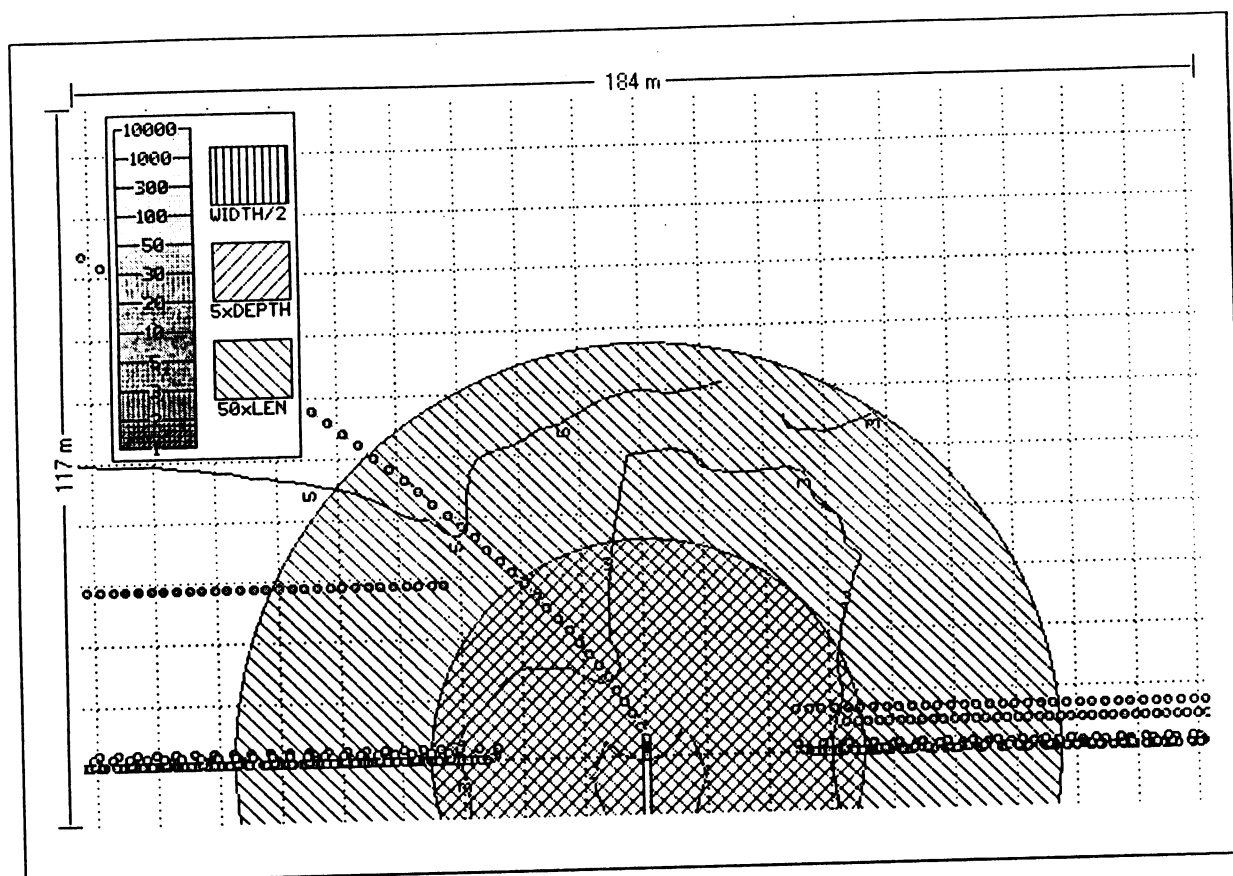


Appendix

Input Data and Graphical Displays for Tidal Cormix Simulations

CORMIX2 -- Submerged multiport diffuser discharges -- CORMIX2

SITE/CASE IDENTIFIER:		Date prepared:	
SITE Name	Dupont - Chambers Works	1/27/95 (3/10/95)	
Design CASE	Tidal Simulation	Prepared by:	
DOS FILE NAME	DUP2-F01	T. Fikslin (SH)	
TIDAL DATA:		Is this a tidal simulation? <u>yes</u>	
Tidal height range (H _t)	<u>1.7</u> m	Phase difference between	<u>90</u> °
Maximum amplitude of the tidal current (U _t)	<u>1.54</u> m/s	tidal current and height	<u>24</u>
AMBIENT DATA:		Number of STEPS	
Water body depth (H _a)	<u>7.11</u> m	Bounded or unbounded	<u>bounded</u>
Depth at discharge (H _d)	<u>5.1</u> m	Water body width (W)	<u>2080</u> m
Ambient flowrate (Q _a)	<u>---</u> m ³ /s	Appearance (1 / 2 / 3)?	<u>1</u>
Manning's n	<u>0.01</u>	or: Ambient velocity (U _a)	<u>0.117</u> m/s
Wind Speed	<u>2</u> m/s	or: Darcy-Weisbach f	<u>---</u>
Density data:		UNITS: Density...kg/m³ / Temperature...°C	
Water body (fresh / salt)?	<u>fresh</u>	Specify density or temp. ?	<u>temp</u>
<i>If uniform:</i>		Average density / temp.	<u>20</u>
<i>If stratified:</i>		Stratification type (A / B / C)?	<u>---</u>
Density/temp. at surface	<u>---</u>	<i>If B/C:</i> Pycnocline height	<u>---</u> m
Density/temp. at bottom	<u>---</u>	<i>If C:</i> Density/temp. jump	<u>---</u> m
DISCHARGE DATA:			
Geometry data:			
Nearest bank (left / right)?	<u>left</u>	Distance to one endpoint	<u>9.1</u> m
Diffuser length (L _D)	<u>6.1</u> m	to other endpoint	<u>9.1</u> m
Total number of openings	<u>4</u>		
Port diameter (D)	<u>0.76</u> m	width contraction ratio	<u>1</u>
Diffuser arrangement / type (unidirectional / staged / alternating or vertical)			<u>unidirect.</u>
Alignment angle (GAMMA)	<u>0</u> °	Horizontal angle (SIGMA)	<u>270</u> °
Vertical angle (THETA)	<u>0</u> °	Relative orientation (BETA)	<u>90</u> °
Port height (h _o)	<u>1.4</u> m		
Effluent data:			
Effluent flow rate	<u>2.92</u> m ³ /s	or: Effluent velocity	<u>---</u> m/s
Effluent density	<u>---</u> kg/m ³	or: Effluent temperature	<u>22</u> °C
Heated discharge (yes/no)?	<u>no</u>	<i>If yes:</i> Heat loss (W/m ² ·°C)	<u>---</u>
Concentration units	<u>percent</u>	Effluent concentration	<u>100</u>
Conservative substance?	<u>yes</u>	<i>If no:</i> Decay coefficient	<u>---</u> /day
MIXING ZONE DATA:			
Is effluent toxic (yes / no)?	<u>no</u>	<i>If yes:</i> CMC value	<u>---</u>
		CCC value	<u>---</u>
Is there a WQ standard for conventional pollutant?	<u>no</u>	<i>If yes:</i> value of standard	<u>---</u>
Any mixing zone specified?	<u>yes</u>	<i>If yes:</i> distance	<u>---</u> m
		or width (% or m)	<u>50%</u>
Region of interest	<u>25000</u> m	or area (% or m ²)	<u>---</u>
Grid intervals for display	<u>50</u>		

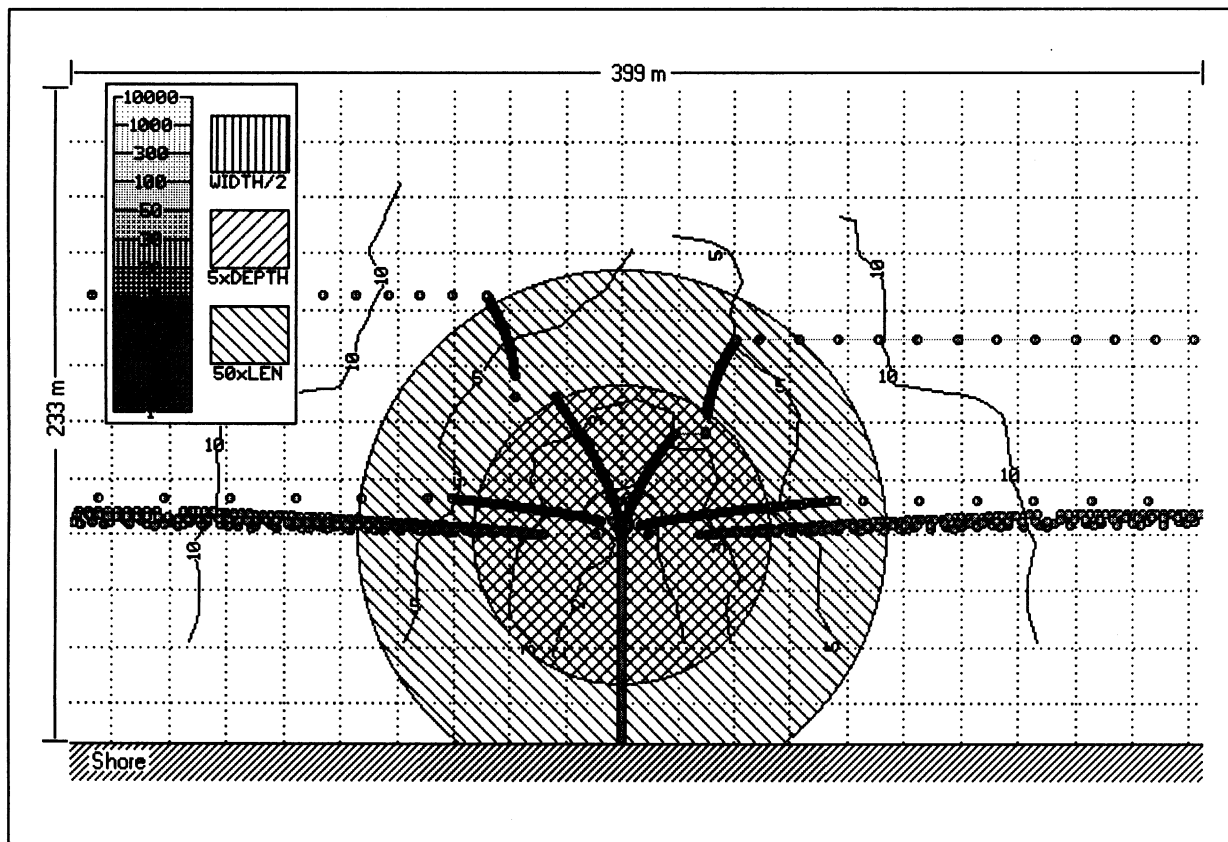


Tidal CORMIX Postprocessor Site Info	
CORMIX Case Description	
Site name:	Dupont - Chambers Works
Design case:	DRBC Tidal Run - 01 Final
File name:	cormix\sim\dup2-f01.cx2
Time of FORTRAN run:	03/14/95-22:28:35
Tidal CORMIX Information	
Tidal height range (m):	1.7
Maximum tidal current (m/s):	1.54
Phase difference (degrees):	90
Number of steps:	24

Regulatory Information		
	Minimum Dilution	Average Dilution
5 x depth (35.55 m)	2.61	3.10
50 x length (67.50 m)	3.02	4.22
50% x width (1040.00 m)	137.70	146.45
	Minimum Distance	Average Distance
50% x width	11619 m	12040 m

CORMIX1 -- Submerged Single Port Discharges -- CORMIX1

SITE/CASE IDENTIFIER:		Date prepared:	
SITE Name	Wilmington STP	9/26/94 (3/6/95)	
Design CASE	Tidal Simulation	Prepared by:	
DOS FILE NAME	WIL1-F02	T. Fikslin (SH)	
TIDAL DATA:		Is this a tidal simulation?	yes
Tidal height range (H_r)	1.67 m	Phase difference between tidal current and height	90 °
Maximum amplitude of the tidal current (U_t)	1.55 m/s	Number of STEPS	23
AMBIENT DATA:		Bounded or unbounded	bounded
Water body depth (H_a)	8.3 m	Water body width (W)	2400 m
Depth at discharge (H_d)	10.7 m	Appearance (1 / 2 / 3)?	1
Ambient flowrate (Q_a)	---	or: Ambient velocity (U_a)	0.117 m/s
Manning's n	0.028	or: Darcy-Weisbach f	---
Wind Speed	2 m/s		
Density data:		UNITS: Density...kg/m³ / Temperature...°C	
Water body (fresh / salt)?	fresh	Specify density or temp. ?	temp
<i>If uniform:</i>		Average density/temp.	20
<i>If stratified:</i>		Stratification type (A / B / C)?	---
Density/temp. at surface	---	<i>If B/C:</i> Pycnocline height	---
Density/temp. at bottom	---	<i>If C:</i> Density/temp. jump	---
DISCHARGE DATA:			
Geometry data:			
Discharge is on (left / right)	right bank	Distance to nearest bank	73.2 m
Vertical angle (THETA)	0 °	Horizontal angle (SIGMA)	90 °
Port diameter (D)	2.13 m	or: Port area	---
Port height (h_o)	1.066 m		
Effluent data:			
Effluent flow rate	3.77 m ³ /s	or: Effluent velocity	---
Effluent density	---	or: Effluent temperature	22 °C
Heated discharge (yes/no)?	no	<i>If yes:</i> Heat loss (W/m ² .°C)	---
Concentration units	percent	Effluent concentration	100
Conservative substance?	yes	<i>If no:</i> Decay coefficient	---
MIXING ZONE DATA:			
Is effluent toxic (yes / no)?	no	<i>If yes:</i> CMC value	---
		CCC value	---
Is there a WQ standard for conventional pollutant?	no	<i>If yes:</i> value of standard	---
Any mixing zone specified?	yes	<i>If yes:</i> distance	---
		or width (% or m)	50%
Region of interest	24000 m	or area (% or m ²)	---
Grid intervals for display	50		



Tidal CORMIX Postprocessor Site Info

CORMIX Case Description

Site name: Wilmington
 Design case: Tidal
 File name: cormix\sim\WIL1-F02.cx1
 Time of FORTRAN run: 01/12/99-15:30:20

Tidal CORMIX Information

Tidal height range (m): 1.67
 Maximum tidal current (m/s): 1.55
 Phase difference (degrees): 90
 Number of steps: 23

Regulatory Information

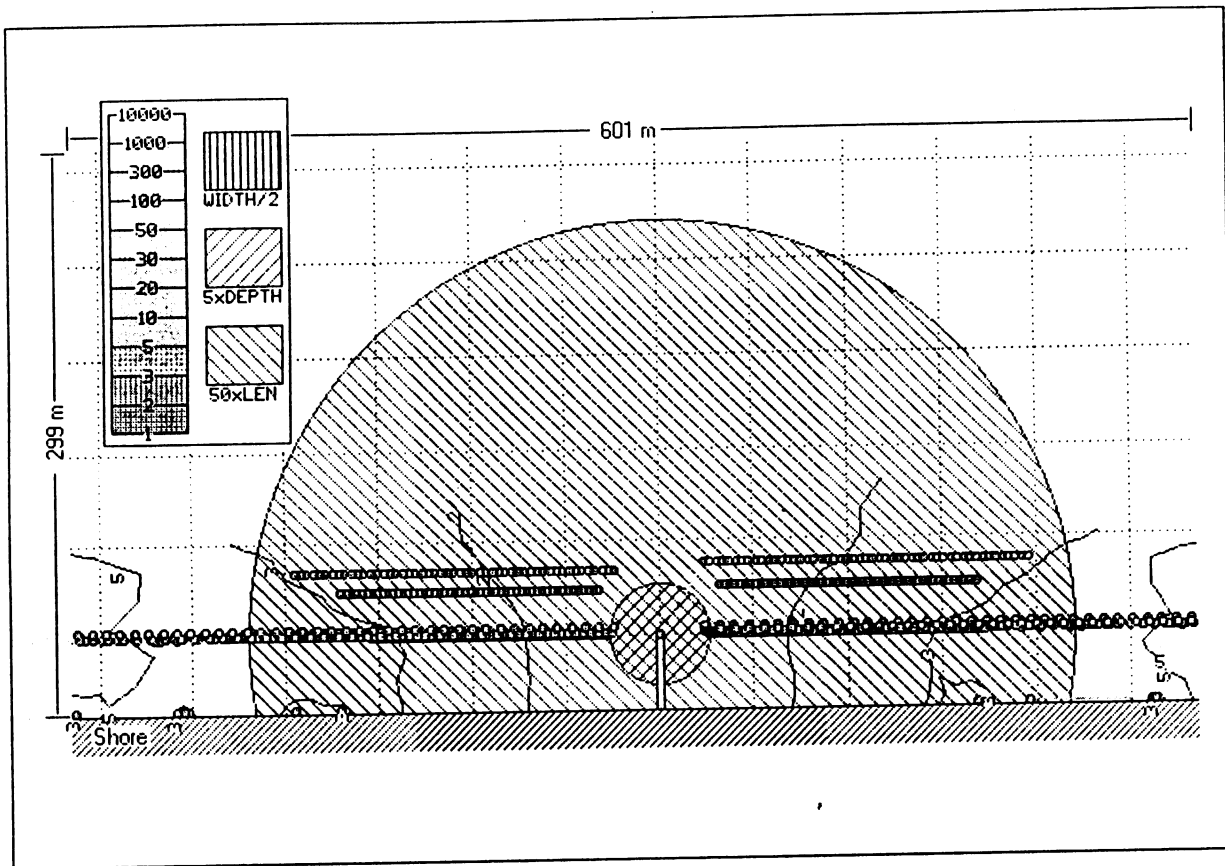
	Minimum Dilution	Average Dilution
5 x depth (53.47 m; 8984 m ²)	2.82	3.79
50 x length (94.38 m; 26261 m ²)	4.61	5.91
50% x width (1200.00 m; 1.2e+08 m ²)	99999.00	

	Minimum Distance	Average Distance
50% x width	99999 m	

Interpolation uses a search distance of 50 m.

CORMIX2 -- Submerged multiport diffuser discharges -- CORMIX2

SITE/CASE IDENTIFIER:		Date prepared:	
SITE Name	Philadelphia SW	12/13/94 (1/26/95)	
Design CASE	Tidal Simulation	Prepared by:	
DOS FILE NAME	PSW2-F01	T. Fikslin (SH)	
TIDAL DATA:		Is this a tidal simulation?	
Tidal height range (H _r)	1.74 m	yes	
Maximum amplitude of the tidal current (U _t)	0.93 m/s	Phase difference between tidal current and height	90 °
		Number of STEPS	24
AMBIENT DATA:		Bounded or unbounded	
Water body depth (H _a)	5.5 m	bounded	
Depth at discharge (H _d)	4.6 m	Water body width (W)	1200 m
Ambient flowrate (Q _a)	---	Appearance (1 / 2 / 3)?	1
Manning's n	0.028	or: Ambient velocity (U _a)	0.117 m/s
Wind Speed	2 m/s	or: Darcy-Weisbach f	---
Density data:		UNITS: Density...kg/m³ / Temperature...°C	
Water body (fresh / salt)?	fresh	Specify density or temp. ?	temp
<i>If uniform:</i>		Average density / temp.	20
<i>If stratified:</i>		Stratification type (A / B / C)?	---
Density/temp. at surface	---	<i>If B/C:</i> Pycnocline height	--- m
Density/temp. at bottom	---	<i>If C:</i> Density/temp. jump	--- m
DISCHARGE DATA:			
Geometry data:			
Nearest bank (left / right)?	right	Distance to one endpoint	38.1 m
Diffuser length (L _D)	10.36 m	to other endpoint	38.1 m
Total number of openings	3		
Port diameter (D)	2.88 m	width contraction ratio	1
Diffuser arrangement / type (unidirectional / staged / alternating or vertical)			unidirect.
Alignment angle (GAMMA)	0 °	Horizontal angle (SIGMA)	90 °
Vertical angle (THETA)	-45 °	Relative orientation (BETA)	90 °
Port height (h _o)	0.8 m		
Effluent data:			
Effluent flow rate	8.76 m ³ /s	or: Effluent velocity	--- m/s
Effluent density	--- kg/m ³	or: Effluent temperature	22 °C
Heated discharge (yes/no)?	no	<i>If yes:</i> Heat loss (W/m ² ·°C)	---
Concentration units	percent	Effluent concentration	100
Conservative substance?	yes	<i>If no:</i> Decay coefficient	--- /day
MIXING ZONE DATA:			
Is effluent toxic (yes / no)?	no	<i>If yes:</i> CMC value	---
		CCC value	---
Is there a WQ standard for conventional pollutant?	no	<i>If yes:</i> value of standard	---
Any mixing zone specified?	yes	<i>If yes:</i> distance	--- m
		or width (% or m)	50%
Region of interest	15000 m	or area (% or m ²)	---
Grid intervals for display	50		



Tidal CORMIX Postprocessor Site Info

CORMIX Case Description

Site name: Philadelphia SW
 Design case: DRBC Tidal Run - 01 Final
 File name: cormix\sim\psw2-01.cx2
 Time of FORTRAN run: 03/14/95-21:39:56

Tidal CORMIX Information

Tidal height range (m): 1.74
 Maximum tidal current (m/s): .93
 Phase difference (degrees): 90
 Number of steps: 24

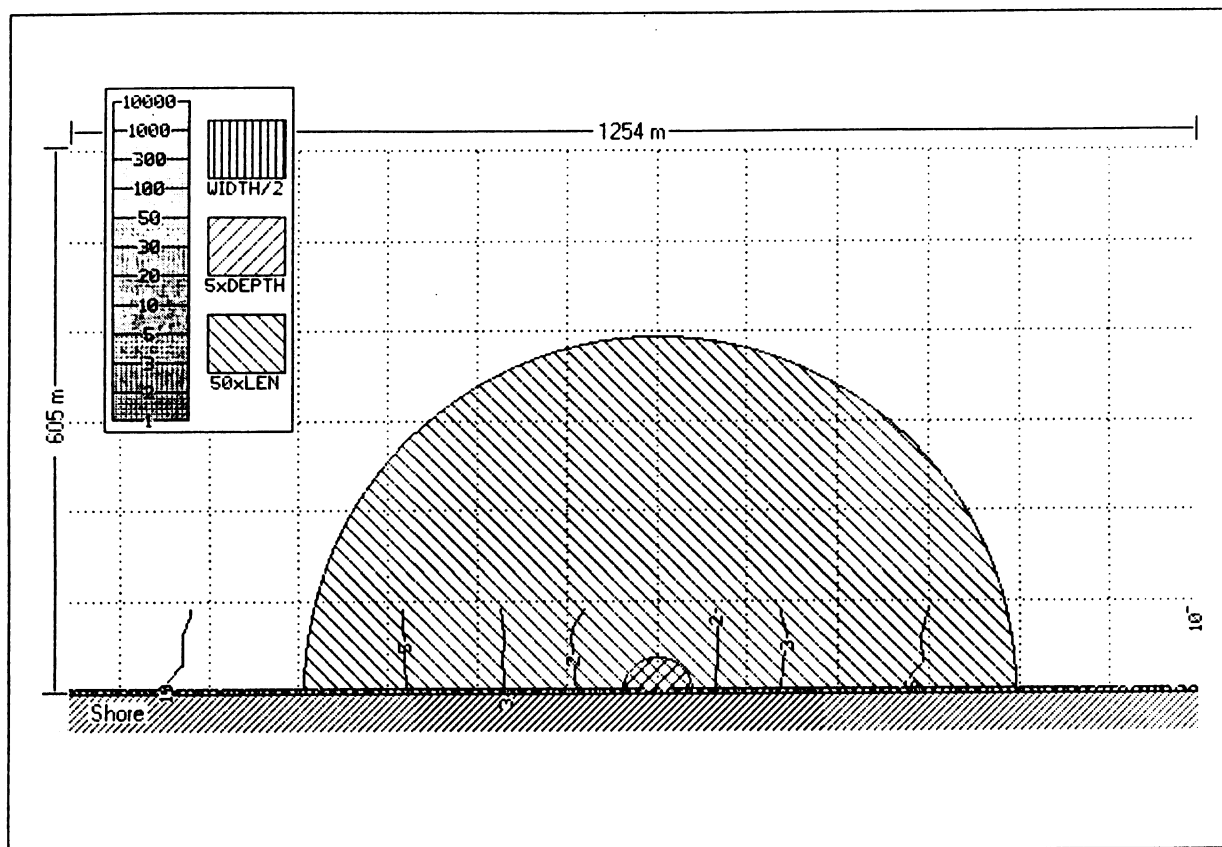
Regulatory Information

	Minimum Dilution	Average Dilution
5 x depth (27.50 m)	1.20	1.38
50 x length (221.00 m)	2.20	3.32
50% x width (600.00 m)	21.70	28.40

	Minimum Distance	Average Distance
50% x width	2862 m	5458 m

CORMIX3 -- Buoyant Surface Discharges -- CORMIX3

SITE/CASE IDENTIFIER:		Date prepared:	
SITE Name	Philadelphia SE	9/26/94 (3/6/95)	
Design CASE	Tidal Simulation	Prepared by:	
DOS FILE NAME	PSE3-F01	T. Fikslin (SH)	
TIDAL DATA:		Is this a tidal simulation?	yes
Tidal height range (H_r)	1.6 m	Phase difference between tidal current and height	90 °
Maximum amplitude of the tidal current (U_t)	0.93 m/s	Number of STEPS	24
AMBIENT DATA:		Bounded or unbounded	bounded
Water body depth (H_a)	7.9 m	Water body width (W)	805 m
Depth at discharge (H_d)	7.9 m	Appearance (1 / 2 / 3)?	1
Ambient flowrate (Q_a)	---	or: Ambient velocity (U_a)	0.117 m/s
Manning's n	0.02	or: Darcy-Weisbach f	---
Wind Speed	2 m/s		
Density data:		UNITS: Density...kg/m³ / Temperature...°C	
Water body (fresh / salt)?	fresh	Specify density or temp. ?	temp
<i>If uniform:</i>		Average density / temp.	20
<i>If stratified:</i>		Stratification type (A / B / C)?	---
Density/temp. at surface	---	<i>If B/C:</i> Pycnocline height	--- m
Density/temp. at bottom	---	<i>If C:</i> Density/temp. jump	--- m
DISCHARGE DATA:			
Geometry data:		Configuration type is	
Discharge is on (left / right)	right bank	(flush/protruding/co-flowing)	flush
Horizontal angle (SIGMA)	90 °	<i>If protruding:</i> Dist. from bank	na m
Depth at discharge	7.9 m	Bottom slope	0 °
<i>If rectangular</i> Width (b_o)	45.2 m	<i>If circular</i> Diameter (D)	na m
<i>disch. channel:</i> Depth (h_o)	3.06 m	<i>pipe:</i> Bottom invert depth (h_o)	na m
Effluent data:			
Effluent flow rate	4.91 m ³ /s	or: Effluent velocity	--- m/s
Effluent density	--- kg/m ³	or: Effluent temperature	22 °C
Heated discharge (yes/no)?	no	<i>If yes:</i> Heat loss (W/m ² .°C)	---
Concentration units	percent	Effluent concentration	100
Conservative substance?	yes	<i>If no:</i> Decay coefficient	--- /day
MIXING ZONE DATA:			
Is effluent toxic (yes / no)?	no	<i>If yes:</i> CMC value	---
		CCC value	---
Is there a WQ standard for conventional pollutant?	no	<i>If yes:</i> value of standard	---
Any mixing zone specified?	yes	<i>If yes:</i> distance	--- m
		or width (% or m)	50%
Region of interest	10000 m	or area (% or m ²)	---
Grid intervals for display	50		

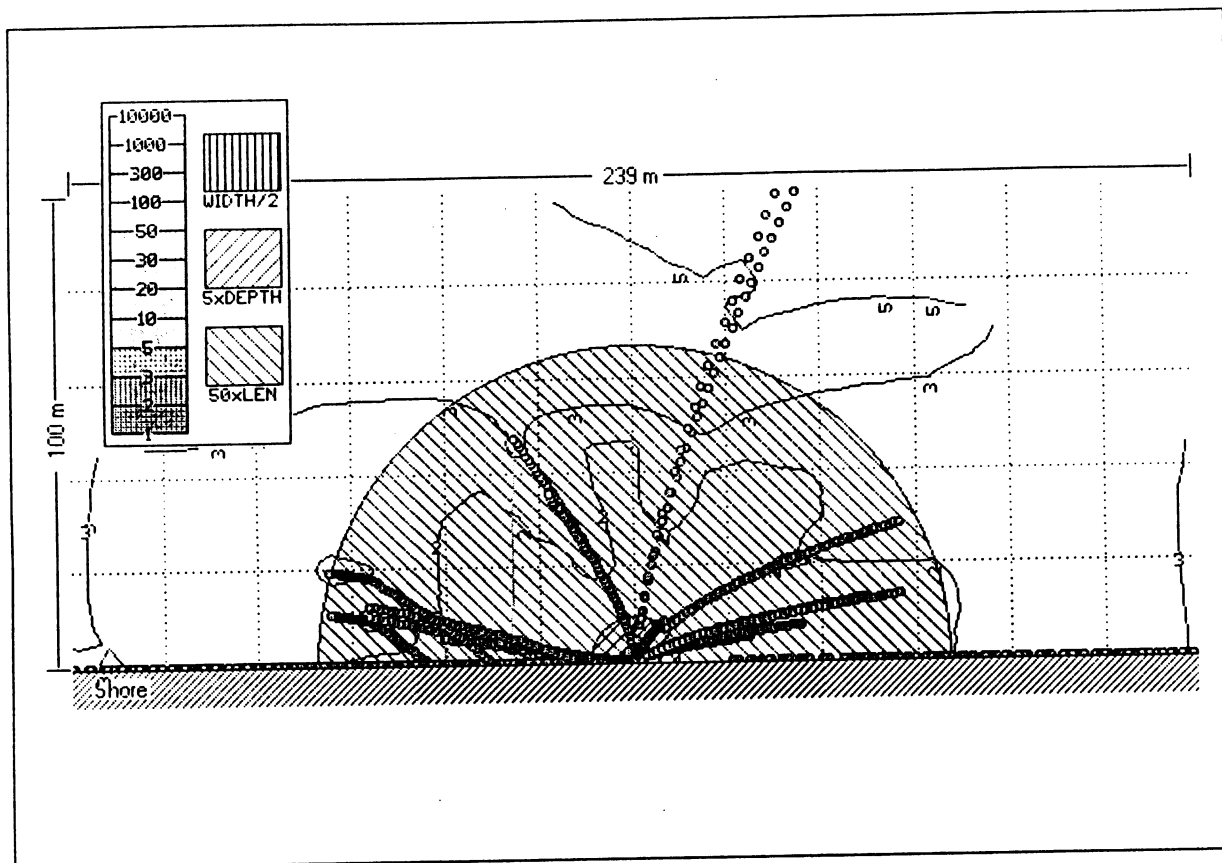


Tidal CORMIX Postprocessor Site Info	
CORMIX Case Description	
Site name:	Philadelphia SE
Design case:	DRBC Tidal Run - 01 Final
File name:	cormix\sim\pse3-f01.cx3
Time of FORTRAN run:	03/14/95-13:55:47
Tidal CORMIX Information	
Tidal height range (m):	1.6
Maximum tidal current (m/s):	.93
Phase difference (degrees):	90
Number of steps:	24

Regulatory Information		
	Minimum Dilution	Average Dilution
5 x depth (39.50 m)	1.25	1.41
50 x length (395.50 m)	6.40	7.17
50% x width (402.50 m)	8.30	9.57
	Minimum Distance	Average Distance
50% x width	2229 m	2315 m

CORMIX3 -- Buoyant Surface Discharges -- CORMIX3

SITE/CASE IDENTIFIER:		Date prepared:	
SITE Name	Camden County MUA	12/14/94 (3/6/95)	
Design CASE	Tidal Simulation	Prepared by:	
DOS FILE NAME	CAM3-F02	R. Wu (SH)	
TIDAL DATA:		Is this a tidal simulation? <u>yes</u>	
Tidal height range (H _r)	<u>0.762</u> m	Phase difference between tidal current and height	<u>90</u> °
Maximum amplitude of the tidal current (U _t)	<u>0.67</u> m/s	Number of STEPS	<u>24</u>
AMBIENT DATA:		Bounded or unbounded <u>bounded</u>	
Water body depth (H _a)	<u>1.905</u> m	Water body width (W)	<u>804.7</u> m
Depth at discharge (H _d)	<u>1.905</u> m	Appearance (1 / 2 / 3)?	<u>1</u>
Ambient flowrate (Q _a)	<u>---</u> m ³ /s	or: Ambient velocity (U _a)	<u>0.117</u> m/s
Manning's n	<u>0.02</u>	or: Darcy-Weisbach f	<u>---</u>
Wind Speed	<u>2</u> m/s		
Density data:		UNITS: Density...kg/m³ / Temperature...°C	
Water body (fresh / salt)?	<u>fresh</u>	Specify density or temp. ?	<u>temp</u>
<i>If uniform:</i>		Average density / temp.	<u>20</u>
<i>If stratified:</i>		Stratification type (A / B / C)?	<u>---</u>
Density/temp. at surface	<u>---</u>	<i>If B/C:</i> Pycnocline height	<u>---</u> m
Density/temp. at bottom	<u>---</u>	<i>If C:</i> Density/temp. jump	<u>---</u> m
DISCHARGE DATA:			
Geometry data:		Configuration type is	
Discharge is on (left / right)	<u>left</u> bank	(flush/protruding/co-flowing)	<u>flush</u>
Horizontal angle (SIGMA)	<u>90</u> °	<i>If protruding:</i> Dist. from bank	<u>na</u> m
Depth at discharge (H _d)	<u>1.905</u> m	Bottom slope	<u>0</u> °
<i>If rectangular</i> Width (b _o)	<u>na</u> m	<i>If circular</i> Diameter (D)	<u>1.524</u> m
<i>disch. channel:</i> Depth (h _o)	<u>na</u> m	<i>pipe:</i> Bottom invert depth (h _o)	<u>1.524</u> m
Effluent data:			
Effluent flow rate	<u>1.48</u> m ³ /s	or: Effluent velocity	<u>---</u> m/s
Effluent density	<u>---</u> kg/m ³	or: Effluent temperature	<u>22</u> °C
Heated discharge (yes/no)?	<u>no</u>	<i>If yes:</i> Heat loss (W/m ² .°C)	<u>---</u>
Concentration units	<u>percent</u>	Effluent concentration	<u>100</u>
Conservative substance?	<u>yes</u>	<i>If no:</i> Decay coefficient	<u>---</u> /day
MIXING ZONE DATA:			
Is effluent toxic (yes / no)?	<u>no</u>	<i>If yes:</i> CMC value	<u>---</u>
		CCC value	<u>---</u>
Is there a WQ standard for conventional pollutant?	<u>no</u>	<i>If yes:</i> value of standard	<u>---</u>
Any mixing zone specified?	<u>yes</u>	<i>If yes:</i> distance	<u>---</u> m
		or width (% or m)	<u>50%</u>
Region of interest	<u>10000</u> m	or area (% or m ²)	<u>---</u>
Grid intervals for display	<u>50</u>		



Tidal CORMIX Postprocessor Site Info

CORMIX Case Description

Site name: Camden County MUA
 Design case: DRBC Tidal Run - 02 Final
 File name: cormix\sim\cam3-02.c3
 Time of FORTRAN run: 07/26/95-16:41:46

Tidal CORMIX Information

Tidal height range (m): .762
 Maximum tidal current (m/s): .67
 Phase difference (degrees): 90
 Number of steps: 24

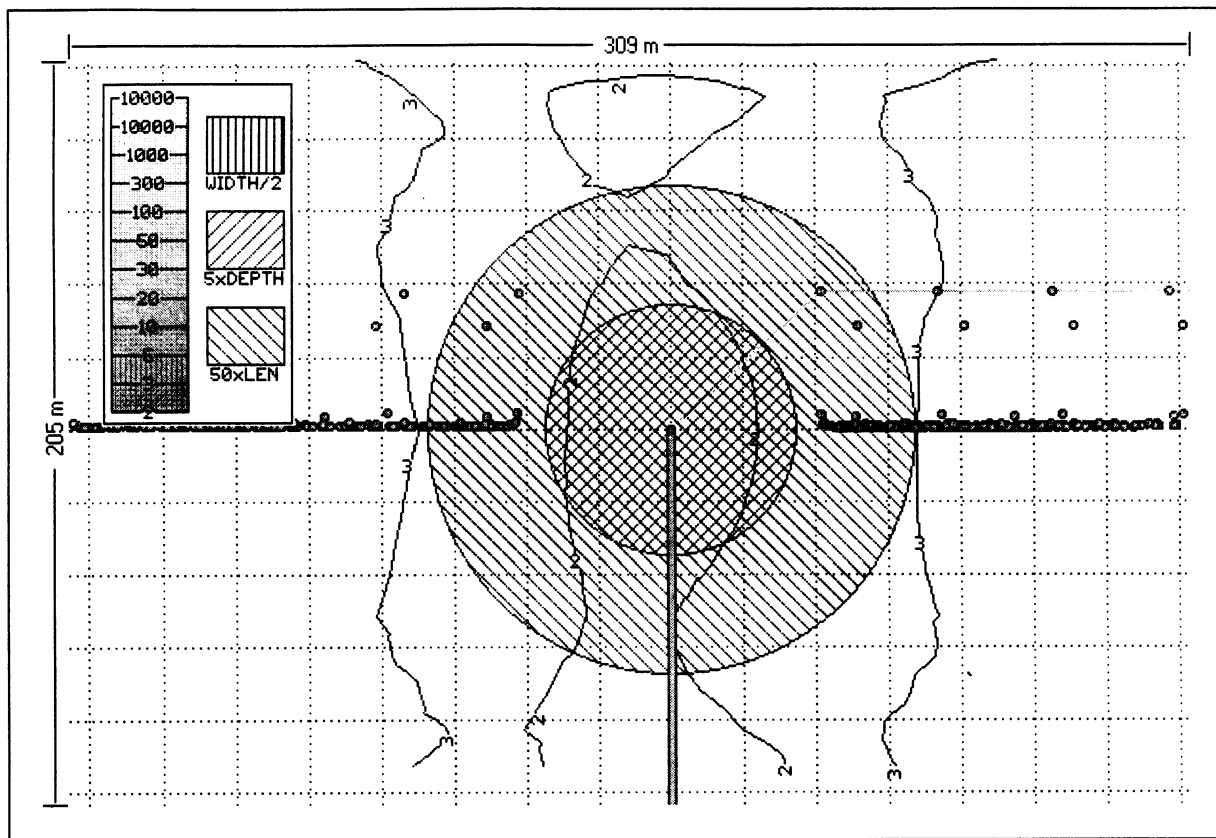
Regulatory Information

	Minimum Dilution	Average Dilution
5 x depth (9.50 m)	1.08	1.28
50 x length (67.50 m)	1.95	2.76
Width	n/a	

	Minimum Distance	Average Distance
Width	n/a	

CORMIX2 -- Submerged multiport diffuser discharges -- CORMIX2

SITE/CASE IDENTIFIER:		Date prepared: <u>4/29/96</u>	
SITE Name	<u>Philadelphia NE</u>	Prepared by: <u>T. Fikslin</u>	
Design CASE	<u>Case 3</u>		
DOS FILE NAME	<u>Cormix\sim\PHIL3-NE.cx2</u>		
TIDAL DATA:		Is this a tidal simulation?	<u>Yes</u>
Tidal height range (H _t)	<u>1.94</u> m	Phase difference between tidal current and height	<u>90</u> °
Maximum amplitude of the tidal current (U)	<u>0.93</u> m/s	Number of STEPS	<u>24</u>
AMBIENT DATA:		Bounded or unbounded	<u>Bounded</u>
Water body depth (H _a)	<u>7.0</u> m	Water body width (W)	<u>805</u> m
Depth at discharge (H _d)	<u>7.0</u> m	Appearance (1 / 2 / 3)?	<u>1</u>
Ambient flow rate (Q _a)	<u>-</u> m ³ /s	or: Ambient velocity (U _a)	<u>0.12</u>
Manning's n	<u>0.028</u>	or: Darcy-Weisbach f	<u>-</u>
Wind speed	<u>0</u> m/s		
Density data:		UNITS: Density...kg/m³ / Temperature...°C	
Water body (fresh / salt)?	<u>Fresh</u>	Specify density or temp. ?	<u>Temp</u>
<i>If uniform</i>		Average density/temp.	<u>20</u>
<i>If stratified</i>		Stratification type (A / B / C)?	<u>-</u>
Density/temp. at surface	<u>-</u>	<i>If B/C:</i> Pycnocline height	<u>-</u> m
Density/temp. at bottom	<u>-</u>	<i>If C:</i> Density/temp. jump	<u>-</u> m
DISCHARGE DATA:			
Geometry data:			
Nearest bank (left / right)?	<u>Right</u>	Distance to one endpoint	<u>186</u> m
Diffuser length (L _D)	<u>23</u> m	to other endpoint	<u>186</u> m
Port diameter (D)	<u>1.524</u> m	width contraction ratio	<u>-</u>
Diffuser arrangement / type (unidirectional / staged / alternating or vertical)			<u>Unidirectional</u>
Alignment angle	<u>0</u> °	Horizontal angle (SIGMA)	<u>90</u> °
Vertical Angle (THETA)	<u>0</u> °	Relative orientation (BETA)	<u>90</u> °
Port height (h _o)	<u>0.762</u> m		
Effluent data:			
Effluent flow rate	<u>9.2</u> m ³ /s	or: Effluent velocity	<u>-</u>
Effluent density	<u>-</u> kg/m ³	or: Effluent temperature	<u>25</u> °C
Heated discharge	<u>No</u>	<i>If yes:</i> Heat loss (W/m ² .°C)	<u>-</u>
Concentration units	<u>Percent</u>	Effluent concentration	<u>100</u>
Conservative substance?	<u>Yes</u>	<i>If no:</i> Decay coefficient	<u>-</u>
MIXING ZONE DATA:			
Is effluent toxic (yes/no)?	<u>No</u>	<i>If yes:</i> CMC value	<u>-</u>
		CCC value	<u>-</u>
Is there a WQ standard conventional pollutant?	<u>No</u>	<i>If yes:</i> value of standard	<u>-</u>
Any mixing zone	<u>No</u>	<i>If yes:</i> distance	<u>-</u> m
		or width (% or m)	<u>-</u>
Region of interest	<u>10,000</u> m	or area (% or m ²)	<u>-</u>
Grid intervals for display	<u>30</u>		



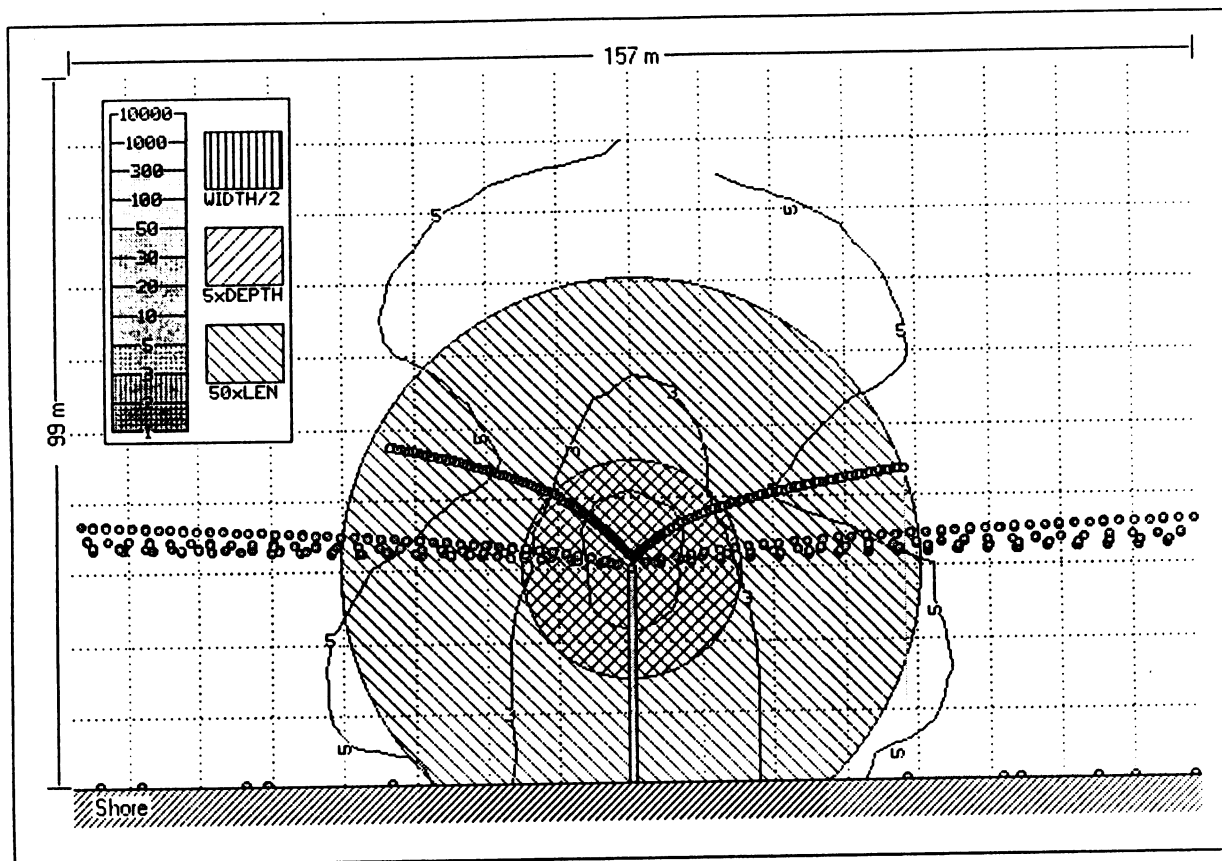
Tidal CORMIX Postprocessor Site Info	
CORMIX Case Description	
Site name:	Philadelphia NE
Design case:	Case 3
File name:	cormix\sim\PHIL3-NE.cx2
Time of FORTRAN run:	04/29/96-11:46:18
Tidal CORMIX Information	
Tidal height range (m):	1.94
Maximum tidal current (m/s):	0.93
Phase difference (degrees):	90
Number of steps:	24

Regulatory Information		
	Minimum Dilution	Average Dilution
5 x depth (35.00 m; 3848 m ²)	1.77	2.07
50 x length (67.53 m; 14327 m ²)	1.89	2.47
50% x width (402.50 m; 336490 m ²)	6.70	7.05
	Minimum Distance	Average Distance
50% x width	836 m	848 m

Interpolation uses a search distance of 100 m.

CORMIX3 -- Buoyant Surface Discharges -- CORMIX3

SITE/CASE IDENTIFIER:		Date prepared:	
SITE Name	Lower Bucks County	12/6/94 (5/95)	
Design CASE	Tidal Simulation	Prepared by:	
DOS FILE NAME	LBC3-F12	T. Fikslin (SH)	
TIDAL DATA:		Is this a tidal simulation? <u>yes</u>	
Tidal height range (H _r)	<u>0.455</u> m	Phase difference between	<u>90</u> °
Maximum amplitude of the tidal current (U _t)	<u>0.82</u> m/s	tidal current and height	<u>24</u>
AMBIENT DATA:		Bounded or unbounded <u>bounded</u>	
Water body depth (H _a)	<u>3.0</u> m	Water body width (W)	<u>300</u> m
Depth at discharge (H _d)	<u>3.0</u> m	Appearance (1 / 2 / 3)?	<u>3</u>
Ambient flowrate (Q _a)	<u>---</u> m ³ /s	or: Ambient velocity (U _a)	<u>0.117</u> m/s
Manning's n	<u>0.028</u>	or: Darcy-Weisbach f	<u>---</u>
Wind Speed	<u>2</u> m/s		
Density data:		UNITS: Density...kg/m³ / Temperature...°C	
Water body (fresh / salt)?	<u>fresh</u>	Specify density or temp. ?	<u>temp</u>
<i>If uniform:</i>		Average density / temp.	<u>20</u>
<i>If stratified:</i>		Stratification type (A / B / C)?	<u>---</u>
Density/temp. at surface	<u>---</u>	<i>If B/C:</i> Pycnocline height	<u>---</u> m
Density/temp. at bottom	<u>---</u>	<i>If C:</i> Density/temp. jump	<u>---</u> m
DISCHARGE DATA:			
Geometry data:		Configuration type is	
Discharge is on (left / right)	<u>right</u> bank	(flush/protruding/co-flowing)	<u>protruding</u>
Horizontal angle (SIGMA)	<u>90</u> °	<i>If protruding:</i> Dist. from bank	<u>29.3</u> m
Depth at discharge (H _d)	<u>3.0</u> m	Bottom slope	<u>10</u> °
<i>If rectangular</i> Width (b _o)	<u>---</u> m	<i>If circular</i> Diameter	<u>0.91</u> m
<i>disch. channel:</i> Depth (h _o)	<u>---</u> m	<i>pipe:</i> Bottom invert depth (h _o)	<u>0.91</u> m
Effluent data:			
Effluent flow rate	<u>0.44</u> m ³ /s	or: Effluent velocity	<u>---</u> m/s
Effluent density	<u>---</u> kg/m ³	or: Effluent temperature	<u>22</u> °C
Heated discharge (yes/no)?	<u>no</u>	<i>If yes:</i> Heat loss (W/m ² ·°C)	<u>---</u>
Concentration units	<u>percent</u>	Effluent concentration	<u>100</u>
Conservative substance?	<u>yes</u>	<i>If no:</i> Decay coefficient	<u>---</u> /day
MIXING ZONE DATA:			
Is effluent toxic (yes / no)?	<u>no</u>	<i>If yes:</i> CMC value	<u>---</u>
		CCC value	<u>---</u>
Is there a WQ standard for conventional pollutant?	<u>no</u>	<i>If yes:</i> value of standard	<u>---</u>
Any mixing zone specified?	<u>yes</u>	<i>If yes:</i> distance	<u>---</u> m
		or width (% or m)	<u>50%</u>
Region of interest	<u>10000</u> m	or area (% or m ²)	<u>---</u>
Grid intervals for display	<u>50</u>		



Tidal CORMIX Postprocessor Site Info

CORMIX Case Description

Site name: Lower Bucks County
 Design case: DRBC Tidal Run - 12 Final
 File name: cormix\sim\lbc3-f12.c3
 Time of FORTRAN run: 04/04/95-13:02:23

Tidal CORMIX Information

Tidal height range (m): .455
 Maximum tidal current (m/s): .82
 Phase difference (degrees): 90
 Number of steps: 24

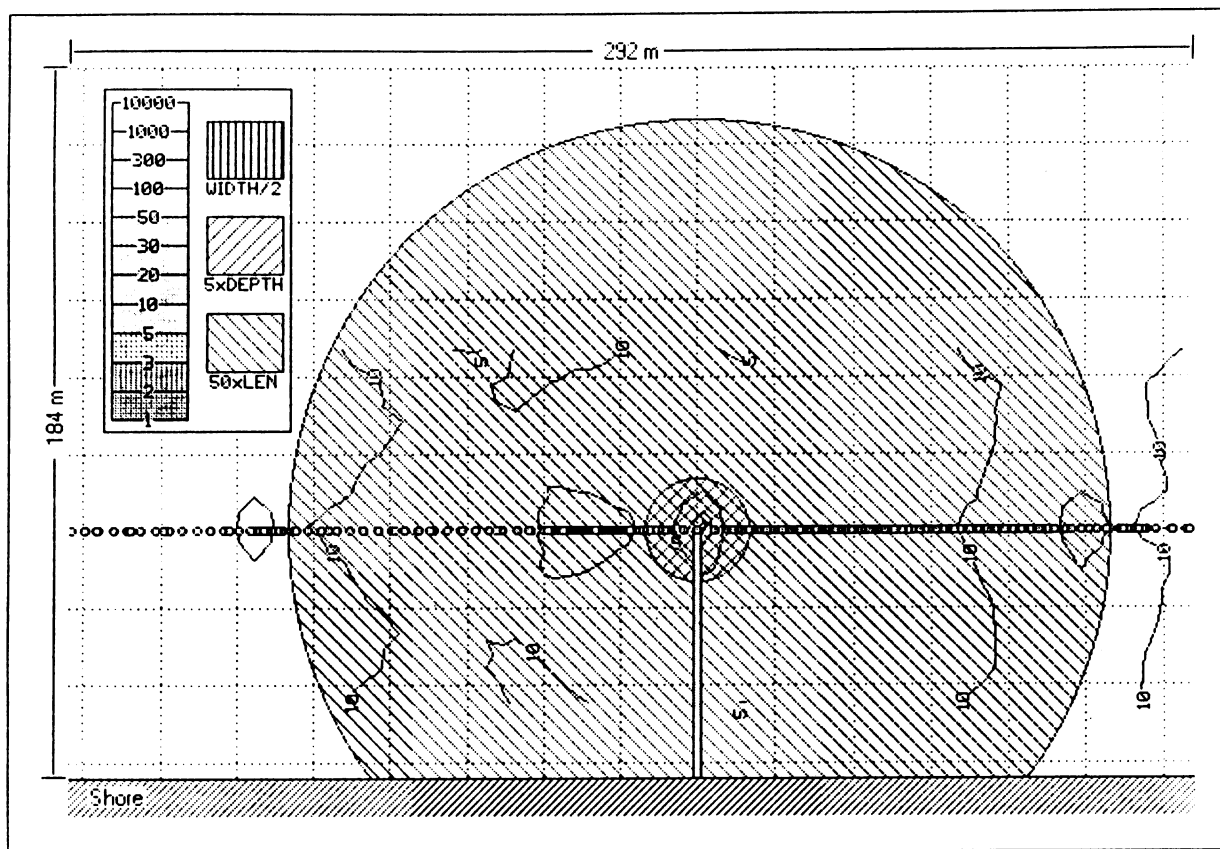
Regulatory Information

	Minimum Dilution	Average Dilution
5 x depth (15.49 m)	2.36	2.73
50 x length (40.50 m)	3.24	4.47
50% x width (150.00 m)	107.70	107.70

	Minimum Distance	Average Distance
50% x width	5708 m	5708 m

CORMIX2 -- Submerged multiport diffuser discharges -- CORMIX2

SITE/CASE IDENTIFIER:		Date prepared:	
SITE Name	City of Trenton	12/6/94 (3/9/95)	
Design CASE	Tidal Simulation	Prepared by:	
DOS FILE NAME	TRN2-F01	R. Wu (SH)	
TIDAL DATA:		Is this a tidal simulation?	yes
Tidal height range (H _t)	2.07 m	Phase difference between tidal current and height	90 °
Maximum amplitude of the tidal current (U _t)	0.72 m/s	Number of STEPS	24
AMBIENT DATA:		Bounded or unbounded	bounded
Water body depth (H _a)	2.72 m	Water body width (W)	265 m
Depth at discharge (H _d)	2.49 m	Appearance (1 / 2 / 3)?	1
Ambient flowrate (Q _a)	---	or: Ambient velocity (U _a)	0.117 m/s
Manning's n	0.04	or: Darcy-Weisbach f	---
Wind Speed	2 m/s		
Density data:		UNITS: Density...kg/m³ / Temperature...°C	
Water body (fresh / salt)?	fresh	Specify density or temp. ?	temp
<i>If uniform:</i>		Average density / temp.	20
<i>If stratified:</i>		Stratification type (A / B / C)?	---
Density/temp. at surface	---	<i>If B/C: Pycnocline height</i>	---
Density/temp. at bottom	---	<i>If C: Density/temp. jump</i>	---
DISCHARGE DATA:			
Geometry data:			
Nearest bank (left / right)?	left	Distance to one endpoint	59.4 m
Diffuser length (L _D)	7.62 m	to other endpoint	67.02 m
Total number of openings	4		
Port diameter (D)	1.2 m	width contraction ratio	1
Diffuser arrangement / type (unidirectional / staged / alternating or vertical)			unidirect.
Alignment angle (GAMMA)	90 °	Horizontal angle (SIGMA)	na °
Vertical angle (THETA)	90 °	Relative orientation (BETA)	na °
Port height (h _o)	0.48105 m		
Effluent data:			
Effluent flow rate	0.69 m ³ /s	or: Effluent velocity	---
Effluent density	---	or: Effluent temperature	22 °C
Heated discharge (yes/no)?	no	<i>If yes: Heat loss (W/m²·°C)</i>	---
Concentration units	percent	Effluent concentration	100
Conservative substance?	yes	<i>If no: Decay coefficient</i>	---
MIXING ZONE DATA:			
Is effluent toxic (yes / no)?	no	<i>If yes: CMC value</i>	---
		CCC value	---
Is there a WQ standard for conventional pollutant?	no	<i>If yes: value of standard</i>	---
Any mixing zone specified?	yes	<i>If yes: distance</i>	---
		or width (% or m)	50%
Region of interest	5000 m	or area (% or m ²)	---
Grid intervals for display	50		



Tidal CORMIX Postprocessor Site Info

CORMIX Case Description

Site name: City of Trenton
 Design case: DRBC Tidal Run - 01 Final
 File name: cormix\sim\TRN2-F01.c2
 Time of FORTRAN run: 03/14/95-20:53:35

Tidal CORMIX Information

Tidal height range (m): 2.07
 Maximum tidal current (m/s): .72
 Phase difference (degrees): 90
 Number of steps: 24

Regulatory Information

	Minimum Dilution	Average Dilution
5 x depth (13.57 m)	5.45	6.68
50 x length (106.50 m)	5.21	11.54
50% x width (132.50 m)	10.40	11.00

	Minimum Distance	Average Distance
50% x width	232 m	244 m

CORMIX3 -- Bouyant Surface Discharges -- CORMIX3

SITE/CASE IDENTIFIER:

SITE Name

Morrisville Borough

Date prepared:

1/11/99

Design Case

Tidal Simulation

Prepared by:

JT

DOS FILE NAME

Morr3

TIDAL DATA

Tidal height range (H_r)

0.69 m

Is this a tidal simulation

Yes

Maximum amplitude

of the tidal current (U_t)

0.72 m/s

Phase differences between tidal current and height

90 °

Number of STEPS

24

AMBIENT DATA:

Water body depth (H_a)

3.0 m

Bounded or unbounded

bounded

Depth at discharge (H_d)

3.0 m

Water body width (W)

244 m

Ambient flow rate (Q_a)

_____ m³/s

Appearance (1 / 2 / 3)?

1

Manning's n

0.04

or: Ambient velocity (U_a)

0.117 m/s

Wind Speed

2 m/s

or: Darcy-Weisbach f

Density data:

Water body (fresh / salt)?

fresh

UNITS: Density...kg/m3 / Temperature...°C

If uniform:

Specify density or temp. ?

temp

If stratified:

Average density / temp.

20

Density/temp. at surface

Stratification type (A / B / C)?

Density/temp. at bottom

If B/C: Pycnocline height

_____ m

If C: Density/temp. jump

_____ m

DISCHARGE DATA:

Geometry data:

Discharge is on (left / right)

right bank

Configuration type is

(flush/protruding/co-flowing)

protruding

Horizontal angle (SIGMA)

90 °

If protruding: Dist. from bank

48.8 m

Depth at discharge

_____ m

Bottom slope

10 °

If rectangular: Width (b_o)

_____ m

If circular: Diameter (D)

1.38 m

disch. channel: Depth (h_o)

_____ m

pipe: Bottom invert depth (h_o)

1.38 m

Effluent data:

Effluent flow rate

0.31 m³/s

or: Effluent velocity

_____ m/s

Effluent density

_____ kg/m³

or: Effluent temperature

11 °C

Heated discharge (yes/no)?

no

If yes: Heat loss (W/m².°C)

Concentration units

percent

Effluent concentration

100

Conservative substance?

yes

If no: Decay coefficient

_____ /day

MIXING ZONE DATA:

Is effluent toxic (yes / no)?

no

If yes: CMC value

CCC value

Is there a WQ standard for conventional pollutant?

no

If yes: value of standard

Any mixing zone specified?

yes

If yes: distance

_____ m

or width (% or m)

50%

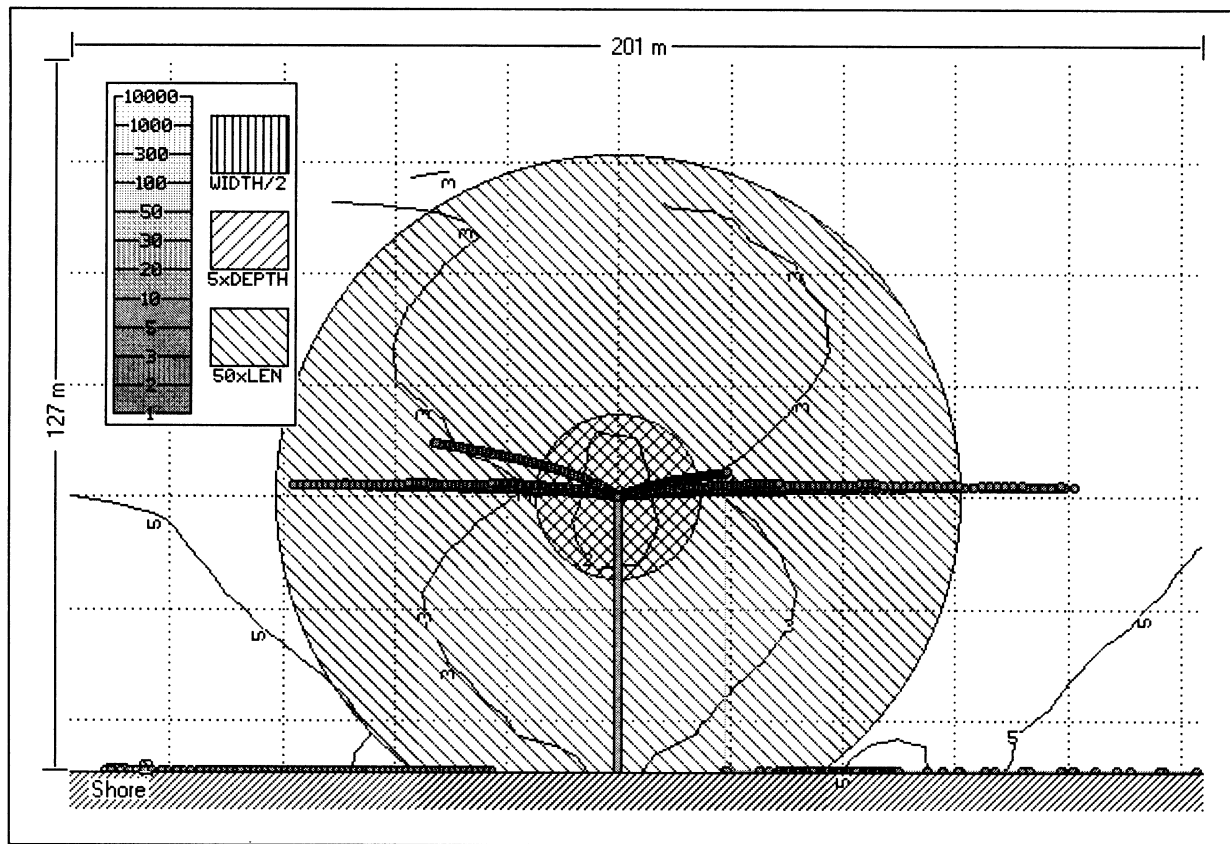
Region of interest

10000 m

or area (% or m²)

Grid intervals for display

50



Tidal CORMIX Postprocessor Site Info

CORMIX Case Description

Site name: Morrisville
Design case: Surface
File name: cormix\sim\morr3
Time of FORTRAN run: 01/08/99-09:13:41

Tidal CORMIX Information

Tidal height range (m): 0.69
Maximum tidal current (m/s): 0.72
Phase difference (degrees): 90
Number of steps: 24

Regulatory Information

	Minimum Dilution	Average Dilution
5 x depth (14.98 m; 705 m ²)	2.06	2.32
50 x length (61.15 m; 11127 m ²)	2.84	4.00
50% x width (122.00 m; 76128 m ²)	68.50	70.60

	Minimum Distance	Average Distance
50% x width	624 m	1742 m

Interpolation uses a search distance of 50 m.