E+00
0.	0.977E+00	0.971E+00	0.520E+00	0.844E-02	0.611E-06	0.000E+00
-8.	0.974E+00	0.968E+00	0.518E+00	0.841E-02	0.609E-06	0.000E+00
-16.	0.965E+00	0.959E+00	0.513E+00	0.833E-02	0.604E-06	0.000E+00

Z = 2.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.940E+00	0.934E+00	0.500E+00	0.812E-02	0.588E-06	0.000E+00
8.	0.949E+00	0.943E+00	0.505E+00	0.820E-02	0.594E-06	0.000E+00
0.	0.952E+00	0.946E+00	0.507E+00	0.822E-02	0.596E-06	0.000E+00

-8.	0.949E+00	0.943E+00	0.505E+00	0.820E-02	0.594E-06	0.000E+00
-16.	0.940E+00	0.934E+00	0.500E+00	0.812E-02	0.588E-06	0.000E+00

Z = 3.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.482E+00	0.480E+00	0.257E+00	0.417E-02	0.302E-06	0.000E+00
8.	0.487E+00	0.484E+00	0.259E+00	0.421E-02	0.305E-06	0.000E+00
0.	0.488E+00	0.486E+00	0.260E+00	0.422E-02	0.306E-06	0.000E+00
-8.	0.487E+00	0.484E+00	0.259E+00	0.421E-02	0.305E-06	0.000E+00
-16.	0.482E+00	0.480E+00	0.257E+00	0.417E-02	0.302E-06	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1460E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.811E+00	0.805E+00	0.433E+00	0.992E-02	0.181E-05	0.000E+00
8.	0.818E+00	0.812E+00	0.437E+00	0.100E-01	0.183E-05	0.000E+00
0.	0.821E+00	0.814E+00	0.438E+00	0.100E-01	0.183E-05	0.000E+00
-8.	0.818E+00	0.812E+00	0.437E+00	0.100E-01	0.183E-05	0.000E+00
-16.	0.811E+00	0.805E+00	0.433E+00	0.992E-02	0.181E-05	0.000E+00

Z = 1.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.811E+00	0.805E+00	0.433E+00	0.992E-02	0.181E-05	0.000E+00
8.	0.818E+00	0.812E+00	0.437E+00	0.100E-01	0.183E-05	0.000E+00
0.	0.821E+00	0.814E+00	0.438E+00	0.100E-01	0.183E-05	0.000E+00
-8.	0.818E+00	0.812E+00	0.437E+00	0.100E-01	0.183E-05	0.000E+00
-16.	0.811E+00	0.805E+00	0.433E+00	0.992E-02	0.181E-05	0.000E+00

Z = 2.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.785E+00	0.779E+00	0.419E+00	0.960E-02	0.175E-05	0.000E+00
8.	0.792E+00	0.786E+00	0.423E+00	0.968E-02	0.177E-05	0.000E+00
0.	0.794E+00	0.788E+00	0.424E+00	0.971E-02	0.177E-05	0.000E+00
-8.	0.792E+00	0.786E+00	0.423E+00	0.968E-02	0.177E-05	0.000E+00
-16.	0.785E+00	0.779E+00	0.419E+00	0.960E-02	0.175E-05	0.000E+00

Z = 3.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.406E+00	0.403E+00	0.217E+00	0.496E-02	0.907E-06	0.000E+00
8.	0.409E+00	0.406E+00	0.219E+00	0.500E-02	0.915E-06	0.000E+00
0.	0.410E+00	0.407E+00	0.219E+00	0.502E-02	0.917E-06	0.000E+00
-8.	0.409E+00	0.406E+00	0.219E+00	0.500E-02	0.915E-06	0.000E+00
-16.	0.406E+00	0.403E+00	0.217E+00	0.496E-02	0.907E-06	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1606E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.686E+00	0.679E+00	0.367E+00	0.112E-01	0.437E-05	0.000E+00
8.	0.691E+00	0.684E+00	0.370E+00	0.113E-01	0.441E-05	0.000E+00
0.	0.693E+00	0.686E+00	0.371E+00	0.113E-01	0.442E-05	0.000E+00
-8.	0.691E+00	0.684E+00	0.370E+00	0.113E-01	0.441E-05	0.000E+00
-16.	0.686E+00	0.679E+00	0.367E+00	0.112E-01	0.437E-05	0.000E+00

Z = 1.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.686E+00	0.679E+00	0.367E+00	0.112E-01	0.437E-05	0.000E+00
8.	0.691E+00	0.684E+00	0.370E+00	0.113E-01	0.441E-05	0.000E+00
0.	0.693E+00	0.686E+00	0.371E+00	0.113E-01	0.442E-05	0.000E+00
-8.	0.691E+00	0.684E+00	0.370E+00	0.113E-01	0.441E-05	0.000E+00
-16.	0.686E+00	0.679E+00	0.367E+00	0.112E-01	0.437E-05	0.000E+00

Z = 2.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.659E+00	0.652E+00	0.353E+00	0.107E-01	0.420E-05	0.000E+00
8.	0.664E+00	0.657E+00	0.356E+00	0.108E-01	0.424E-05	0.000E+00
0.	0.666E+00	0.659E+00	0.357E+00	0.108E-01	0.425E-05	0.000E+00
-8.	0.664E+00	0.657E+00	0.356E+00	0.108E-01	0.424E-05	0.000E+00
-16.	0.659E+00	0.652E+00	0.353E+00	0.107E-01	0.420E-05	0.000E+00

Z = 3.00

Y	X 0.	4.	8.	12.	16.	20.

16.	0.343E+00	0.339E+00	0.184E+00	0.559E-02	0.219E-05	0.000E+00
8.	0.346E+00	0.342E+00	0.185E+00	0.563E-02	0.220E-05	0.000E+00
0.	0.346E+00	0.343E+00	0.186E+00	0.565E-02	0.221E-05	0.000E+00
-8.	0.346E+00	0.342E+00	0.185E+00	0.563E-02	0.220E-05	0.000E+00
-16.	0.343E+00	0.339E+00	0.184E+00	0.559E-02	0.219E-05	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1752E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.582E+00	0.574E+00	0.313E+00	0.121E-01	0.883E-05	0.000E+00
8.	0.586E+00	0.579E+00	0.315E+00	0.122E-01	0.889E-05	0.000E+00
0.	0.588E+00	0.580E+00	0.316E+00	0.122E-01	0.891E-05	0.000E+00
-8.	0.586E+00	0.579E+00	0.315E+00	0.122E-01	0.889E-05	0.000E+00
-16.	0.582E+00	0.574E+00	0.313E+00	0.121E-01	0.883E-05	0.000E+00

Z = 1.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.582E+00	0.574E+00	0.313E+00	0.121E-01	0.882E-05	0.000E+00
8.	0.586E+00	0.578E+00	0.315E+00	0.122E-01	0.889E-05	0.000E+00
0.	0.587E+00	0.580E+00	0.316E+00	0.122E-01	0.891E-05	0.000E+00
-8.	0.586E+00	0.578E+00	0.315E+00	0.122E-01	0.889E-05	0.000E+00
-16.	0.582E+00	0.574E+00	0.313E+00	0.121E-01	0.882E-05	0.000E+00

Z = 2.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.555E+00	0.548E+00	0.298E+00	0.115E-01	0.842E-05	0.000E+00
8.	0.559E+00	0.552E+00	0.301E+00	0.116E-01	0.848E-05	0.000E+00
0.	0.561E+00	0.553E+00	0.301E+00	0.116E-01	0.850E-05	0.000E+00
-8.	0.559E+00	0.552E+00	0.301E+00	0.116E-01	0.848E-05	0.000E+00
-16.	0.555E+00	0.548E+00	0.298E+00	0.115E-01	0.842E-05	0.000E+00

Z = 3.00

Y	0.	4.	8.	12.	X 16.	20.
16.	0.291E+00	0.287E+00	0.156E+00	0.604E-02	0.441E-05	0.000E+00
8.	0.293E+00	0.289E+00	0.157E+00	0.608E-02	0.445E-05	0.000E+00
0.	0.294E+00	0.290E+00	0.158E+00	0.610E-02	0.446E-05	0.000E+00
-8.	0.293E+00	0.289E+00	0.157E+00	0.608E-02	0.445E-05	0.000E+00

-16.	0.291E+00	0.287E+00	0.156E+00	0.604E-02	0.441E-05	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1898E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.495E+00	0.488E+00	0.267E+00	0.127E-01	0.157E-04	0.000E+00
8.	0.499E+00	0.491E+00	0.269E+00	0.127E-01	0.158E-04	0.000E+00
0.	0.500E+00	0.492E+00	0.269E+00	0.128E-01	0.159E-04	0.000E+00
-8.	0.499E+00	0.491E+00	0.269E+00	0.127E-01	0.158E-04	0.000E+00
-16.	0.495E+00	0.488E+00	0.267E+00	0.127E-01	0.157E-04	0.000E+00

Z = 1.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.495E+00	0.487E+00	0.267E+00	0.126E-01	0.157E-04	0.000E+00
8.	0.498E+00	0.491E+00	0.269E+00	0.127E-01	0.158E-04	0.000E+00
0.	0.500E+00	0.492E+00	0.269E+00	0.128E-01	0.159E-04	0.000E+00
-8.	0.498E+00	0.491E+00	0.269E+00	0.127E-01	0.158E-04	0.000E+00
-16.	0.495E+00	0.487E+00	0.267E+00	0.126E-01	0.157E-04	0.000E+00

Z = 2.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.469E+00	0.462E+00	0.253E+00	0.120E-01	0.149E-04	0.000E+00
8.	0.472E+00	0.465E+00	0.255E+00	0.121E-01	0.150E-04	0.000E+00
0.	0.474E+00	0.466E+00	0.255E+00	0.121E-01	0.150E-04	0.000E+00
-8.	0.472E+00	0.465E+00	0.255E+00	0.121E-01	0.150E-04	0.000E+00
-16.	0.469E+00	0.462E+00	0.253E+00	0.120E-01	0.149E-04	0.000E+00

Z = 3.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.248E+00	0.244E+00	0.134E+00	0.633E-02	0.786E-05	0.000E+00
8.	0.249E+00	0.245E+00	0.134E+00	0.637E-02	0.792E-05	0.000E+00
0.	0.250E+00	0.246E+00	0.135E+00	0.638E-02	0.793E-05	0.000E+00
-8.	0.249E+00	0.245E+00	0.134E+00	0.637E-02	0.792E-05	0.000E+00
-16.	0.248E+00	0.244E+00	0.134E+00	0.633E-02	0.786E-05	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.2044E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.423E+00	0.415E+00	0.229E+00	0.129E-01	0.253E-04	0.000E+00
8.	0.426E+00	0.418E+00	0.230E+00	0.130E-01	0.255E-04	0.000E+00
0.	0.427E+00	0.418E+00	0.230E+00	0.130E-01	0.255E-04	0.000E+00
-8.	0.426E+00	0.418E+00	0.230E+00	0.130E-01	0.255E-04	0.000E+00
-16.	0.423E+00	0.415E+00	0.229E+00	0.129E-01	0.253E-04	0.000E+00

Z = 1.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.423E+00	0.415E+00	0.228E+00	0.129E-01	0.253E-04	0.000E+00
8.	0.425E+00	0.417E+00	0.230E+00	0.130E-01	0.255E-04	0.000E+00
0.	0.426E+00	0.418E+00	0.230E+00	0.130E-01	0.255E-04	0.000E+00
-8.	0.425E+00	0.417E+00	0.230E+00	0.130E-01	0.255E-04	0.000E+00
-16.	0.423E+00	0.415E+00	0.228E+00	0.129E-01	0.253E-04	0.000E+00

Z = 2.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.398E+00	0.390E+00	0.215E+00	0.122E-01	0.238E-04	0.000E+00
8.	0.400E+00	0.393E+00	0.216E+00	0.122E-01	0.240E-04	0.000E+00
0.	0.401E+00	0.394E+00	0.217E+00	0.123E-01	0.240E-04	0.000E+00
-8.	0.400E+00	0.393E+00	0.216E+00	0.122E-01	0.240E-04	0.000E+00
-16.	0.398E+00	0.390E+00	0.215E+00	0.122E-01	0.238E-04	0.000E+00

Z = 3.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.212E+00	0.208E+00	0.114E+00	0.646E-02	0.127E-04	0.000E+00
8.	0.213E+00	0.209E+00	0.115E+00	0.650E-02	0.127E-04	0.000E+00
0.	0.213E+00	0.209E+00	0.115E+00	0.652E-02	0.128E-04	0.000E+00
-8.	0.213E+00	0.209E+00	0.115E+00	0.650E-02	0.127E-04	0.000E+00
-16.	0.212E+00	0.208E+00	0.114E+00	0.646E-02	0.127E-04	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.2190E+05 HRS

(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.362E+00	0.354E+00	0.196E+00	0.130E-01	0.376E-04	0.000E+00
8.	0.364E+00	0.356E+00	0.197E+00	0.130E-01	0.379E-04	0.000E+00
0.	0.365E+00	0.357E+00	0.198E+00	0.130E-01	0.379E-04	0.000E+00
-8.	0.364E+00	0.356E+00	0.197E+00	0.130E-01	0.379E-04	0.000E+00
-16.	0.362E+00	0.354E+00	0.196E+00	0.130E-01	0.376E-04	0.000E+00

Z = 1.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.362E+00	0.354E+00	0.196E+00	0.129E-01	0.376E-04	0.000E+00
8.	0.364E+00	0.356E+00	0.197E+00	0.130E-01	0.378E-04	0.000E+00
0.	0.364E+00	0.356E+00	0.197E+00	0.130E-01	0.379E-04	0.000E+00
-8.	0.364E+00	0.356E+00	0.197E+00	0.130E-01	0.378E-04	0.000E+00
-16.	0.362E+00	0.354E+00	0.196E+00	0.129E-01	0.376E-04	0.000E+00

Z = 2.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.338E+00	0.331E+00	0.183E+00	0.121E-01	0.352E-04	0.000E+00
8.	0.340E+00	0.333E+00	0.184E+00	0.122E-01	0.354E-04	0.000E+00
0.	0.341E+00	0.333E+00	0.185E+00	0.122E-01	0.354E-04	0.000E+00
-8.	0.340E+00	0.333E+00	0.184E+00	0.122E-01	0.354E-04	0.000E+00
-16.	0.338E+00	0.331E+00	0.183E+00	0.121E-01	0.352E-04	0.000E+00

Z = 3.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.181E+00	0.177E+00	0.981E-01	0.648E-02	0.188E-04	0.000E+00
8.	0.182E+00	0.178E+00	0.987E-01	0.651E-02	0.189E-04	0.000E+00
0.	0.182E+00	0.178E+00	0.988E-01	0.652E-02	0.190E-04	0.000E+00
-8.	0.182E+00	0.178E+00	0.987E-01	0.651E-02	0.189E-04	0.000E+00
-16.	0.181E+00	0.177E+00	0.981E-01	0.648E-02	0.188E-04	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.2336E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.311E+00	0.303E+00	0.169E+00	0.128E-01	0.524E-04	0.000E+00
8.	0.312E+00	0.304E+00	0.170E+00	0.128E-01	0.527E-04	0.000E+00
0.	0.313E+00	0.305E+00	0.170E+00	0.129E-01	0.528E-04	0.000E+00
-8.	0.312E+00	0.304E+00	0.170E+00	0.128E-01	0.527E-04	0.000E+00
-16.	0.311E+00	0.303E+00	0.169E+00	0.128E-01	0.524E-04	0.000E+00

Z = 1.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.310E+00	0.302E+00	0.168E+00	0.127E-01	0.523E-04	0.000E+00
8.	0.312E+00	0.304E+00	0.169E+00	0.128E-01	0.526E-04	0.000E+00
0.	0.312E+00	0.304E+00	0.170E+00	0.128E-01	0.527E-04	0.000E+00
-8.	0.312E+00	0.304E+00	0.169E+00	0.128E-01	0.526E-04	0.000E+00
-16.	0.310E+00	0.302E+00	0.168E+00	0.127E-01	0.523E-04	0.000E+00

Z = 2.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.288E+00	0.281E+00	0.157E+00	0.118E-01	0.486E-04	0.000E+00
8.	0.290E+00	0.282E+00	0.157E+00	0.119E-01	0.489E-04	0.000E+00
0.	0.290E+00	0.283E+00	0.158E+00	0.119E-01	0.490E-04	0.000E+00
-8.	0.290E+00	0.282E+00	0.157E+00	0.119E-01	0.489E-04	0.000E+00
-16.	0.288E+00	0.281E+00	0.157E+00	0.118E-01	0.486E-04	0.000E+00

Z = 3.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.155E+00	0.151E+00	0.844E-01	0.638E-02	0.262E-04	0.000E+00
8.	0.156E+00	0.152E+00	0.848E-01	0.642E-02	0.264E-04	0.000E+00
0.	0.156E+00	0.152E+00	0.850E-01	0.643E-02	0.264E-04	0.000E+00
-8.	0.156E+00	0.152E+00	0.848E-01	0.642E-02	0.264E-04	0.000E+00
-16.	0.155E+00	0.151E+00	0.844E-01	0.638E-02	0.262E-04	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.2482E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.267E+00	0.259E+00	0.145E+00	0.124E-01	0.692E-04	0.159E-07

8.	0.268E+00	0.261E+00	0.146E+00	0.125E-01	0.696E-04	0.160E-07
0.	0.269E+00	0.261E+00	0.146E+00	0.125E-01	0.697E-04	0.160E-07
-8.	0.268E+00	0.261E+00	0.146E+00	0.125E-01	0.696E-04	0.160E-07
-16.	0.267E+00	0.259E+00	0.145E+00	0.124E-01	0.692E-04	0.159E-07

Z = 1.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.266E+00	0.259E+00	0.145E+00	0.124E-01	0.690E-04	0.159E-07
8.	0.268E+00	0.260E+00	0.146E+00	0.125E-01	0.694E-04	0.160E-07
0.	0.268E+00	0.261E+00	0.146E+00	0.125E-01	0.695E-04	0.160E-07
-8.	0.268E+00	0.260E+00	0.146E+00	0.125E-01	0.694E-04	0.160E-07
-16.	0.266E+00	0.259E+00	0.145E+00	0.124E-01	0.690E-04	0.159E-07

Z = 2.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.246E+00	0.239E+00	0.134E+00	0.114E-01	0.638E-04	0.147E-07
8.	0.247E+00	0.240E+00	0.135E+00	0.115E-01	0.641E-04	0.147E-07
0.	0.248E+00	0.241E+00	0.135E+00	0.115E-01	0.642E-04	0.148E-07
-8.	0.247E+00	0.240E+00	0.135E+00	0.115E-01	0.641E-04	0.147E-07
-16.	0.246E+00	0.239E+00	0.134E+00	0.114E-01	0.638E-04	0.147E-07

Z = 3.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.133E+00	0.130E+00	0.727E-01	0.621E-02	0.346E-04	0.796E-08
8.	0.134E+00	0.130E+00	0.730E-01	0.624E-02	0.348E-04	0.800E-08
0.	0.134E+00	0.131E+00	0.732E-01	0.625E-02	0.348E-04	0.801E-08
-8.	0.134E+00	0.130E+00	0.730E-01	0.624E-02	0.348E-04	0.800E-08
-16.	0.133E+00	0.130E+00	0.727E-01	0.621E-02	0.346E-04	0.796E-08

STEADY STATE SOLUTION HAS NOT BEEN REACHED BEFORE FINAL SIMULATING TIME

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.2628E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.230E+00	0.223E+00	0.125E+00	0.119E-01	0.874E-04	0.342E-07

8.	0.231E+00	0.224E+00	0.126E+00	0.120E-01	0.878E-04	0.344E-07
0.	0.231E+00	0.224E+00	0.126E+00	0.120E-01	0.879E-04	0.345E-07
-8.	0.231E+00	0.224E+00	0.126E+00	0.120E-01	0.878E-04	0.344E-07
-16.	0.230E+00	0.223E+00	0.125E+00	0.119E-01	0.874E-04	0.342E-07

Z = 1.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.229E+00	0.222E+00	0.125E+00	0.119E-01	0.871E-04	0.341E-07
8.	0.230E+00	0.223E+00	0.126E+00	0.120E-01	0.875E-04	0.343E-07
0.	0.231E+00	0.223E+00	0.126E+00	0.120E-01	0.877E-04	0.344E-07
-8.	0.230E+00	0.223E+00	0.126E+00	0.120E-01	0.875E-04	0.343E-07
-16.	0.229E+00	0.222E+00	0.125E+00	0.119E-01	0.871E-04	0.341E-07

Z = 2.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.210E+00	0.204E+00	0.115E+00	0.109E-01	0.800E-04	0.314E-07
8.	0.211E+00	0.205E+00	0.115E+00	0.110E-01	0.804E-04	0.315E-07
0.	0.212E+00	0.205E+00	0.116E+00	0.110E-01	0.805E-04	0.316E-07
-8.	0.211E+00	0.205E+00	0.115E+00	0.110E-01	0.804E-04	0.315E-07
-16.	0.210E+00	0.204E+00	0.115E+00	0.109E-01	0.800E-04	0.314E-07

Z = 3.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.115E+00	0.111E+00	0.627E-01	0.597E-02	0.437E-04	0.171E-07
8.	0.115E+00	0.112E+00	0.630E-01	0.600E-02	0.439E-04	0.172E-07
0.	0.116E+00	0.112E+00	0.631E-01	0.601E-02	0.440E-04	0.172E-07
-8.	0.115E+00	0.112E+00	0.630E-01	0.600E-02	0.439E-04	0.172E-07
-16.	0.115E+00	0.111E+00	0.627E-01	0.597E-02	0.437E-04	0.171E-07

April 19, 95 run3

NO. OF POINTS IN X-DIRECTION	6
NO. OF POINTS IN Y-DIRECTION	5
NO. OF POINTS IN Z-DIRECTION	4
NO. OF ROOTS: NO. OF SERIES TERMS	400
NO. OF BEGINNING TIME STEP	37
NO. OF ENDING TIME STEP	121
NO. OF TIME INTERVALS FOR PRINTED OUT SOLUTION	6
INSTANTANEOUS SOURCE CONTROL = 0 FOR INSTANT SOURCE	0
SOURCE CONDITION CONTROL = 0 FOR STEADY SOURCE	0
INTERMITTENT OUTPUT CONTROL = 0 NO SUCH OUTPUT	1
CASE CONTROL =1 THERMAL, = 2 FOR CHEMICAL, = 3 RAD	2

$\Delta t_{mstep} = 6$ mo

AQUIFER DEPTH, = 0.0 FOR INFINITE DEEP (METERS)	0.6000E+01
AQUIFER WIDTH, = 0.0 FOR INFINITE WIDE (METERS)	0.2000E+04
BEGIN POINT OF X-SOURCE LOCATION (METERS)	-0.8000E+01
END POINT OF X-SOURCE LOCATION (METERS)	0.8000E+01
BEGIN POINT OF Y-SOURCE LOCATION (METERS)	-0.8000E+01
END POINT OF Y-SOURCE LOCATION (METERS)	0.8000E+01
BEGIN POINT OF Z-SOURCE LOCATION (METERS)	0.0000E+00
END POINT OF Z-SOURCE LOCATION (METERS)	0.3000E+01

POROSITY	0.3000E+00
HYDRAULIC CONDUCTIVITY (METER/HOUR)	0.1800E-02
HYDRAULIC GRADIENT	0.3000E-02
LONGITUDINAL DISPERSIVITY (METER)	0.1000E+02
LATERAL DISPERSIVITY (METER)	0.5000E+01
VERTICAL DISPERSIVITY (METER)	0.1000E+01
DISTRIBUTION COEFFICIENT, KD (M**3/KG)	0.1440E-03
HEAT EXCHANGE COEFFICIENT (KCAL/HR-M**2-DEGREE C)	0.0000E+00

MOLECULAR DIFFUSION MULTIPLY BY POROSITY (M**2/HR)	0.0000E+00
DECAY CONSTANT (PER HOUR)	0.8330E-04
BULK DENSITY OF THE SOIL (KG/M**3)	0.1650E+04
ACCURACY TOLERANCE FOR REACHING STEADY STATE	0.1000E-01
DENSITY OF WATER (KG/M**3)	0.1000E+04
TIME INTERVAL SIZE FOR THE DESIRED SOLUTION (HR)	0.7300E+03
DISCHARGE TIME (HR)	0.7300E+03
WASTE RELEASE RATE (KCAL/HR), (KG/HR), OR (CI/HR)	0.9480E+01

RETARDATION FACTOR	0.1792E+01
RETARDED DARCY VELOCITY (M/HR)	0.1004E-04
RETARDED LONGITUDINAL DISPERSION COEF. (M**2/HR)	0.1004E-03
RETARDED LATERAL DISPERSION COEFFICIENT (M**2/HR)	0.5022E-04
RETARDED VERTICAL DISPERSION COEFFICIENT (M**2/HR)	0.1004E-04

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.0000E+00 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Z = 1.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Z = 2.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Z = 3.00

Y	X 0.	4.	8.	12.	16.	20.
16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-16.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.2628E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.230E+00	0.223E+00	0.125E+00	0.119E-01	0.874E-04	0.342E-07
8.	0.231E+00	0.224E+00	0.126E+00	0.120E-01	0.878E-04	0.344E-07
0.	0.231E+00	0.224E+00	0.126E+00	0.120E-01	0.879E-04	0.345E-07
-8.	0.231E+00	0.224E+00	0.126E+00	0.120E-01	0.878E-04	0.344E-07
-16.	0.230E+00	0.223E+00	0.125E+00	0.119E-01	0.874E-04	0.342E-07

Z = 1.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.229E+00	0.222E+00	0.125E+00	0.119E-01	0.871E-04	0.341E-07
8.	0.230E+00	0.223E+00	0.126E+00	0.120E-01	0.875E-04	0.343E-07
0.	0.231E+00	0.223E+00	0.126E+00	0.120E-01	0.877E-04	0.344E-07
-8.	0.230E+00	0.223E+00	0.126E+00	0.120E-01	0.875E-04	0.343E-07
-16.	0.229E+00	0.222E+00	0.125E+00	0.119E-01	0.871E-04	0.341E-07

Z = 2.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.210E+00	0.204E+00	0.115E+00	0.109E-01	0.800E-04	0.314E-07
8.	0.211E+00	0.205E+00	0.115E+00	0.110E-01	0.804E-04	0.315E-07
0.	0.212E+00	0.205E+00	0.116E+00	0.110E-01	0.805E-04	0.316E-07
-8.	0.211E+00	0.205E+00	0.115E+00	0.110E-01	0.804E-04	0.315E-07
-16.	0.210E+00	0.204E+00	0.115E+00	0.109E-01	0.800E-04	0.314E-07

Z = 3.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.115E+00	0.111E+00	0.627E-01	0.597E-02	0.437E-04	0.171E-07
8.	0.115E+00	0.112E+00	0.630E-01	0.600E-02	0.439E-04	0.172E-07
0.	0.116E+00	0.112E+00	0.631E-01	0.601E-02	0.440E-04	0.172E-07
-8.	0.115E+00	0.112E+00	0.630E-01	0.600E-02	0.439E-04	0.172E-07
-16.	0.115E+00	0.111E+00	0.627E-01	0.597E-02	0.437E-04	0.171E-07

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.3066E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.148E+00	0.142E+00	0.812E-01	0.101E-01	0.143E-03	0.181E-06
8.	0.148E+00	0.142E+00	0.816E-01	0.102E-01	0.144E-03	0.181E-06
0.	0.148E+00	0.143E+00	0.817E-01	0.102E-01	0.144E-03	0.182E-06
-8.	0.148E+00	0.142E+00	0.816E-01	0.102E-01	0.144E-03	0.181E-06
-16.	0.148E+00	0.142E+00	0.812E-01	0.101E-01	0.143E-03	0.181E-06

Z = 1.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.147E+00	0.141E+00	0.808E-01	0.101E-01	0.143E-03	0.180E-06
8.	0.147E+00	0.142E+00	0.811E-01	0.101E-01	0.143E-03	0.180E-06
0.	0.148E+00	0.142E+00	0.812E-01	0.101E-01	0.143E-03	0.181E-06
-8.	0.147E+00	0.142E+00	0.811E-01	0.101E-01	0.143E-03	0.180E-06
-16.	0.147E+00	0.141E+00	0.808E-01	0.101E-01	0.143E-03	0.180E-06

Z = 2.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.133E+00	0.127E+00	0.730E-01	0.909E-02	0.129E-03	0.162E-06
8.	0.133E+00	0.128E+00	0.733E-01	0.913E-02	0.129E-03	0.163E-06
0.	0.133E+00	0.128E+00	0.734E-01	0.914E-02	0.130E-03	0.163E-06
-8.	0.133E+00	0.128E+00	0.733E-01	0.913E-02	0.129E-03	0.163E-06
-16.	0.133E+00	0.127E+00	0.730E-01	0.909E-02	0.129E-03	0.162E-06

Z = 3.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.738E-01	0.709E-01	0.406E-01	0.506E-02	0.717E-04	0.904E-07
8.	0.741E-01	0.712E-01	0.408E-01	0.508E-02	0.720E-04	0.907E-07
0.	0.742E-01	0.713E-01	0.408E-01	0.509E-02	0.721E-04	0.908E-07
-8.	0.741E-01	0.712E-01	0.408E-01	0.508E-02	0.720E-04	0.907E-07
-16.	0.738E-01	0.709E-01	0.406E-01	0.506E-02	0.717E-04	0.904E-07

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.3504E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X = 0.	4.	8.	12.	16.	20.

16.	0.958E-01	0.912E-01	0.531E-01	0.813E-02	0.189E-03	0.541E-06
8.	0.962E-01	0.916E-01	0.533E-01	0.815E-02	0.190E-03	0.543E-06
0.	0.963E-01	0.917E-01	0.534E-01	0.816E-02	0.190E-03	0.544E-06
-8.	0.962E-01	0.916E-01	0.533E-01	0.815E-02	0.190E-03	0.543E-06
-16.	0.958E-01	0.912E-01	0.531E-01	0.813E-02	0.189E-03	0.541E-06

Z = 1.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.950E-01	0.905E-01	0.527E-01	0.806E-02	0.188E-03	0.537E-06
8.	0.954E-01	0.908E-01	0.529E-01	0.809E-02	0.189E-03	0.539E-06
0.	0.955E-01	0.909E-01	0.529E-01	0.810E-02	0.189E-03	0.539E-06
-8.	0.954E-01	0.908E-01	0.529E-01	0.809E-02	0.189E-03	0.539E-06
-16.	0.950E-01	0.905E-01	0.527E-01	0.806E-02	0.188E-03	0.537E-06

Z = 2.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.847E-01	0.806E-01	0.469E-01	0.718E-02	0.167E-03	0.478E-06
8.	0.850E-01	0.809E-01	0.471E-01	0.721E-02	0.168E-03	0.480E-06
0.	0.851E-01	0.810E-01	0.472E-01	0.721E-02	0.168E-03	0.481E-06
-8.	0.850E-01	0.809E-01	0.471E-01	0.721E-02	0.168E-03	0.480E-06
-16.	0.847E-01	0.806E-01	0.469E-01	0.718E-02	0.167E-03	0.478E-06

Z = 3.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.479E-01	0.456E-01	0.266E-01	0.406E-02	0.948E-04	0.271E-06
8.	0.481E-01	0.458E-01	0.267E-01	0.408E-02	0.951E-04	0.272E-06
0.	0.482E-01	0.459E-01	0.267E-01	0.408E-02	0.952E-04	0.272E-06
-8.	0.481E-01	0.458E-01	0.267E-01	0.408E-02	0.951E-04	0.272E-06
-16.	0.479E-01	0.456E-01	0.266E-01	0.406E-02	0.948E-04	0.271E-06

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.3942E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.626E-01	0.592E-01	0.350E-01	0.630E-02	0.217E-03	0.117E-05
8.	0.628E-01	0.594E-01	0.351E-01	0.632E-02	0.217E-03	0.118E-05
0.	0.629E-01	0.594E-01	0.351E-01	0.633E-02	0.218E-03	0.118E-05
-8.	0.628E-01	0.594E-01	0.351E-01	0.632E-02	0.217E-03	0.118E-05

-16.	0.626E-01	0.592E-01	0.350E-01	0.630E-02	0.217E-03	0.117E-05

Z = 1.00

				X		
Y	0.	4.	8.	12.	16.	20.
16.	0.619E-01	0.585E-01	0.346E-01	0.623E-02	0.214E-03	0.116E-05
8.	0.621E-01	0.587E-01	0.347E-01	0.625E-02	0.215E-03	0.116E-05
0.	0.621E-01	0.587E-01	0.347E-01	0.625E-02	0.215E-03	0.116E-05
-8.	0.621E-01	0.587E-01	0.347E-01	0.625E-02	0.215E-03	0.116E-05
-16.	0.619E-01	0.585E-01	0.346E-01	0.623E-02	0.214E-03	0.116E-05

Z = 2.00

				X		
Y	0.	4.	8.	12.	16.	20.
16.	0.545E-01	0.515E-01	0.304E-01	0.548E-02	0.189E-03	0.102E-05
8.	0.546E-01	0.517E-01	0.305E-01	0.550E-02	0.189E-03	0.102E-05
0.	0.547E-01	0.517E-01	0.306E-01	0.550E-02	0.189E-03	0.102E-05
-8.	0.546E-01	0.517E-01	0.305E-01	0.550E-02	0.189E-03	0.102E-05
-16.	0.545E-01	0.515E-01	0.304E-01	0.548E-02	0.189E-03	0.102E-05

Z = 3.00

				X		
Y	0.	4.	8.	12.	16.	20.
16.	0.313E-01	0.296E-01	0.175E-01	0.315E-02	0.108E-03	0.586E-06
8.	0.314E-01	0.297E-01	0.176E-01	0.316E-02	0.109E-03	0.588E-06
0.	0.315E-01	0.297E-01	0.176E-01	0.317E-02	0.109E-03	0.589E-06
-8.	0.314E-01	0.297E-01	0.176E-01	0.316E-02	0.109E-03	0.588E-06
-16.	0.313E-01	0.296E-01	0.175E-01	0.315E-02	0.108E-03	0.586E-06

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.4380E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

				X		
Y	0.	4.	8.	12.	16.	20.
16.	0.411E-01	0.386E-01	0.232E-01	0.477E-02	0.224E-03	0.202E-05
8.	0.412E-01	0.388E-01	0.232E-01	0.478E-02	0.225E-03	0.202E-05
0.	0.413E-01	0.388E-01	0.232E-01	0.478E-02	0.225E-03	0.202E-05
-8.	0.412E-01	0.388E-01	0.232E-01	0.478E-02	0.225E-03	0.202E-05
-16.	0.411E-01	0.386E-01	0.232E-01	0.477E-02	0.224E-03	0.202E-05

Z = 1.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.405E-01	0.381E-01	0.228E-01	0.469E-02	0.221E-03	0.199E-05
8.	0.406E-01	0.382E-01	0.229E-01	0.471E-02	0.221E-03	0.199E-05
0.	0.406E-01	0.382E-01	0.229E-01	0.471E-02	0.221E-03	0.199E-05
-8.	0.406E-01	0.382E-01	0.229E-01	0.471E-02	0.221E-03	0.199E-05
-16.	0.405E-01	0.381E-01	0.228E-01	0.469E-02	0.221E-03	0.199E-05

Z = 2.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.353E-01	0.332E-01	0.199E-01	0.409E-02	0.192E-03	0.173E-05
8.	0.354E-01	0.332E-01	0.199E-01	0.410E-02	0.193E-03	0.173E-05
0.	0.354E-01	0.333E-01	0.199E-01	0.410E-02	0.193E-03	0.174E-05
-8.	0.354E-01	0.332E-01	0.199E-01	0.410E-02	0.193E-03	0.173E-05
-16.	0.353E-01	0.332E-01	0.199E-01	0.409E-02	0.192E-03	0.173E-05

Z = 3.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.206E-01	0.193E-01	0.116E-01	0.239E-02	0.112E-03	0.101E-05
8.	0.206E-01	0.194E-01	0.116E-01	0.239E-02	0.112E-03	0.101E-05
0.	0.207E-01	0.194E-01	0.116E-01	0.240E-02	0.113E-03	0.101E-05
-8.	0.206E-01	0.194E-01	0.116E-01	0.239E-02	0.112E-03	0.101E-05
-16.	0.206E-01	0.193E-01	0.116E-01	0.239E-02	0.112E-03	0.101E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.4818E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.271E-01	0.254E-01	0.154E-01	0.354E-02	0.215E-03	0.294E-05
8.	0.272E-01	0.254E-01	0.154E-01	0.355E-02	0.216E-03	0.294E-05
0.	0.272E-01	0.254E-01	0.155E-01	0.355E-02	0.216E-03	0.295E-05
-8.	0.272E-01	0.254E-01	0.154E-01	0.355E-02	0.216E-03	0.294E-05
-16.	0.271E-01	0.254E-01	0.154E-01	0.354E-02	0.215E-03	0.294E-05

Z = 1.00

					X	
Y	0.	4.	8.	12.	16.	20.
16.	0.266E-01	0.249E-01	0.151E-01	0.347E-02	0.211E-03	0.288E-05

8.	0.267E-01	0.249E-01	0.151E-01	0.348E-02	0.212E-03	0.289E-05
0.	0.267E-01	0.250E-01	0.152E-01	0.349E-02	0.212E-03	0.289E-05
-8.	0.267E-01	0.249E-01	0.151E-01	0.348E-02	0.212E-03	0.289E-05
-16.	0.266E-01	0.249E-01	0.151E-01	0.347E-02	0.211E-03	0.288E-05

Z = 2.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.230E-01	0.215E-01	0.130E-01	0.300E-02	0.182E-03	0.249E-05
8.	0.230E-01	0.215E-01	0.131E-01	0.301E-02	0.183E-03	0.249E-05
0.	0.230E-01	0.216E-01	0.131E-01	0.301E-02	0.183E-03	0.250E-05
-8.	0.230E-01	0.215E-01	0.131E-01	0.301E-02	0.183E-03	0.249E-05
-16.	0.230E-01	0.215E-01	0.130E-01	0.300E-02	0.182E-03	0.249E-05

Z = 3.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.136E-01	0.127E-01	0.772E-02	0.177E-02	0.108E-03	0.147E-05
8.	0.136E-01	0.127E-01	0.774E-02	0.178E-02	0.108E-03	0.148E-05
0.	0.136E-01	0.128E-01	0.774E-02	0.178E-02	0.108E-03	0.148E-05
-8.	0.136E-01	0.127E-01	0.774E-02	0.178E-02	0.108E-03	0.148E-05
-16.	0.136E-01	0.127E-01	0.772E-02	0.177E-02	0.108E-03	0.147E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.5256E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.179E-01	0.167E-01	0.103E-01	0.260E-02	0.195E-03	0.378E-05
8.	0.180E-01	0.168E-01	0.103E-01	0.260E-02	0.196E-03	0.378E-05
0.	0.180E-01	0.168E-01	0.103E-01	0.260E-02	0.196E-03	0.379E-05
-8.	0.180E-01	0.168E-01	0.103E-01	0.260E-02	0.196E-03	0.378E-05
-16.	0.179E-01	0.167E-01	0.103E-01	0.260E-02	0.195E-03	0.378E-05

Z = 1.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.175E-01	0.163E-01	0.100E-01	0.254E-02	0.191E-03	0.369E-05
8.	0.176E-01	0.164E-01	0.101E-01	0.254E-02	0.192E-03	0.370E-05
0.	0.176E-01	0.164E-01	0.101E-01	0.255E-02	0.192E-03	0.370E-05
-8.	0.176E-01	0.164E-01	0.101E-01	0.254E-02	0.192E-03	0.370E-05
-16.	0.175E-01	0.163E-01	0.100E-01	0.254E-02	0.191E-03	0.369E-05

Z = 2.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.150E-01	0.140E-01	0.861E-02	0.218E-02	0.164E-03	0.316E-05
8.	0.151E-01	0.140E-01	0.863E-02	0.218E-02	0.164E-03	0.317E-05
0.	0.151E-01	0.140E-01	0.864E-02	0.218E-02	0.164E-03	0.317E-05
-8.	0.151E-01	0.140E-01	0.863E-02	0.218E-02	0.164E-03	0.317E-05
-16.	0.150E-01	0.140E-01	0.861E-02	0.218E-02	0.164E-03	0.316E-05

Z = 3.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.900E-02	0.839E-02	0.516E-02	0.130E-02	0.981E-04	0.189E-05
8.	0.902E-02	0.841E-02	0.517E-02	0.131E-02	0.983E-04	0.190E-05
0.	0.902E-02	0.841E-02	0.517E-02	0.131E-02	0.984E-04	0.190E-05
-8.	0.902E-02	0.841E-02	0.517E-02	0.131E-02	0.983E-04	0.190E-05
-16.	0.900E-02	0.839E-02	0.516E-02	0.130E-02	0.981E-04	0.189E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.5694E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.119E-01	0.111E-01	0.688E-02	0.188E-02	0.170E-03	0.441E-05
8.	0.119E-01	0.111E-01	0.689E-02	0.189E-02	0.171E-03	0.442E-05
0.	0.119E-01	0.111E-01	0.690E-02	0.189E-02	0.171E-03	0.442E-05
-8.	0.119E-01	0.111E-01	0.689E-02	0.189E-02	0.171E-03	0.442E-05
-16.	0.119E-01	0.111E-01	0.688E-02	0.188E-02	0.170E-03	0.441E-05

Z = 1.00

Y	X = 0.	4.	8.	12.	16.	20.
16.	0.116E-01	0.108E-01	0.670E-02	0.184E-02	0.166E-03	0.430E-05
8.	0.116E-01	0.108E-01	0.671E-02	0.184E-02	0.166E-03	0.431E-05
0.	0.116E-01	0.108E-01	0.672E-02	0.184E-02	0.166E-03	0.431E-05
-8.	0.116E-01	0.108E-01	0.671E-02	0.184E-02	0.166E-03	0.431E-05
-16.	0.116E-01	0.108E-01	0.670E-02	0.184E-02	0.166E-03	0.430E-05

Z = 2.00

Y	X = 0.	4.	8.	12.	16.	20.

16.	0.986E-02	0.917E-02	0.570E-02	0.156E-02	0.141E-03	0.366E-05
8.	0.988E-02	0.919E-02	0.572E-02	0.157E-02	0.141E-03	0.367E-05
0.	0.989E-02	0.919E-02	0.572E-02	0.157E-02	0.142E-03	0.367E-05
-8.	0.988E-02	0.919E-02	0.572E-02	0.157E-02	0.141E-03	0.367E-05
-16.	0.986E-02	0.917E-02	0.570E-02	0.156E-02	0.141E-03	0.366E-05

Z = 3.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.597E-02	0.555E-02	0.346E-02	0.947E-03	0.855E-04	0.222E-05
8.	0.599E-02	0.557E-02	0.346E-02	0.949E-03	0.857E-04	0.222E-05
0.	0.599E-02	0.557E-02	0.347E-02	0.950E-03	0.858E-04	0.222E-05
-8.	0.599E-02	0.557E-02	0.346E-02	0.949E-03	0.857E-04	0.222E-05
-16.	0.597E-02	0.555E-02	0.346E-02	0.947E-03	0.855E-04	0.222E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.6132E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.790E-02	0.733E-02	0.461E-02	0.136E-02	0.143E-03	0.478E-05
8.	0.792E-02	0.735E-02	0.462E-02	0.136E-02	0.144E-03	0.479E-05
0.	0.792E-02	0.735E-02	0.463E-02	0.136E-02	0.144E-03	0.480E-05
-8.	0.792E-02	0.735E-02	0.462E-02	0.136E-02	0.144E-03	0.479E-05
-16.	0.790E-02	0.733E-02	0.461E-02	0.136E-02	0.143E-03	0.478E-05

Z = 1.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.767E-02	0.712E-02	0.448E-02	0.132E-02	0.139E-03	0.464E-05
8.	0.768E-02	0.713E-02	0.449E-02	0.132E-02	0.139E-03	0.465E-05
0.	0.769E-02	0.714E-02	0.449E-02	0.132E-02	0.140E-03	0.465E-05
-8.	0.768E-02	0.713E-02	0.449E-02	0.132E-02	0.139E-03	0.465E-05
-16.	0.767E-02	0.712E-02	0.448E-02	0.132E-02	0.139E-03	0.464E-05

Z = 2.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.649E-02	0.603E-02	0.379E-02	0.112E-02	0.118E-03	0.393E-05
8.	0.651E-02	0.604E-02	0.380E-02	0.112E-02	0.118E-03	0.394E-05
0.	0.651E-02	0.604E-02	0.380E-02	0.112E-02	0.118E-03	0.394E-05

-8.	0.651E-02	0.604E-02	0.380E-02	0.112E-02	0.118E-03	0.394E-05
-16.	0.649E-02	0.603E-02	0.379E-02	0.112E-02	0.118E-03	0.393E-05

Z = 3.00

				X		
Y	0.	4.	8.	12.	16.	20.
16.	0.398E-02	0.369E-02	0.232E-02	0.683E-03	0.722E-04	0.241E-05
8.	0.399E-02	0.370E-02	0.233E-02	0.684E-03	0.723E-04	0.241E-05
0.	0.399E-02	0.370E-02	0.233E-02	0.685E-03	0.724E-04	0.241E-05
-8.	0.399E-02	0.370E-02	0.233E-02	0.684E-03	0.723E-04	0.241E-05
-16.	0.398E-02	0.369E-02	0.232E-02	0.683E-03	0.722E-04	0.241E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.6570E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

				X		
Y	0.	4.	8.	12.	16.	20.
16.	0.526E-02	0.488E-02	0.310E-02	0.970E-03	0.118E-03	0.488E-05
8.	0.527E-02	0.489E-02	0.311E-02	0.972E-03	0.118E-03	0.489E-05
0.	0.527E-02	0.489E-02	0.311E-02	0.973E-03	0.118E-03	0.489E-05
-8.	0.527E-02	0.489E-02	0.311E-02	0.972E-03	0.118E-03	0.489E-05
-16.	0.526E-02	0.488E-02	0.310E-02	0.970E-03	0.118E-03	0.488E-05

Z = 1.00

				X		
Y	0.	4.	8.	12.	16.	20.
16.	0.509E-02	0.472E-02	0.300E-02	0.939E-03	0.114E-03	0.472E-05
8.	0.510E-02	0.473E-02	0.301E-02	0.941E-03	0.114E-03	0.473E-05
0.	0.510E-02	0.473E-02	0.301E-02	0.941E-03	0.114E-03	0.473E-05
-8.	0.510E-02	0.473E-02	0.301E-02	0.941E-03	0.114E-03	0.473E-05
-16.	0.509E-02	0.472E-02	0.300E-02	0.939E-03	0.114E-03	0.472E-05

Z = 2.00

				X		
Y	0.	4.	8.	12.	16.	20.
16.	0.429E-02	0.398E-02	0.253E-02	0.791E-03	0.958E-04	0.398E-05
8.	0.430E-02	0.398E-02	0.253E-02	0.793E-03	0.960E-04	0.399E-05
0.	0.430E-02	0.399E-02	0.254E-02	0.793E-03	0.961E-04	0.399E-05
-8.	0.430E-02	0.398E-02	0.253E-02	0.793E-03	0.960E-04	0.399E-05
-16.	0.429E-02	0.398E-02	0.253E-02	0.791E-03	0.958E-04	0.398E-05

Z = 3.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.265E-02	0.246E-02	0.157E-02	0.490E-03	0.593E-04	0.246E-05
8.	0.266E-02	0.247E-02	0.157E-02	0.491E-03	0.594E-04	0.247E-05
0.	0.266E-02	0.247E-02	0.157E-02	0.491E-03	0.594E-04	0.247E-05
-8.	0.266E-02	0.247E-02	0.157E-02	0.491E-03	0.594E-04	0.247E-05
-16.	0.265E-02	0.246E-02	0.157E-02	0.490E-03	0.593E-04	0.246E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7008E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.351E-02	0.325E-02	0.209E-02	0.691E-03	0.943E-04	0.474E-05
8.	0.351E-02	0.326E-02	0.209E-02	0.692E-03	0.944E-04	0.475E-05
0.	0.351E-02	0.326E-02	0.209E-02	0.692E-03	0.945E-04	0.475E-05
-8.	0.351E-02	0.326E-02	0.209E-02	0.692E-03	0.944E-04	0.475E-05
-16.	0.351E-02	0.325E-02	0.209E-02	0.691E-03	0.943E-04	0.474E-05

Z = 1.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.338E-02	0.314E-02	0.202E-02	0.666E-03	0.909E-04	0.458E-05
8.	0.339E-02	0.314E-02	0.202E-02	0.667E-03	0.911E-04	0.458E-05
0.	0.339E-02	0.314E-02	0.202E-02	0.668E-03	0.912E-04	0.459E-05
-8.	0.339E-02	0.314E-02	0.202E-02	0.667E-03	0.911E-04	0.458E-05
-16.	0.338E-02	0.314E-02	0.202E-02	0.666E-03	0.909E-04	0.458E-05

Z = 2.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.284E-02	0.263E-02	0.169E-02	0.559E-03	0.763E-04	0.384E-05
8.	0.284E-02	0.264E-02	0.169E-02	0.560E-03	0.765E-04	0.385E-05
0.	0.285E-02	0.264E-02	0.170E-02	0.560E-03	0.765E-04	0.385E-05
-8.	0.284E-02	0.264E-02	0.169E-02	0.560E-03	0.765E-04	0.385E-05
-16.	0.284E-02	0.263E-02	0.169E-02	0.559E-03	0.763E-04	0.384E-05

Z = 3.00

Y \ X	0.	4.	8.	12.	16.	20.

16.	0.177E-02	0.164E-02	0.106E-02	0.349E-03	0.477E-04	0.240E-05
8.	0.178E-02	0.165E-02	0.106E-02	0.350E-03	0.478E-04	0.240E-05
0.	0.178E-02	0.165E-02	0.106E-02	0.350E-03	0.478E-04	0.240E-05
-8.	0.178E-02	0.165E-02	0.106E-02	0.350E-03	0.478E-04	0.240E-05
-16.	0.177E-02	0.164E-02	0.106E-02	0.349E-03	0.477E-04	0.240E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7446E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.234E-02	0.217E-02	0.141E-02	0.489E-03	0.743E-04	0.443E-05
8.	0.234E-02	0.217E-02	0.141E-02	0.490E-03	0.744E-04	0.443E-05
0.	0.235E-02	0.218E-02	0.141E-02	0.490E-03	0.744E-04	0.444E-05
-8.	0.234E-02	0.217E-02	0.141E-02	0.490E-03	0.744E-04	0.443E-05
-16.	0.234E-02	0.217E-02	0.141E-02	0.489E-03	0.743E-04	0.443E-05

Z = 1.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.225E-02	0.209E-02	0.136E-02	0.471E-03	0.714E-04	0.426E-05
8.	0.226E-02	0.209E-02	0.136E-02	0.471E-03	0.716E-04	0.427E-05
0.	0.226E-02	0.209E-02	0.136E-02	0.472E-03	0.716E-04	0.427E-05
-8.	0.226E-02	0.209E-02	0.136E-02	0.471E-03	0.716E-04	0.427E-05
-16.	0.225E-02	0.209E-02	0.136E-02	0.471E-03	0.714E-04	0.426E-05

Z = 2.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.188E-02	0.175E-02	0.113E-02	0.394E-03	0.598E-04	0.356E-05
8.	0.189E-02	0.175E-02	0.114E-02	0.394E-03	0.599E-04	0.357E-05
0.	0.189E-02	0.175E-02	0.114E-02	0.395E-03	0.599E-04	0.357E-05
-8.	0.189E-02	0.175E-02	0.114E-02	0.394E-03	0.599E-04	0.357E-05
-16.	0.188E-02	0.175E-02	0.113E-02	0.394E-03	0.598E-04	0.356E-05

Z = 3.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.119E-02	0.110E-02	0.715E-03	0.248E-03	0.377E-04	0.224E-05
8.	0.119E-02	0.110E-02	0.716E-03	0.249E-03	0.377E-04	0.225E-05
0.	0.119E-02	0.110E-02	0.716E-03	0.249E-03	0.377E-04	0.225E-05
-8.	0.119E-02	0.110E-02	0.716E-03	0.249E-03	0.377E-04	0.225E-05

-16.	0.119E-02	0.110E-02	0.715E-03	0.248E-03	0.377E-04	0.224E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7884E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.156E-02	0.145E-02	0.952E-03	0.345E-03	0.576E-04	0.399E-05
8.	0.157E-02	0.145E-02	0.953E-03	0.346E-03	0.577E-04	0.400E-05
0.	0.157E-02	0.146E-02	0.954E-03	0.346E-03	0.578E-04	0.400E-05
-8.	0.157E-02	0.145E-02	0.953E-03	0.346E-03	0.577E-04	0.400E-05
-16.	0.156E-02	0.145E-02	0.952E-03	0.345E-03	0.576E-04	0.399E-05

Z = 1.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.150E-02	0.139E-02	0.913E-03	0.331E-03	0.553E-04	0.383E-05
8.	0.150E-02	0.140E-02	0.915E-03	0.332E-03	0.554E-04	0.384E-05
0.	0.150E-02	0.140E-02	0.915E-03	0.332E-03	0.554E-04	0.384E-05
-8.	0.150E-02	0.140E-02	0.915E-03	0.332E-03	0.554E-04	0.384E-05
-16.	0.150E-02	0.139E-02	0.913E-03	0.331E-03	0.553E-04	0.383E-05

Z = 2.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.125E-02	0.116E-02	0.761E-03	0.276E-03	0.461E-04	0.320E-05
8.	0.125E-02	0.116E-02	0.763E-03	0.277E-03	0.462E-04	0.320E-05
0.	0.125E-02	0.116E-02	0.763E-03	0.277E-03	0.462E-04	0.320E-05
-8.	0.125E-02	0.116E-02	0.763E-03	0.277E-03	0.462E-04	0.320E-05
-16.	0.125E-02	0.116E-02	0.761E-03	0.276E-03	0.461E-04	0.320E-05

Z = 3.00

	X					
Y	0.	4.	8.	12.	16.	20.
16.	0.796E-03	0.739E-03	0.484E-03	0.176E-03	0.293E-04	0.203E-05
8.	0.797E-03	0.740E-03	0.485E-03	0.176E-03	0.294E-04	0.203E-05
0.	0.797E-03	0.740E-03	0.485E-03	0.176E-03	0.294E-04	0.204E-05
-8.	0.797E-03	0.740E-03	0.485E-03	0.176E-03	0.294E-04	0.203E-05
-16.	0.796E-03	0.739E-03	0.484E-03	0.176E-03	0.293E-04	0.203E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.8322E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.105E-02	0.973E-03	0.643E-03	0.243E-03	0.442E-04	0.350E-05
8.	0.105E-02	0.974E-03	0.644E-03	0.243E-03	0.442E-04	0.351E-05
0.	0.105E-02	0.975E-03	0.645E-03	0.244E-03	0.443E-04	0.351E-05
-8.	0.105E-02	0.974E-03	0.644E-03	0.243E-03	0.442E-04	0.351E-05
-16.	0.105E-02	0.973E-03	0.643E-03	0.243E-03	0.442E-04	0.350E-05

Z = 1.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.100E-02	0.932E-03	0.616E-03	0.233E-03	0.423E-04	0.335E-05
8.	0.100E-02	0.933E-03	0.617E-03	0.233E-03	0.424E-04	0.336E-05
0.	0.100E-02	0.933E-03	0.617E-03	0.233E-03	0.424E-04	0.336E-05
-8.	0.100E-02	0.933E-03	0.617E-03	0.233E-03	0.424E-04	0.336E-05
-16.	0.100E-02	0.932E-03	0.616E-03	0.233E-03	0.423E-04	0.335E-05

Z = 2.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.833E-03	0.775E-03	0.512E-03	0.194E-03	0.352E-04	0.279E-05
8.	0.835E-03	0.776E-03	0.513E-03	0.194E-03	0.352E-04	0.279E-05
0.	0.835E-03	0.776E-03	0.513E-03	0.194E-03	0.352E-04	0.280E-05
-8.	0.835E-03	0.776E-03	0.513E-03	0.194E-03	0.352E-04	0.279E-05
-16.	0.833E-03	0.775E-03	0.512E-03	0.194E-03	0.352E-04	0.279E-05

Z = 3.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.534E-03	0.497E-03	0.328E-03	0.124E-03	0.225E-04	0.179E-05
8.	0.535E-03	0.497E-03	0.329E-03	0.124E-03	0.226E-04	0.179E-05
0.	0.535E-03	0.498E-03	0.329E-03	0.124E-03	0.226E-04	0.179E-05
-8.	0.535E-03	0.497E-03	0.329E-03	0.124E-03	0.226E-04	0.179E-05
-16.	0.534E-03	0.497E-03	0.328E-03	0.124E-03	0.225E-04	0.179E-05

STEADY STATE SOLUTION HAS NOT BEEN REACHED BEFORE FINAL SIMULATING TIME

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.8760E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1440E+00 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.701E-03	0.653E-03	0.435E-03	0.171E-03	0.335E-04	0.300E-05
8.	0.702E-03	0.653E-03	0.436E-03	0.171E-03	0.335E-04	0.300E-05
0.	0.702E-03	0.654E-03	0.436E-03	0.171E-03	0.335E-04	0.300E-05
-8.	0.702E-03	0.653E-03	0.436E-03	0.171E-03	0.335E-04	0.300E-05
-16.	0.701E-03	0.653E-03	0.435E-03	0.171E-03	0.335E-04	0.300E-05

Z = 1.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.670E-03	0.624E-03	0.416E-03	0.163E-03	0.320E-04	0.287E-05
8.	0.671E-03	0.624E-03	0.417E-03	0.163E-03	0.320E-04	0.287E-05
0.	0.671E-03	0.625E-03	0.417E-03	0.163E-03	0.321E-04	0.287E-05
-8.	0.671E-03	0.624E-03	0.417E-03	0.163E-03	0.320E-04	0.287E-05
-16.	0.670E-03	0.624E-03	0.416E-03	0.163E-03	0.320E-04	0.287E-05

Z = 2.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.556E-03	0.518E-03	0.345E-03	0.135E-03	0.266E-04	0.238E-05
8.	0.557E-03	0.518E-03	0.346E-03	0.136E-03	0.266E-04	0.238E-05
0.	0.557E-03	0.519E-03	0.346E-03	0.136E-03	0.266E-04	0.238E-05
-8.	0.557E-03	0.518E-03	0.346E-03	0.136E-03	0.266E-04	0.238E-05
-16.	0.556E-03	0.518E-03	0.345E-03	0.135E-03	0.266E-04	0.238E-05

Z = 3.00

Y \ X	0.	4.	8.	12.	16.	20.
16.	0.359E-03	0.334E-03	0.223E-03	0.874E-04	0.171E-04	0.154E-05
8.	0.359E-03	0.335E-03	0.223E-03	0.875E-04	0.172E-04	0.154E-05
0.	0.360E-03	0.335E-03	0.223E-03	0.876E-04	0.172E-04	0.154E-05
-8.	0.359E-03	0.335E-03	0.223E-03	0.875E-04	0.172E-04	0.154E-05
-16.	0.359E-03	0.334E-03	0.223E-03	0.874E-04	0.171E-04	0.154E-05