

**HAMS-GPS : EIA Module**

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Date : Sunday, August 21, 2016

**Data Entered for Stack - Plume**

Reference No. : Stack A	Stack Tip Diameter (m):1.50 Stack exit Velocity. (m/s) :2.50 Ambient Temp at stack height (deg.C) :80.00 Stack exit temp (deg.C):100.00 Mixing Height (m) : 20.00 Percent Humidity (%) : 52.37	Sulpher dioxide (SOXs as SO2): : 100000 micro gm/m3
Name of Pollutant : Stack gas		Carbon dioxide (CO2): : 10000 micro gm/m3
Scenario : Stack at PI 1a		Nitrogen dioxide (NOXs as NO2): : 1000 micro gm/m3
Height of release (m) : 105.69		Carbon monoxide (CO): : 1000 micro gm/m3
Height of simulation (m): 1.50		Hydrocarbons as (CH4): : 1000 micro gm/m3
Atmospheric stability class : A		SPM: : 1000 micro gm/m3
Wind velocity : 3.90 m/s		
Terrain : Semi-Urban		
Rate of Released (micro gm/Sec) : 475182.29		

**Results**

Max Isop conc (micro gm/m3) : 3.28                      Max. Isop Conc. Distance (m) : 422.50  
 MGC (micro gm/m3) : 3.30                              MGC Distance (m) : 385.00  
 Time for stabilization concentration zones of dispersion (Mins) 8.38

Concentration for Isopleth	Concentration (micro gm/m3):		-----Isopleth (X- Axis)		Isopleth (Y- Axis) [m]	Distance of Max. ISOP from source [m]	Isopleth angle (deg.)	Isopleth Area (Ha)	
	Begin point	End point	Time (Sec)	Isopleth length					
Concentration for Isopleth 1:	2	319.00	639.08	163.93	320.08	135.04	466.50	8.23	3.395
Concentration for Isopleth 2:	1	282.50	854.03	219.06	571.53	215.41	541.50	11.25	9.669
Concentration for Isopleth 3:	0.5	250.00	1107.93	284.19	857.93	288.30	648.50	12.53	19.426
Concentration for Isopleth 4:	0.25	228.00	1421.73	364.68	1193.73	365.06	797.50	12.89	34.226
Concentration for Isopleth 5:	0.15	216.00	1701.99	436.57	1485.99	427.76	938.50	12.84	49.924
Concentration for Isopleth 6:	0.1	208.00	1959.95	502.74	1751.95	482.71	1072.50	12.68	66.420

NOTE:Please check for latest emission standards of concentration of each gas.

**Data Entered for Stack - Plume**

Reference No. : Stack A	Sulphur dioxide (SOXs as SO2): : 100000 micro gm/m3
Name of Pollutant : Stack gas	Carbon dioxide (CO2): : 10000 micro gm/m3
Scenario : Stack at PI 1a	Nitrogen dioxide (NOXs as NO2): : 1000 micro gm/m3
Height of release (m) : 105.69	Carbon monoxide (CO): : 1000 micro gm/m3
Height of simulation (m): 1.50	Hydrocarbons as (CH4): : 1000 micro gm/m3
Atmospheric stability class : A	SPM: : 1000 micro gm/m3
Wind velocity : 3.90 m/s	
Terrain : Semi-Urban	
Rate of Released (micro gm/Sec) : 475182.29	
Stack Tip Diameter (m):1.50	
Stack exit Velocity. (m/s) :2.50	
Ambient Temp at stack height (deg.C) :80.00	
Stack exit temp (deg.C):100.00	
Mixing Height (m) : 20.00	
Percent Humidity (%) : 52.37	

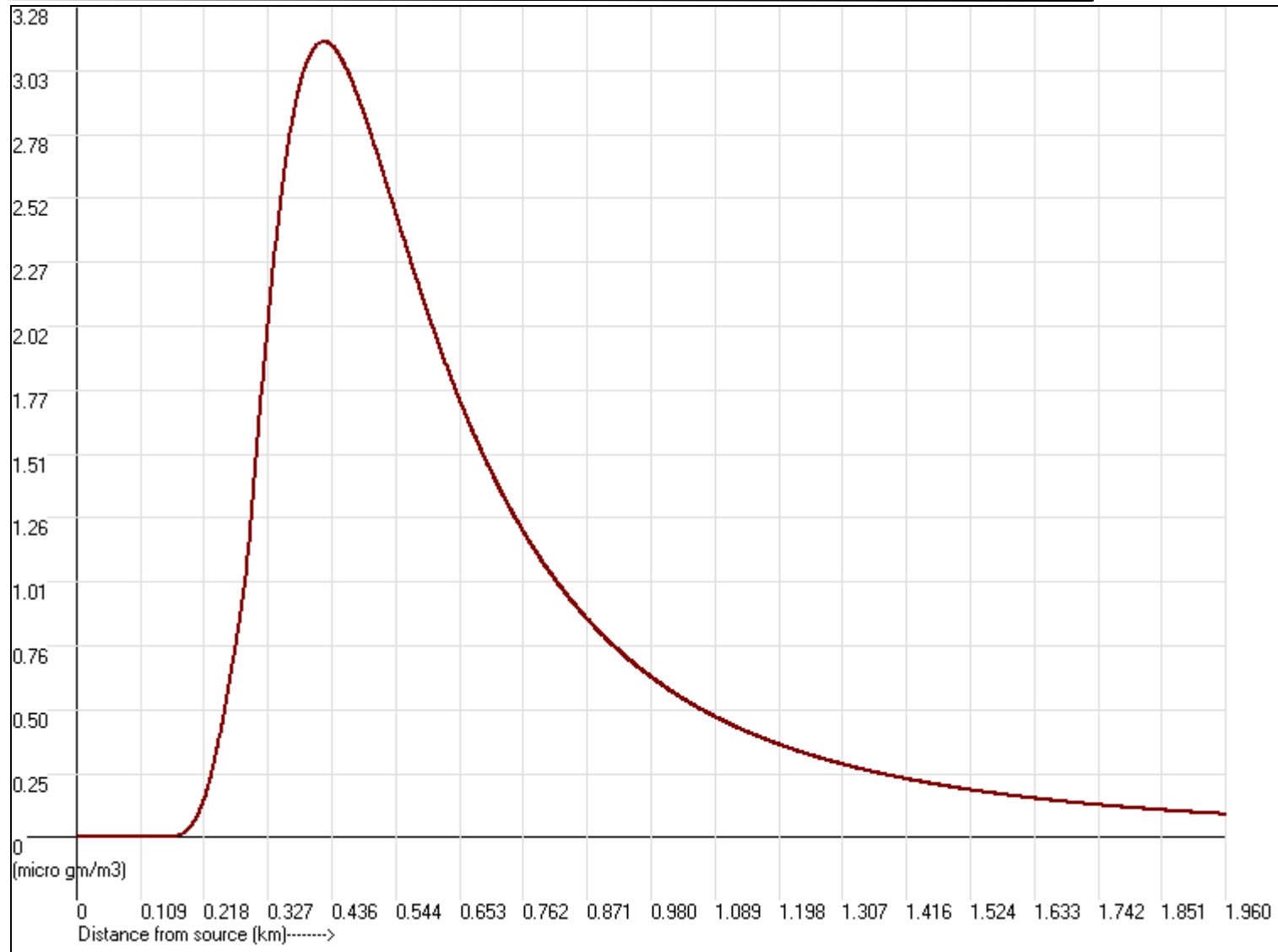
**Results**

Max Isop conc (micro gm/m3) : 3.28      Max. Isop Conc. Distance (m) : 422.50  
MGC (micro gm/m3) : 3.30      MGC Distance (m) : 385.00  
Time for stabilization concentration zones of dispersion (Mins) 8.38

Concentration for Isopleth:	Concentration (micro gm/m3):	Sulphur dioxide (SOXs as SO2):	Carbon dioxide (CO2):	Nitrogen dioxide (NOXs as NO2):	Carbon monoxide (CO):	Hydrocarbons as (CH4):	SPM:
Concentration for Isopleth 1:	2	1.754	0.175	0.018	0.018	0.018	0.018
Concentration for Isopleth 2:	1	0.877	0.088	0.009	0.009	0.009	0.009
Concentration for Isopleth 3:	0.5	0.439	0.044	0.004	0.004	0.004	0.004
Concentration for Isopleth 4:	0.25	0.219	0.022	0.002	0.002	0.002	0.002
Concentration for Isopleth 5:	0.15	0.132	0.013	0.001	0.001	0.001	0.001
Concentration for Isopleth 6:	0.1	0.088	0.009	0.001	0.001	0.001	0.001

NOTE:Please check for latest emission standards of concentration of each gas.

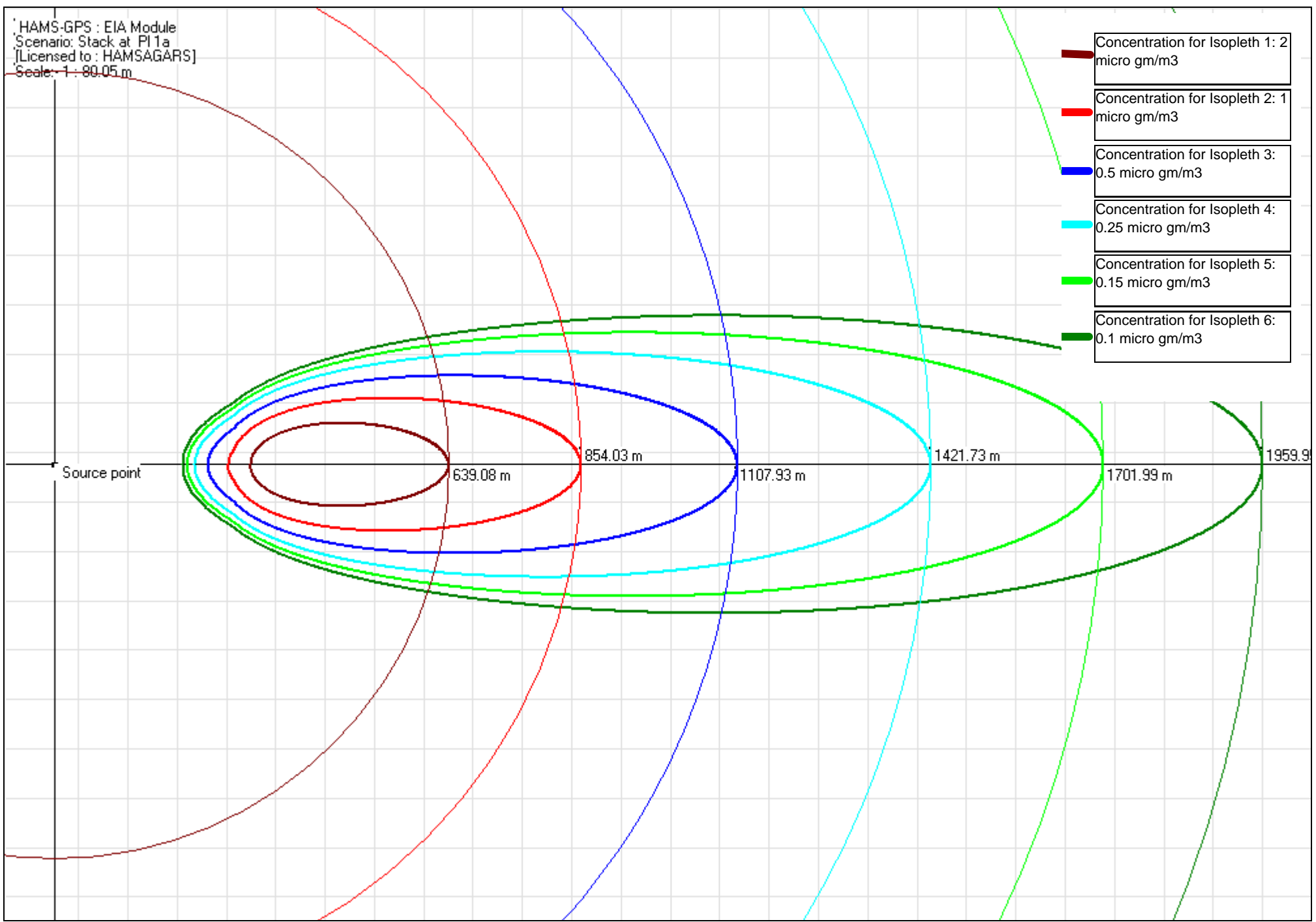
Concentration profile (ISOELEVET)



Concentration 0.04 micro gm/m3 At Distance 0.190 Km
Concentration 3.15 micro gm/m3 At Distance 0.418 Km
Concentration 1.74 micro gm/m3 At Distance 0.645 Km
Concentration 0.49 micro gm/m3 At Distance 1.078 Km

HAMS-GPS : EIA Module  
Scenario: Stack at PI1a  
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Scale: 1 : 80.05 m

- Concentration for Isoleth 1: 2 micro gm/m<sup>3</sup>
- Concentration for Isoleth 2: 1 micro gm/m<sup>3</sup>
- Concentration for Isoleth 3: 0.5 micro gm/m<sup>3</sup>
- Concentration for Isoleth 4: 0.25 micro gm/m<sup>3</sup>
- Concentration for Isoleth 5: 0.15 micro gm/m<sup>3</sup>
- Concentration for Isoleth 6: 0.1 micro gm/m<sup>3</sup>



Source point

639.08 m

854.03 m

1107.93 m

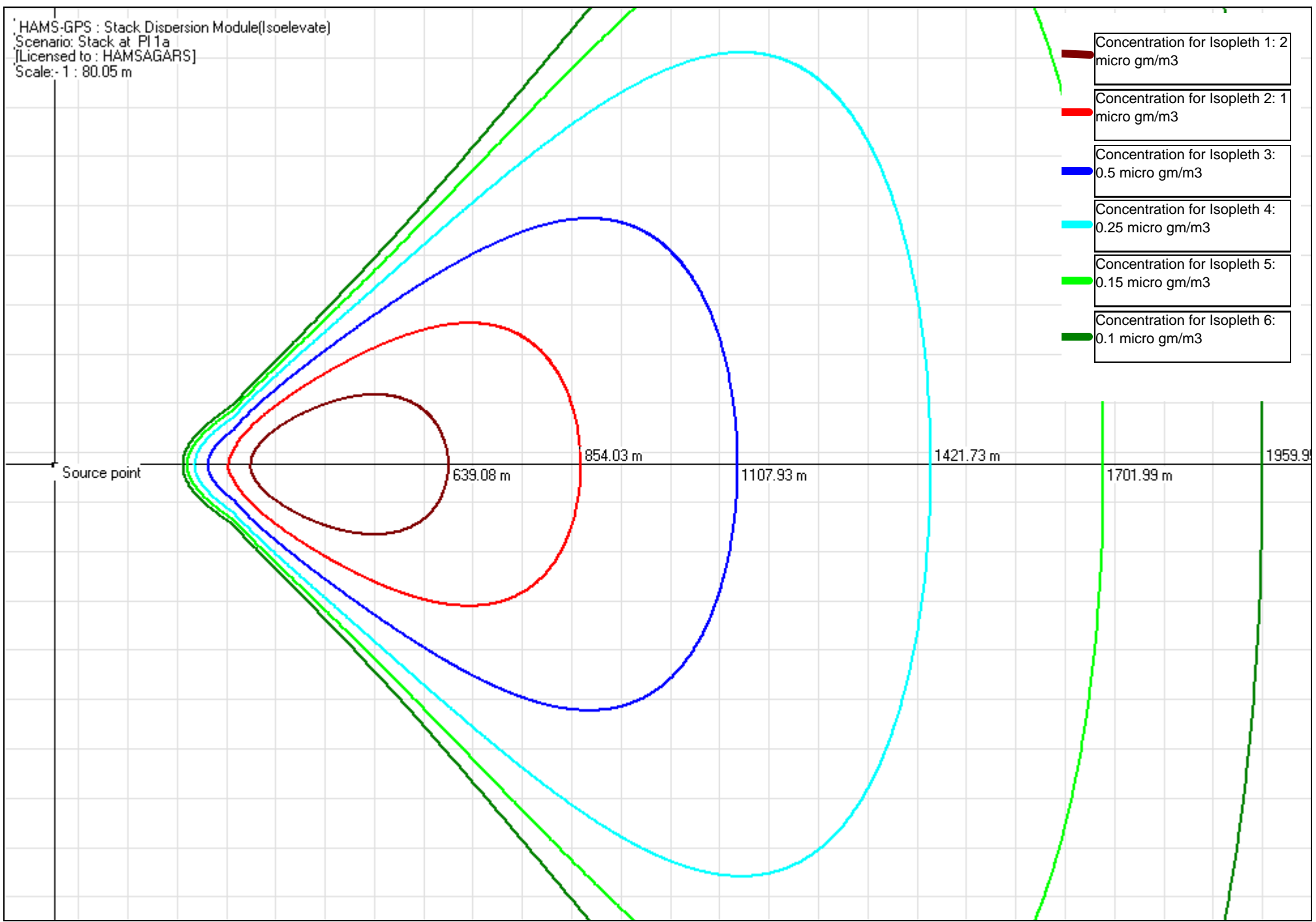
1421.73 m

1701.99 m

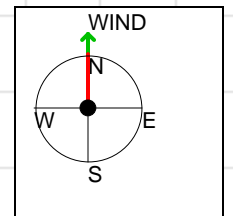
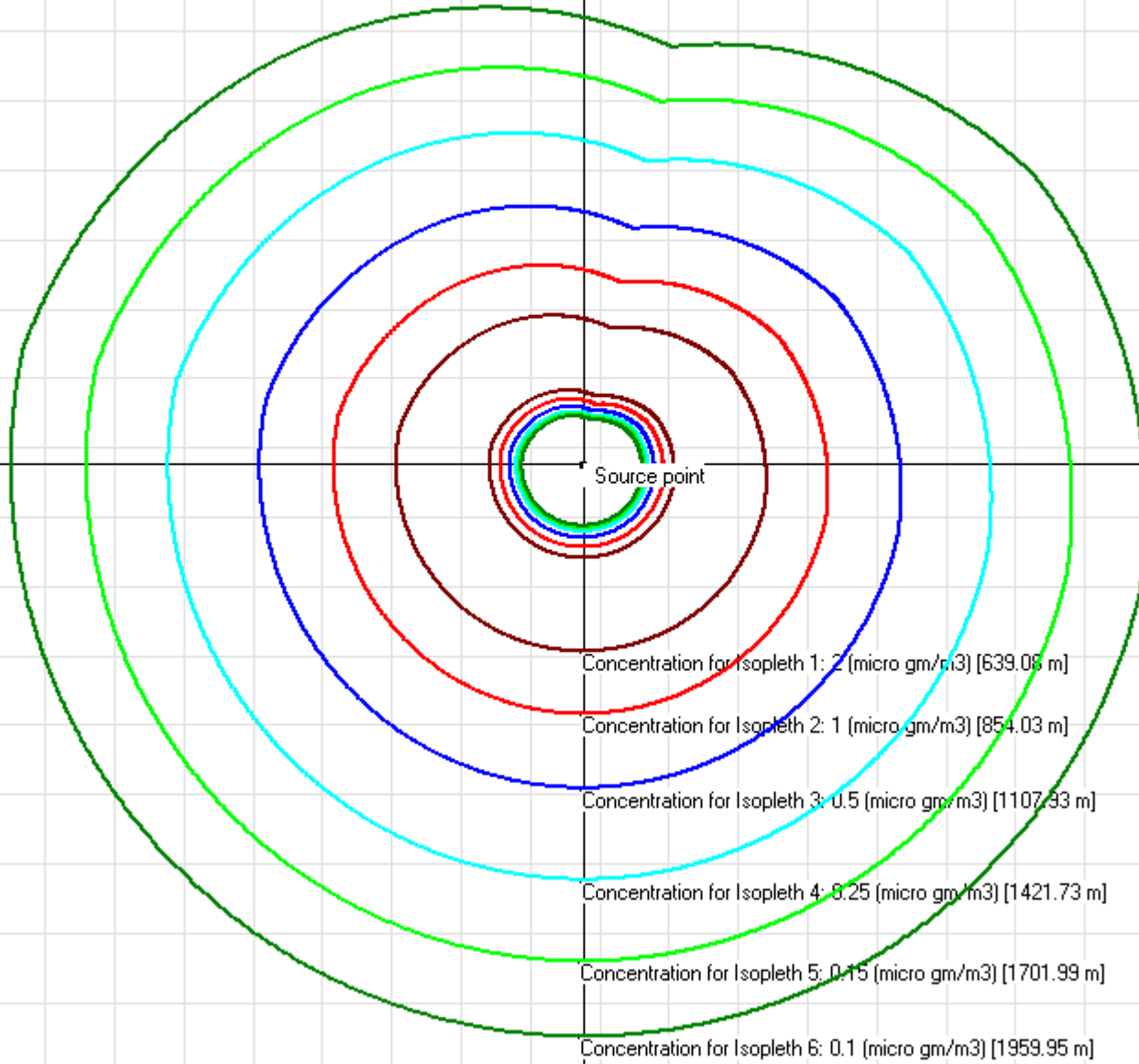
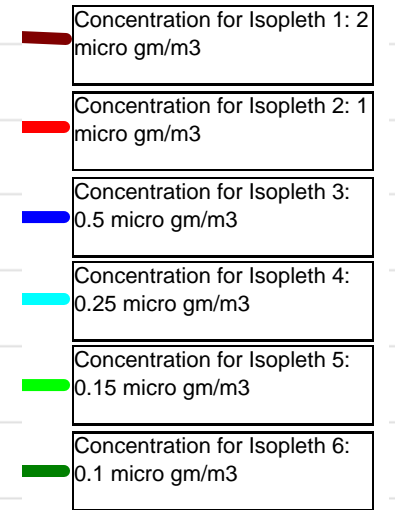
1959.9 m

HAMS-GPS : Stack Dispersion Module(ISOELEVATE)  
Scenario: Stack at PI 1a  
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Scale: 1 : 80.05 m

Concentration for Isopleth 1: 2 micro gm/m <sup>3</sup>
Concentration for Isopleth 2: 1 micro gm/m <sup>3</sup>
Concentration for Isopleth 3: 0.5 micro gm/m <sup>3</sup>
Concentration for Isopleth 4: 0.25 micro gm/m <sup>3</sup>
Concentration for Isopleth 5: 0.15 micro gm/m <sup>3</sup>
Concentration for Isopleth 6: 0.1 micro gm/m <sup>3</sup>

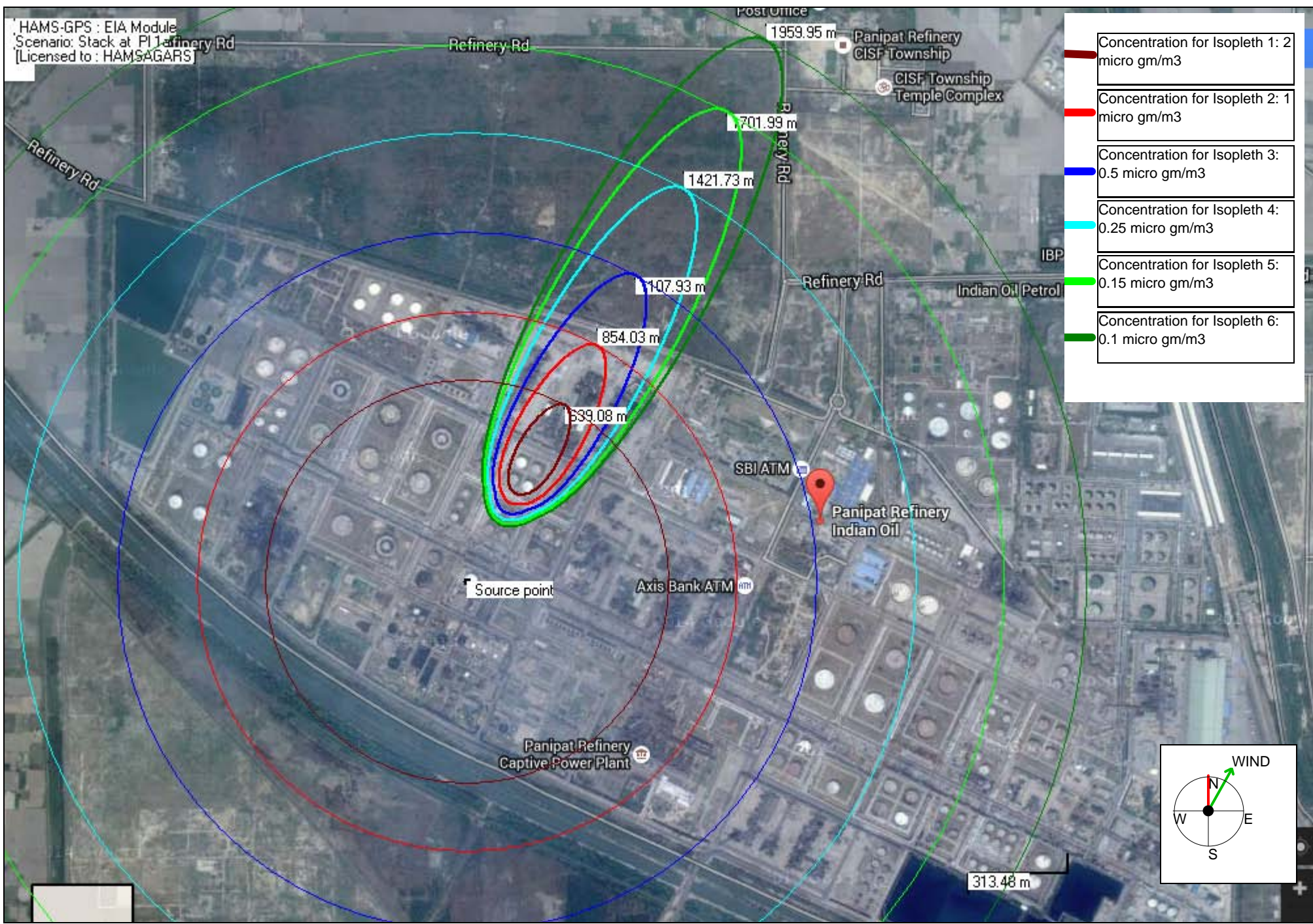


HAMS-GPS : EIA Module  
Scenario: Stack at PI1a  
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Scale: 1 : 237.65 m





HAMS-GPS : EIA Module  
Scenario: Stack at PI 1 Refinery Rd  
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HAMS-GPS : EIA Module  
Scenario: Stack at PI1 Refinery Rd  
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