

46.00 m from the RIGHT bank/shore.
X-axis points downstream, Y-axis points to left, Z-axis points upward.
NSTEP = 10 display intervals per module

BEGIN MOD101: DISCHARGE MODULE

X	Y	Z	S	C	B
0.00	0.00	0.60	1.0	0.350E+04	0.13

END OF MOD101: DISCHARGE MODULE

BEGIN CORJET (MOD110): JET/PLUME NEAR-FIELD MIXING REGION

Jet-like motion in linear stratification with weak crossflow.

Zone of flow establishment:			THETA E=	10.00	SIGMA E=	89.88	
LE =	1.25	XE =	0.00	YE =	1.23	ZE =	0.82

Profile definitions:

B = Gaussian 1/e (37%) half-width, normal to trajectory
S = hydrodynamic centerline dilution
C = centerline concentration (includes reaction effects, if any)

X	Y	Z	S	C	B
0.00	0.00	0.60	1.0	0.350E+04	0.13
0.00	1.23	0.82	1.0	0.350E+04	0.14
0.02	3.63	1.25	2.7	0.130E+04	0.41

** CMC HAS BEEN FOUND **

The pollutant concentration in the plume falls below CMC value of 0.120E+04 in the current prediction interval.

This is the extent of the TOXIC DILUTION ZONE.

0.09	6.15	1.76	4.6	0.766E+03	0.69
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** WATER QUALITY STANDARD OR CCC HAS BEEN FOUND **

The pollutant concentration in the plume falls below water quality standard or CCC value of 0.600E+03 in the current prediction interval.

This is the spatial extent of concentrations exceeding the water quality standard or CCC value.

0.20	8.65	2.32	6.5	0.541E+03	0.98
0.36	11.14	2.93	8.4	0.418E+03	1.26

Level of buoyancy reversal in stratified ambient.

0.56	13.63	3.54	10.3	0.340E+03	1.55
0.83	16.26	4.06	12.3	0.285E+03	1.86
1.14	18.80	4.29	14.2	0.247E+03	2.16

Maximum jet height has been reached.

1.51	21.34	4.14	16.2	0.215E+03	2.46
1.92	23.82	3.64	18.5	0.190E+03	2.76
2.40	26.27	3.05	20.4	0.171E+03	3.05

Cumulative travel time = 75. sec

END OF CORJET (MOD110): JET/PLUME NEAR-FIELD MIXING REGION

BEGIN MOD137: TERMINAL LAYER INJECTION/UPSTREAM SPREADING

UPSTREAM INTRUSION PROPERTIES:

Maximum elevation of jet/plume rise = 7.26 m
 Layer thickness in impingement region = 1.30 m
 Upstream intrusion length = 96.54 m
 X-position of upstream stagnation point = -94.14 m
 Thickness in intrusion region = 1.30 m
 Half-width at downstream end = 206.30 m
 Thickness at downstream end = 0.96 m

Control volume inflow:

X	Y	Z	S	C	B
2.40	26.27	3.05	20.4	0.171E+03	3.05

Profile definitions:

BV = top-hat thickness, measured vertically
 BH = top-hat half-width, measured horizontally in Y-direction
 ZU = upper plume boundary (Z-coordinate)
 ZL = lower plume boundary (Z-coordinate)
 S = hydrodynamic average (bulk) dilution
 C = average (bulk) concentration (includes reaction effects, if any)

X	Y	Z	S	C	BV	BH	ZU	ZL
-94.14	26.27	3.05	9999.9	0.000E+00	0.00	0.00	3.05	3.05
-90.15	26.27	3.05	80.2	0.437E+02	0.33	29.18	3.22	2.89
-70.58	26.27	3.05	33.4	0.105E+03	0.79	70.87	3.45	2.66
-51.01	26.27	3.05	25.4	0.138E+03	1.04	95.88	3.57	2.53
-31.44	26.27	3.05	22.1	0.158E+03	1.20	115.60	3.65	2.46
-11.87	26.27	3.05	20.7	0.169E+03	1.28	132.42	3.69	2.41
7.70	26.27	3.05	20.6	0.170E+03	1.29	147.33	3.70	2.41
27.27	26.27	3.05	24.2	0.144E+03	1.23	160.86	3.67	2.44
46.84	26.27	3.05	30.0	0.117E+03	1.12	173.34	3.61	2.49
66.41	26.27	3.05	34.8	0.100E+03	1.03	184.99	3.57	2.54
85.98	26.27	3.05	37.4	0.935E+02	0.98	195.93	3.54	2.56
105.55	26.27	3.05	38.8	0.903E+02	0.96	206.30	3.53	2.57

Cumulative travel time = 6951. sec

END OF MOD137: TERMINAL LAYER INJECTION/UPSTREAM SPREADING

 ** End of NEAR-FIELD REGION (NFR) **

In this design case, the discharge is located CLOSE TO BANK/SHORE.
 Some boundary interaction occurs at end of near-field.

This may be related to a design case with a very LOW AMBIENT VELOCITY.

The dilution values in one or more of the preceding zones may be too high.
 Carefully evaluate results in near-field and check degree of interaction.

Consider locating outfall further away from bank or shore.

In the next prediction module, the plume centerline will be set
 to follow the bank/shore.

 ** REGULATORY MIXING ZONE BOUNDARY is within the Near-Field Region (NFR) **

BEGIN MOD142: BUOYANT TERMINAL LAYER SPREADING

Plume is ATTACHED to RIGHT bank/shore.

Plume width is now determined from RIGHT bank/shore.

Profile definitions:

BV = top-hat thickness, measured vertically

