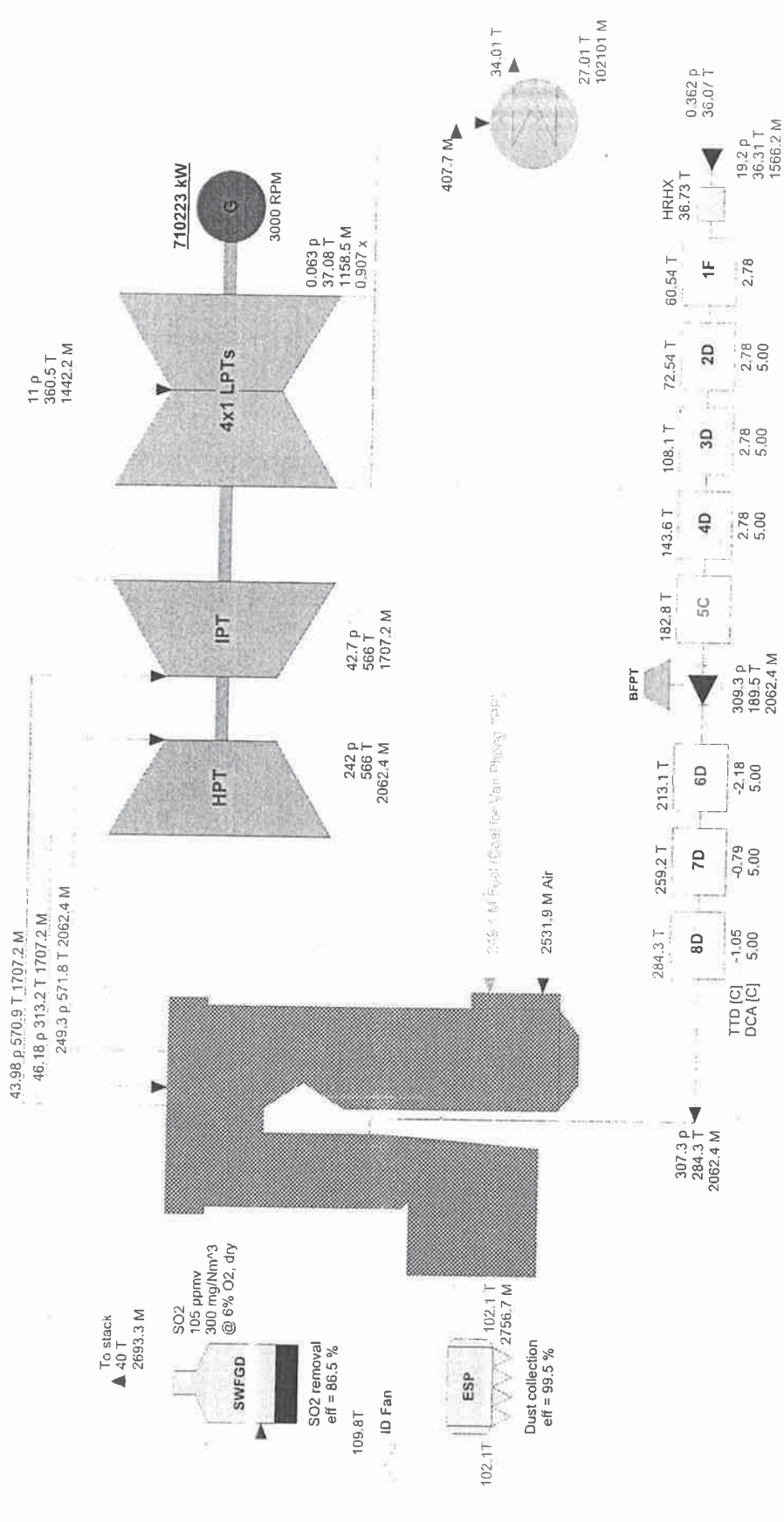


Plant gross power 1420446 KW
 Plant net power 1320301 KW
 Number of units 2
 Plant net HR (HHV) 9242 kJ/kWh
 Plant net HR (LHV) 8744 kJ/kWh
 Plant net eff (HHV) 38.95 %
 Plant net eff (LHV) 41.17 %
 Aux. & losses 100145 KW
 Fuel heat input (HHV) 12203 GJ/h
 Fuel heat input (LHV) 11545 GJ/h
 Fuel flow 11957 t/day
 Net process heat 0 kJ/s

Ambient
 1.012 P
 26.7 T
 79% RH
 23.84 T wet bulb

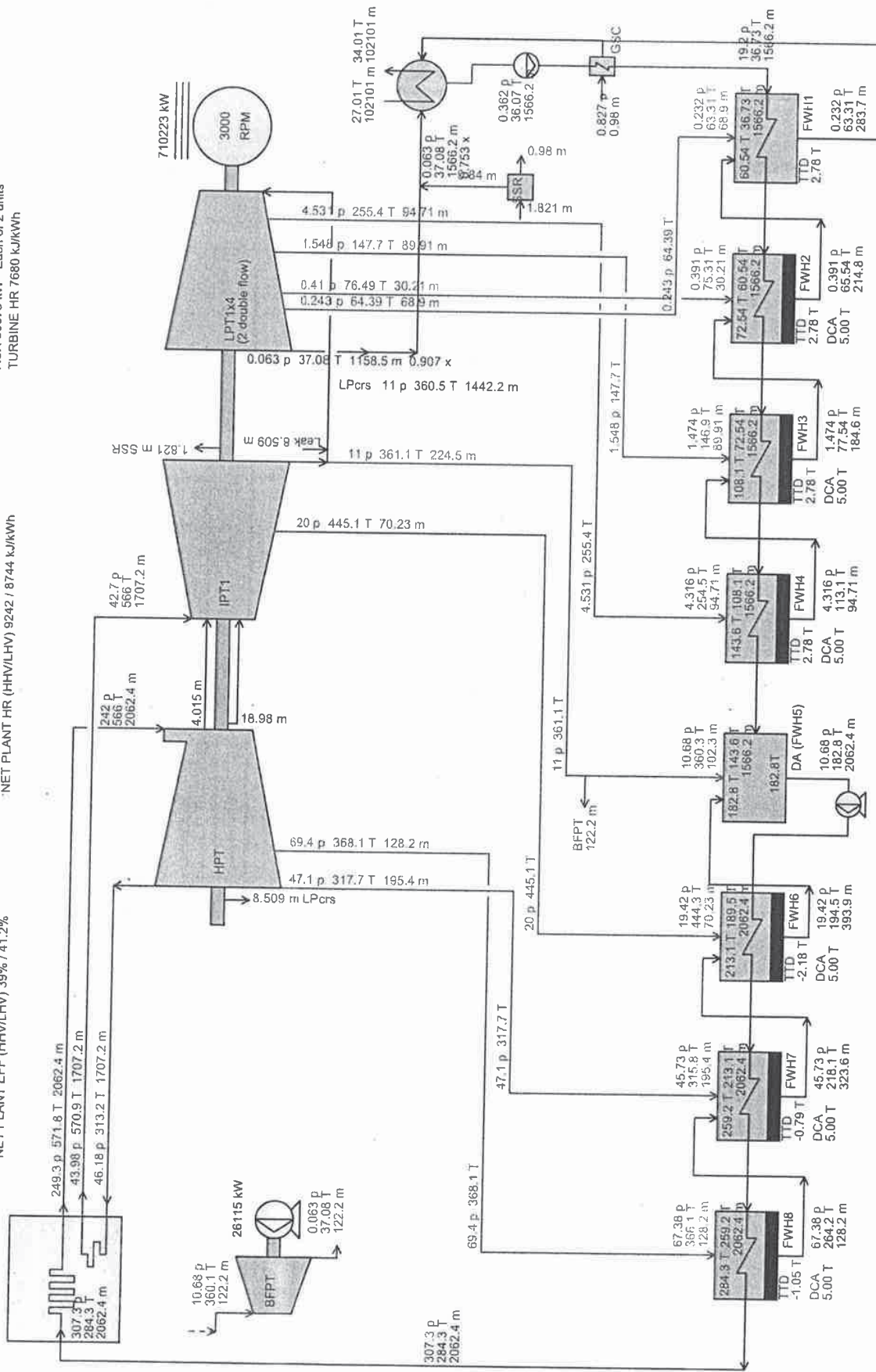


- Each of 2 units
p [bar] T [C] M [t/h] x [-]

BOILER EFF (HHV/LHV) 90.3% / 95.4%
 NET PLANT EFF (HHV/LHV) 39% / 41.2%

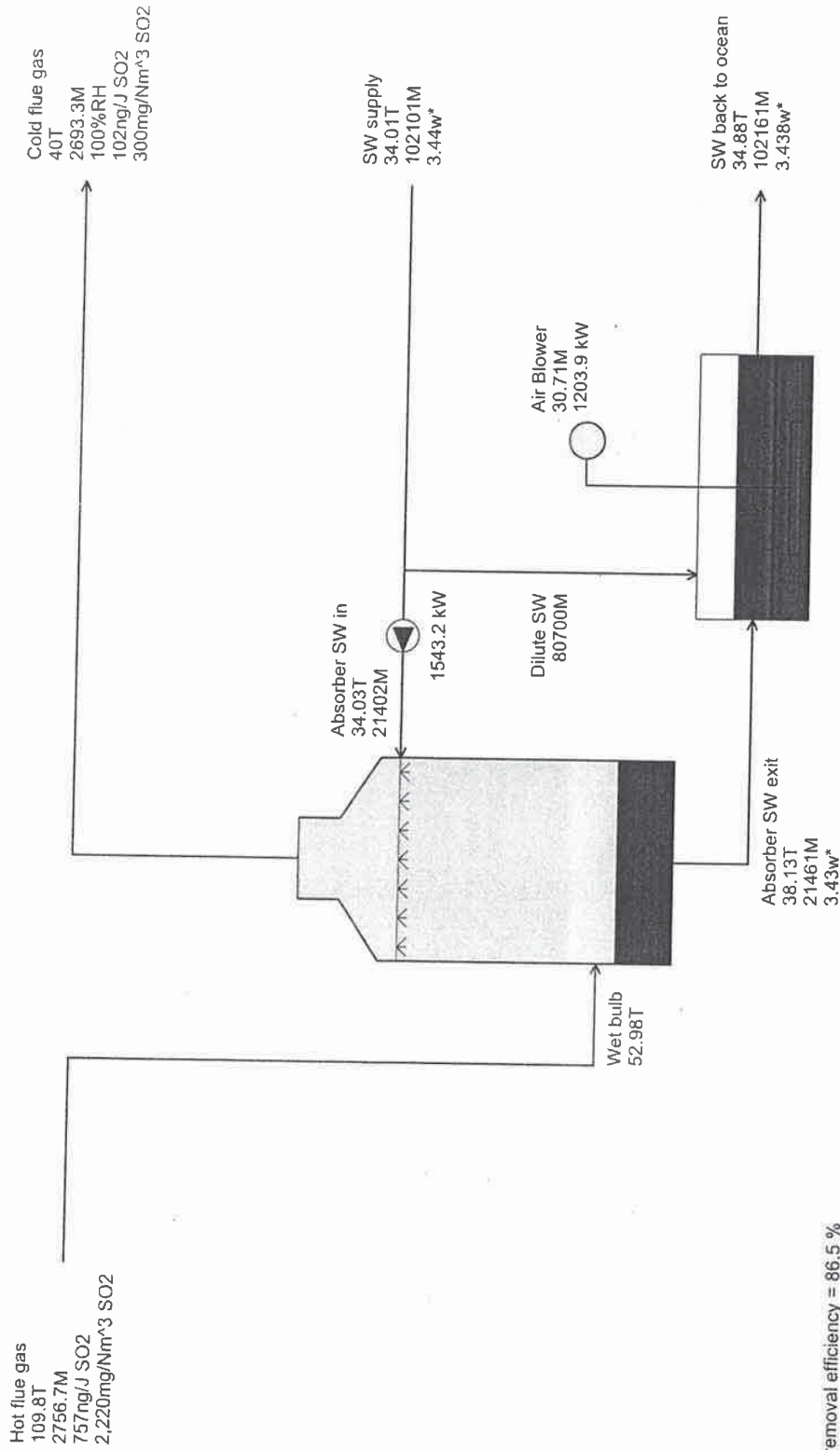
NET POWER 660151 kW - Each of 2 units
 NET PLANT HR (HHV/LHV) 9242 / 8744 kJ/kWh

AUX 50073 kW - Each of 2 units
 TURBINE HR 7680 kJ/kWh



Handwritten signature or mark.

SWFGD Flow Circuit - One Unit (Engineering Design)



FGD SO₂ removal efficiency = 86.5 %
 Absorber SO₂ removal efficiency = 86.5 %
 Number of transfer units (NTU) = 2.002
 Absorber L/G = 11.45 L/Nm³
 Total SO₂ removed = 3.995 t/h
 Total auxiliary power = 2747.2 kW

P[bar] T[C] M[t/h] w*[wt% salinity]

STEAM PRO 24.0 Vu The Uy Institute of Energy

1984 10-06-2014 14:53:12 E:\ThermoFlow\Van Phong 1 Project\VAN PHONG TPP @ RO-REV3 (6-10-2014).STP

Program revision date: June 24, 2014

Steam source: Conventional boiler

Steam turbine: Single reheat condensing turbine 3000+3000/3000

Feedwater heaters: DDDCCDDDF, single LP FWH train & single HP FWH train

Cooling system: Once-through water cooling

Steam Property Formulation: IFC-67

SYSTEM SUMMARY

	Power Output (kW)		Fuel Input (kJ/s)		Fuel Flows	
	Gross	Net	LHV	HHV	t/h	t/day
Each Unit	710223	660151	1603533	1694867	249.1	5978
Plant Total	1420446	1320301	3207066	3389733	498.2	11957
Number of units =	2					
Net process heat output =					kJ/s	
as % of total output (net elec. + net heat) =					%	

PLANT EFFICIENCY AND HEAT RATE

	LHV*		HHV*		Boiler Heat Input**	
	Gross	Net	Gross	Net	Gross	Net
Heat rate	8128	8744	8591	9242	8128	8745
Electric efficiency	44.29	41.17	41.91	38.95	44.29	41.17
CHP (Total) efficiency		41.17		38.95		41.17
U.S. PURPA efficiency		41.17		38.95		41.17

* Heat input is based on fuel chemical energy, LHV or HHV, at 77 F/25 C

** Boiler heat input includes fuel chemical LHV energy at 77 F/25 C, plus enthalpy of supply air (gas) in excess of ambient temperature.

Total heat input (LHV adjusted) =

Fuel input to boiler (LHV adjusted) =

3207066 kJ/s

3206924 kJ/s.

STEAM CYCLE/BOILER PERFORMANCE

Steam cycle heat rate	7757	kJ/kWh
Steam cycle efficiency	46.41	%
Turbine heat rate	7680	kJ/kWh
Boiler LHV adjusted efficiency	95.44	%
Boiler HHV adjusted efficiency	90.29	%

Emissions	kg/hr	metric ton/year	kg/MW/hr (gross)
Furnace Emissions (2 units)			
NOx as NO2	1494.8	12108	1.052
SOx as SO2	9241	74856	6.506
CO2 (net)	1078580	8736499	759.3
Particulate	39298	318312	27.67
Mercury as Hg	0	0	0
Electrostatic Precipitator Exit (2 units)			
NOx as NO2	1494.8	12108	1.052
SOx as SO2	9237	74824	6.503
CO2 (net)	1078116	8732738	759
Particulate	196.5	1591.6	0.1383
Mercury as Hg	0	0	0
Flue Gas Desulfurization (SWFGD) Exit (2 units)			
NOx as NO2	1494.8	12108	1.052
SOx as SO2	1247.1	10101	0.8779
CO2 (net)	1078112	8732710	759
Particulate	98.24	795.8	0.0692
Mercury as Hg	0	0	0
Plant Total Emissions			
NOx as NO2	1494.8	12108	1.052
SOx as SO2	1247.1	10101	0.8779
CO2 (net)	1078112	8732710	759
Particulate	98.24	795.8	0.0692
Mercury as Hg	0	0	0
Stack Levels			
NOx as NO2	122.5	360 @ 6% O2, dry	175.4 @ 6% O2, dry
SOx as SO2	102.2	300.3 @ 6% O2, dry	105.1 @ 6% O2, dry
Particulate	8.051	23.66 @ 6% O2, dry	0 @ 6% O2, dry
Mercury as Hg	0	0 @ 6% O2, dry	0 @ 6% O2, dry
Nm3 at 0 C, 101.325 kPa (32 F, 14.696 psia)			
Note: Boiler NOx emission is computed from the user-specified generation rate input on the Environment topic.			



Emissions

The program DOES NOT predict NOx emissions. Therefore, it is incumbent on the user to input OEM-provided data consistent with equipment operation at this specific running condition.

kg/hr	metric ton/year	kg/MW/hr (gross)

ESP	
Heat Balance	
Flue Gas	
Flue gas inlet temperature	102.1 C
Flue gas outlet temperature	102.1 C
Flue gas mass flow (excluding particulate flow)	2,760 t/h
Flue gas volume flow	2,989,000 m ³ /hr
Flue gas velocity	1.379 m/s
Performance	
Particulate collection efficiency	99.5 %
Inlet particulate per energy input	3221 ng/J
Inlet particulate per gas flow	9455 mg/Nm ³ @ 6% O ₂ , dry
Outlet particulate per energy input	16.1 ng/J
Outlet particulate per gas flow	47.27 mg/Nm ³ @ 6% O ₂ , dry
Inlet particulate flow	19.65 t/h
Particulate removal	19.55 t/h
Outlet particulate flow	0.0982 t/h
Pressure drop (including ductwork)	8.095 millibar
Electricity consumption	1471.3 kW
Flue gas SO ₂	767.4 ppm
Flue gas SO ₃ at inlet	4.981 ppm
Injected sulfur trioxide (SO ₃) for flue gas conditioning	0.113 t/h
Flue gas SO ₃ after conditioning	20 ppm
Flue gas SO ₃ at exit	15 ppm
Heat loss	0 kW
Modified Deutsch-Anderson Equation	
Specific collecting area (SCA)	84.87 m ² / m ³ /s
Particulate resistivity	245543 ohm-cm
Effective migration velocity	0.4167 m/s
Dimensionless K	0.4676
Hardware	
Design collection efficiency	99.5 %
Design inlet temperature	102.1 C
Design flue gas mass flow	2,760 t/h
Design flue gas volume flow	2,989,000 m ³ /hr
Design flue gas velocity	1.372 m/s

ESP

Overall Dimensions

Number of chambers

Number of fields

Total length

Total width

Total height

Total weight

3
4
29.96 m
67.67 m
20.4 m
1,789,000 kg

Collecting Plates

Design specific collecting area (SCA)

Total collection surface area

Number of plates per chamber

Collecting plates height

Collecting plates spacing

Collecting plates bundle width per chamber

Collecting plates depth per field

Collecting length

Aspect ratio (Collecting length / Plate height)

84.87 m² / m³/s
70,450 m²
61
10.97 m
304.8 mm
18.29 m
4.459 m
17.84 m
1.626

SWFGD	
Heat Balance	
Performance	
Number of absorber modules	1
Number of absorber modules in operation	1
FGD SO2 removal efficiency	86.5 %
Absorber SO2 removal efficiency	86.5 %
Number of transfer units (NTU)	2.002
Absorber liquid to gas ratio	11.45 L/Nm ³
Absorber inlet gas wet bulb temperature	52.98 C
Seawater salinity	34400 ppm
Inlet Flue Gas	
Temperature	109.8 C
Gas massflow	2756.7 t/h
Volume flow (upstream of the duct and the air heater if present)	2877382 m ³ /hr
Outlet Flue Gas	
Temperature	40 C
Gas massflow	2693.3 t/h
Volume flow	2324424 m ³ /hr
Seawater Inlet	
Pressure	1.012 bar
Temperature	34.01 C
Enthalpy	135.8 kJ/kg
Massflow	102101 t/h
Salinity	3.44 %
Absorber Seawater Inlet	
Pressure	3.095 bar
Temperature	34.03 C
Enthalpy	136.1 kJ/kg
Massflow (per)	21402 t/h
Absorber Seawater Outlet	
Pressure	1.015 bar
Temperature	38.13 C
Enthalpy	152.3 kJ/kg
Massflow (per)	21461 t/h
Salinity	3.43 %
Dilute Seawater	
Massflow (per)	80700 t/h
Seawater Exit	
Pressure	1.012 bar

SWFGD

Temperature	34.88	C
Enthalpy	139.3	kJ/kg
Massflow	102161	t/h
Salinity	3.438	%
Oxidation Air		
Temperature	26.7	C
Air massflow	30.71	t/h
Oxidation blower pressure rise	1.472	bar

Emissions

Sulfur Dioxide		
Flue gas inlet SO2	757	ng/J
Flue gas inlet SO2	2,220	mg/Nm ³ @ 6% O ₂ , dry
Flue gas inlet SO2	778	ppmv @ 6% O ₂ , dry
FGD outlet SO2	102	ng/J
FGD outlet SO2	300	mg/Nm ³ @ 6% O ₂ , dry
FGD outlet SO2	105	ppmv @ 6% O ₂ , dry
Total SO2 removed	3,995	t/h

Sulfur Trioxide

Inlet SO3	15	ppmv
Outlet SO3	7.778	ppmv

Auxiliary Power

Seawater pump		
Oxidation blower	1543.2	kW
User-defined additional auxiliary	1203.9	kW
Total auxiliary	0	kW
	2747.2	kW

Hardware

Number of absorber modules	1	
Design flue gas inlet temperature		
Design flue gas inlet volume flow (upstream of the duct and the air heater if present)	109.8	C
Design flue gas inlet massflow	2877382	m ³ /hr
	2756.7	t/h

Absorber Design Parameters

Absorber removal efficiency	86.5	%
Absorber gas inlet flow (downstream of the duct and the air heater if present)	2905242	m ³ /hr
Absorber gas outlet flow	2324424	m ³ /hr
Absorber gas flow @ wet bulb temperature	2508922	m ³ /hr
Absorber gas velocity @ wet bulb temperature	3.048	m/s
Absorber gas wet bulb temperature @ design	52.98	C
Absorber liquid to gas ratio	11.45	L/Nm ³

SWFGD

Absorber seawater pump flow

387598 lpm

Absorber Overall Dimensions

Absorber module diameter

17.06 m

Absorber module height

42.66 m

Seawater Treatment Basin

Basin depth

10 m

Basin width

62.76 m

Basin length

62.76 m

Design total seawater flow

102101 tonne/hr

Design seawater residence time

20 minutes

PHỤ LỤC

I. PHỤ LỤC 1: GIAI ĐOẠN I (KHÔNG CÓ BÃI XỈ)

1. Phụ lục 1.1: Kịch bản mùa đông VVP11

2. Phụ lục 1.2: Kịch bản mùa hè VVP12

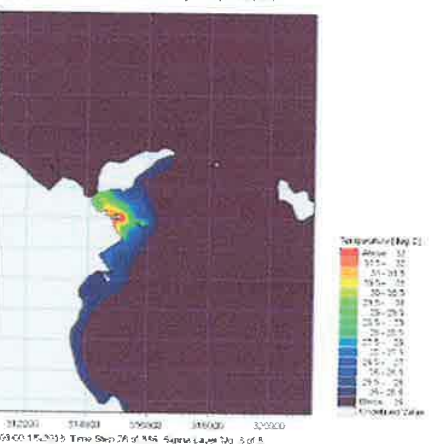
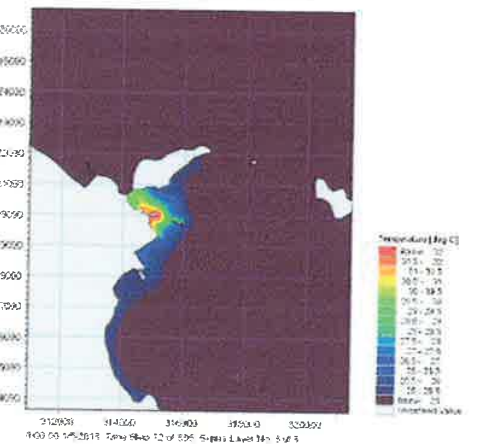
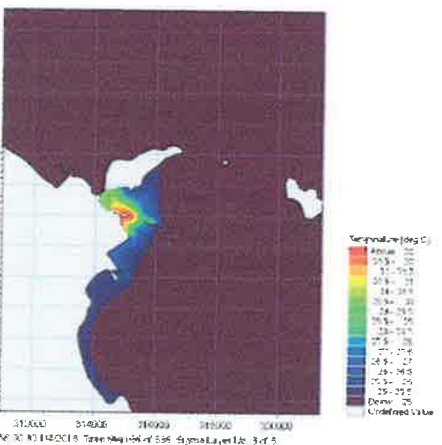
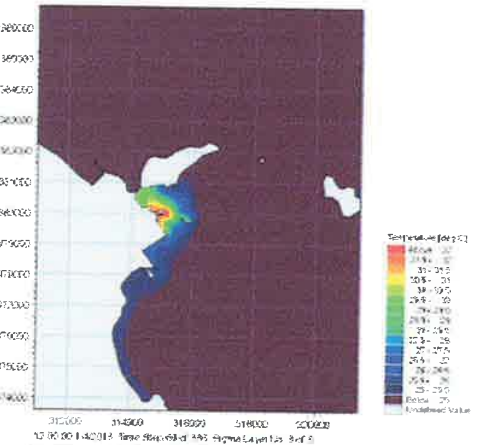
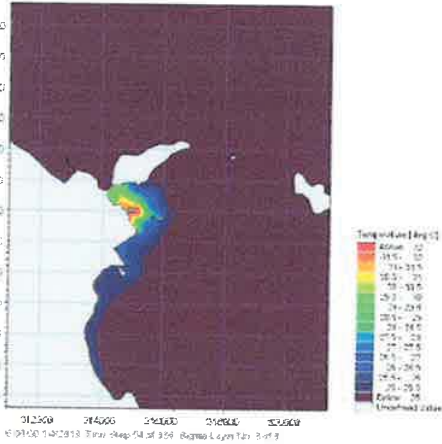
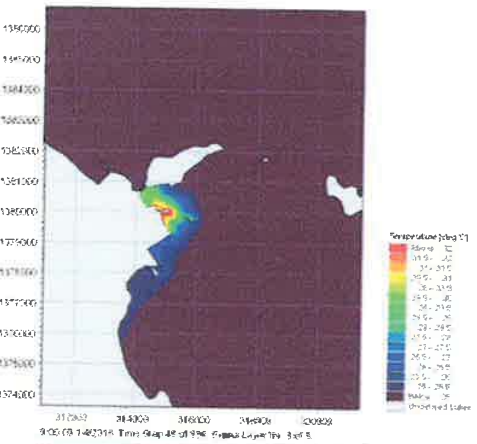
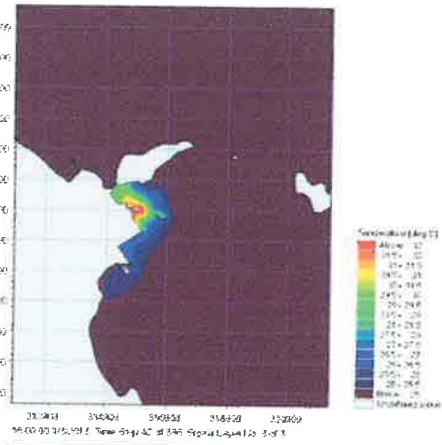
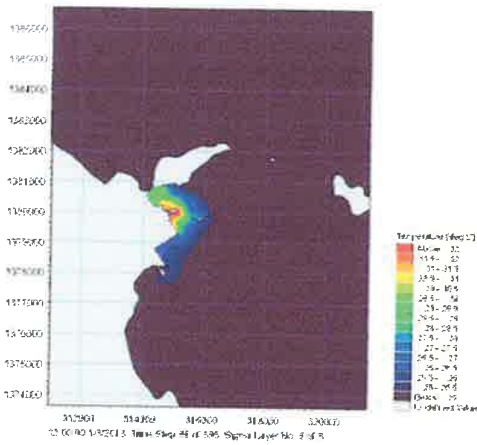
3. Phụ lục 1.3: Kịch bản cực đoan VVP13

II. PHỤ LỤC 2: GIAI ĐOẠN II (CÓ BÃI XỈ)

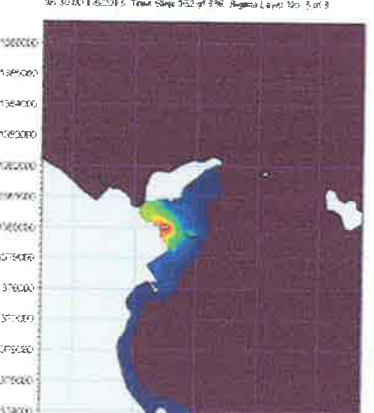
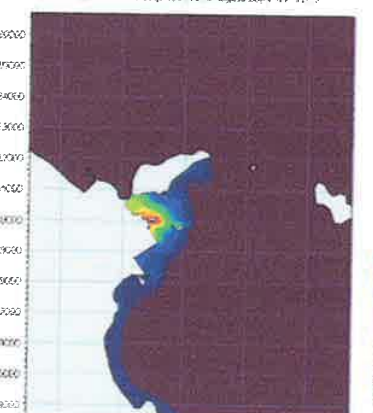
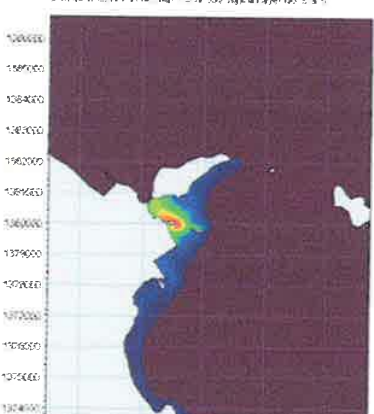
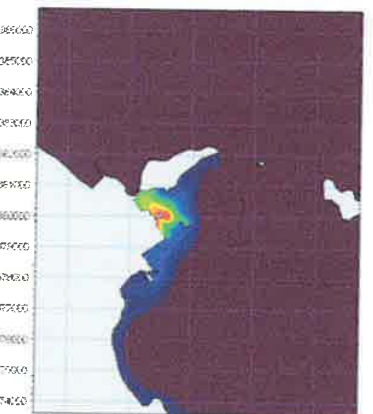
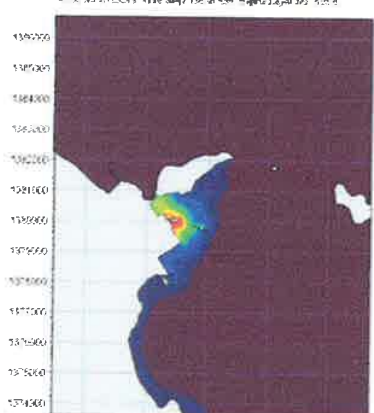
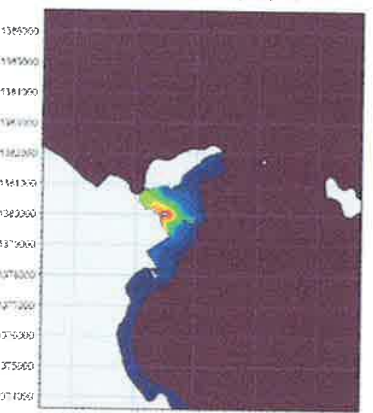
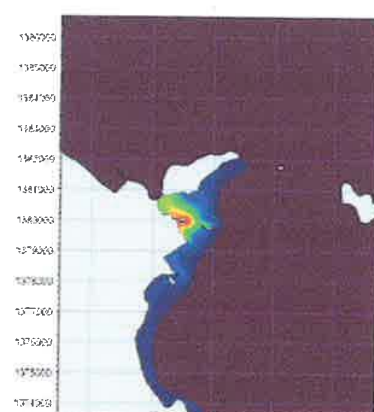
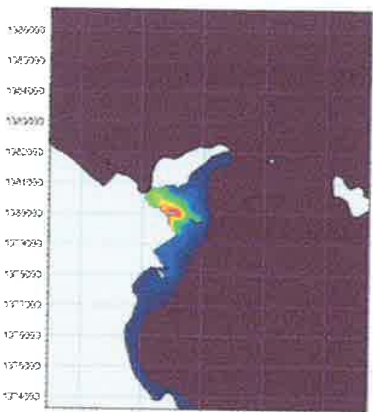
1. Phụ lục 2.1: Kịch bản mùa đông VVP21

2. Phụ lục 2.2: Kịch bản mùa hè VVP22

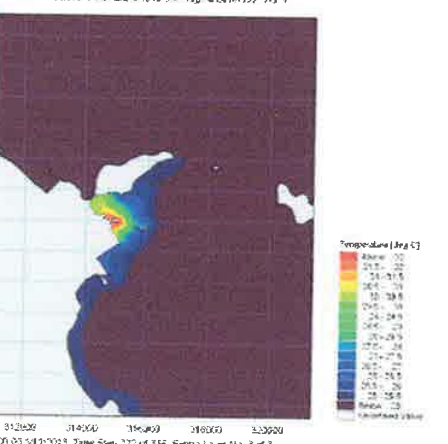
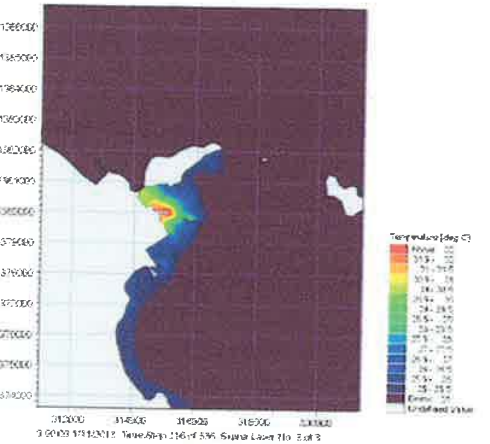
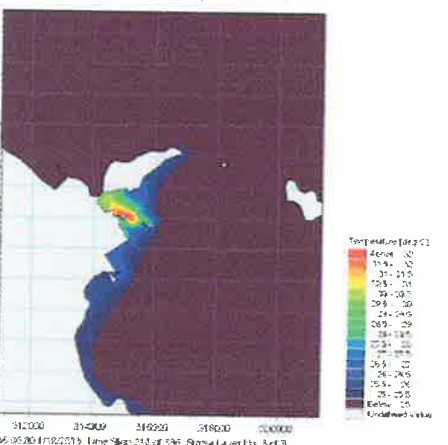
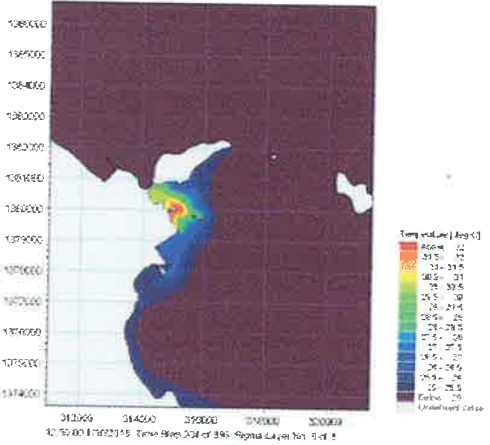
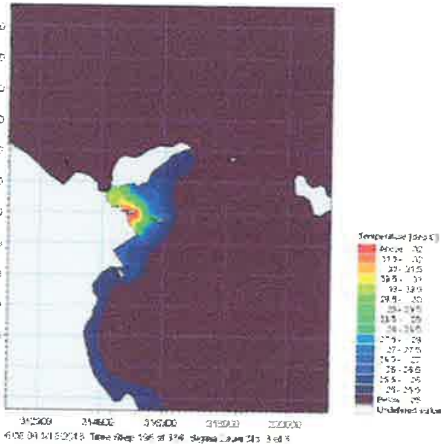
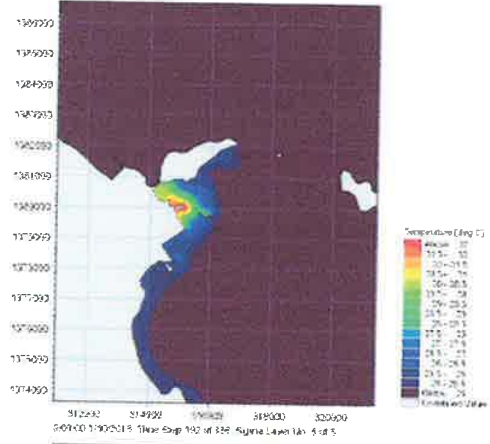
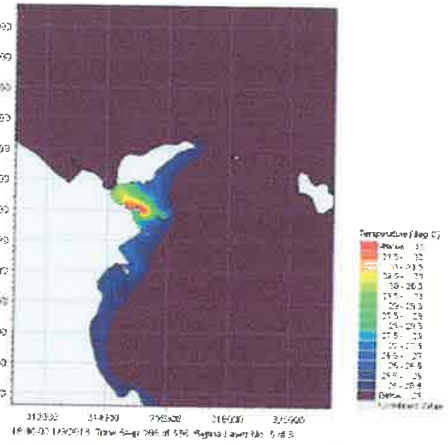
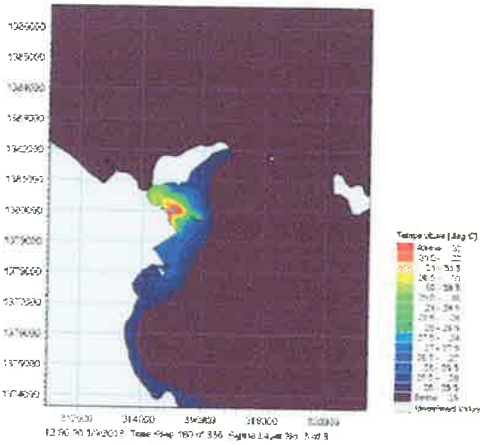
3. Phụ lục 2.3: Kịch bản cực đoan VVP23



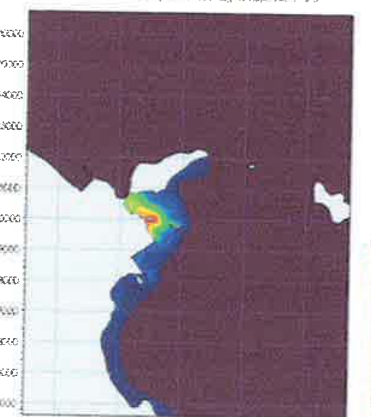
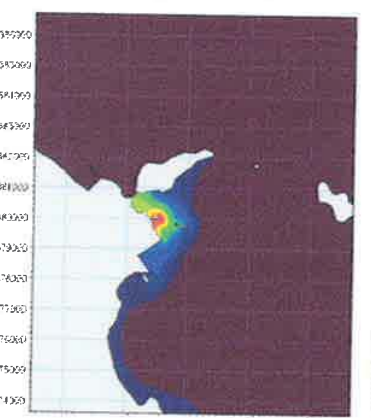
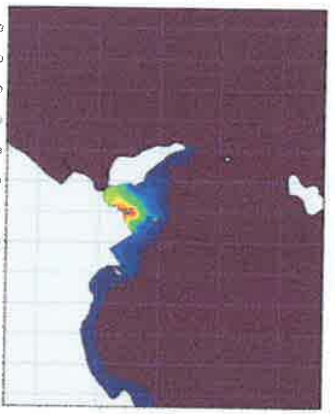
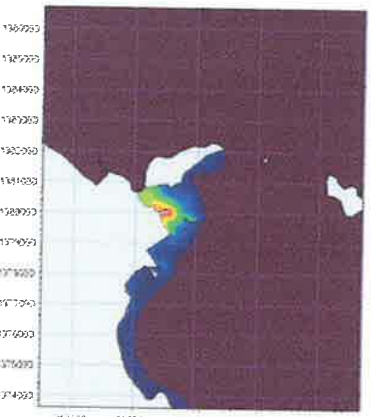
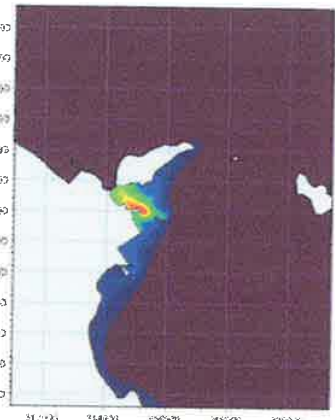
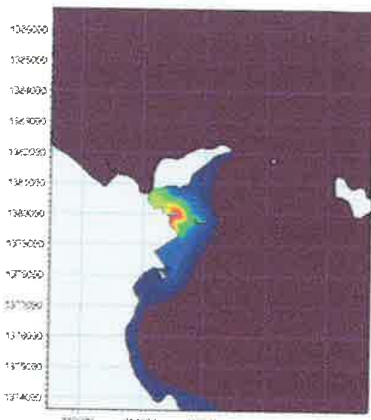
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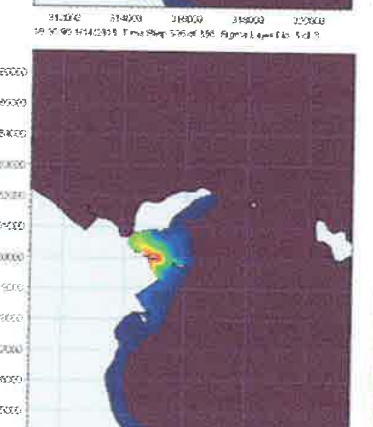
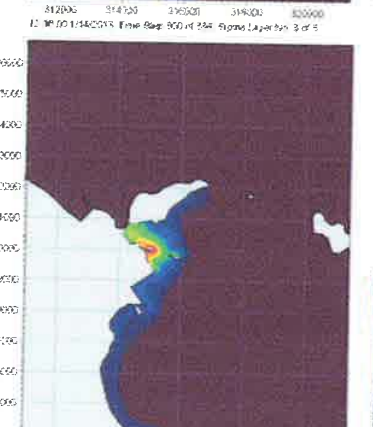
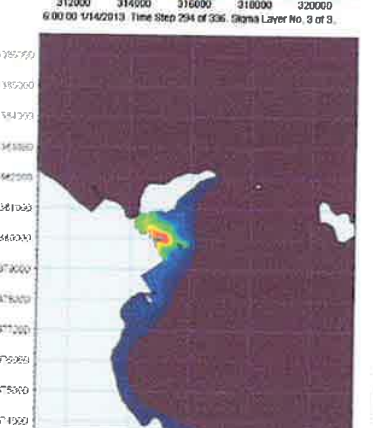
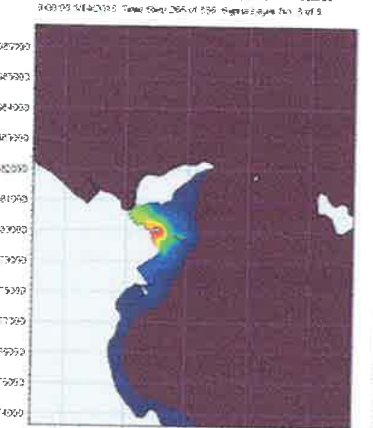
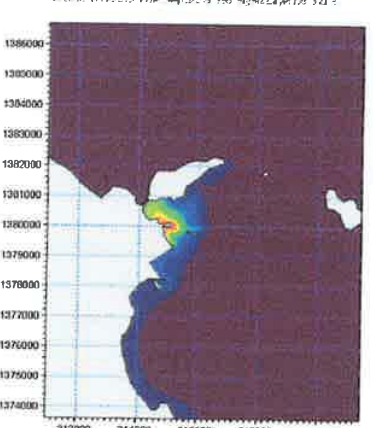
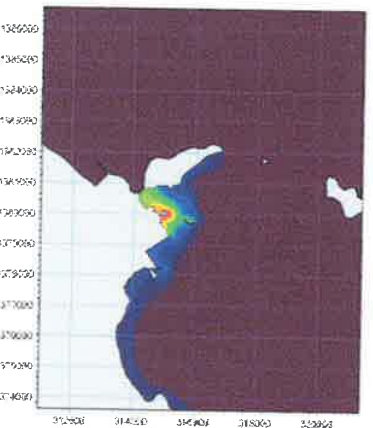
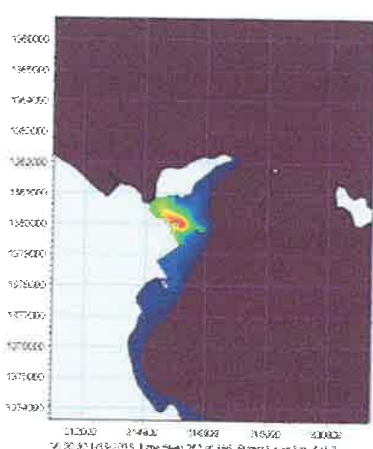
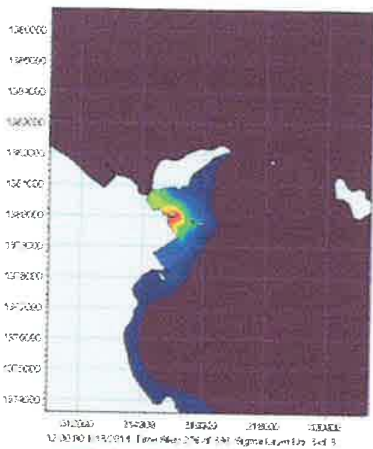
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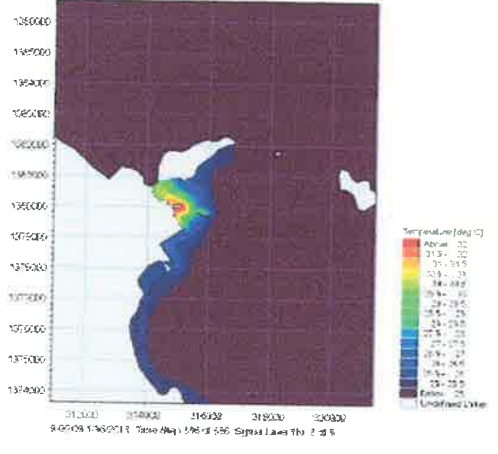
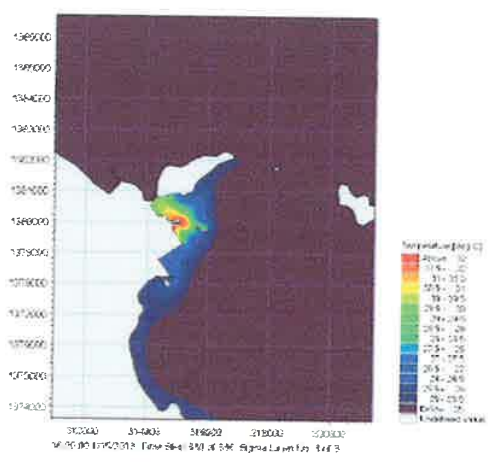
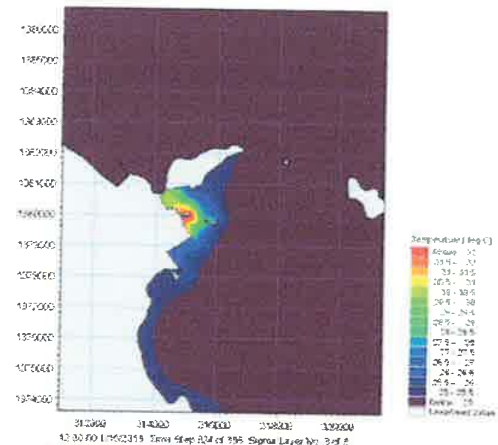
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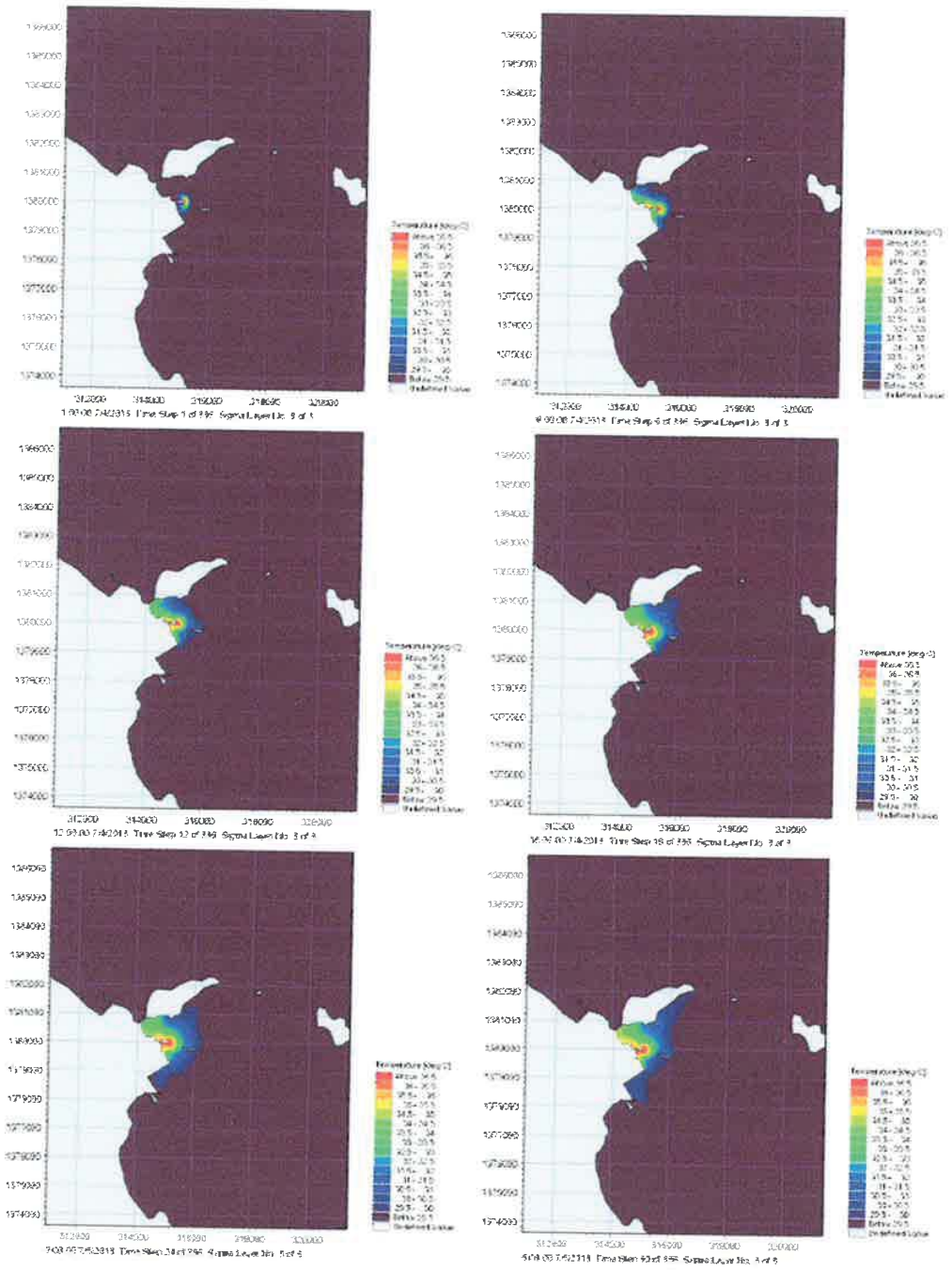


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8

Phụ lục 1.2: Kịch bản mùa hè VVP12



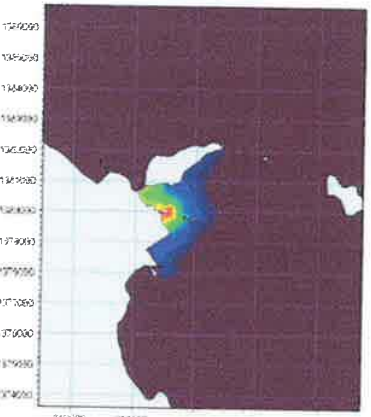
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12 01 00 7462018 Time Step 12 of 95 Sigma Layer 2 of 5



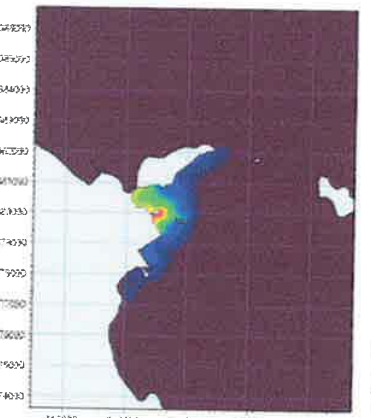
16 01 30 7462018 Time Step 16 of 95 Sigma Layer 2 of 5



20 01 30 7462018 Time Step 20 of 95 Sigma Layer 3 of 5



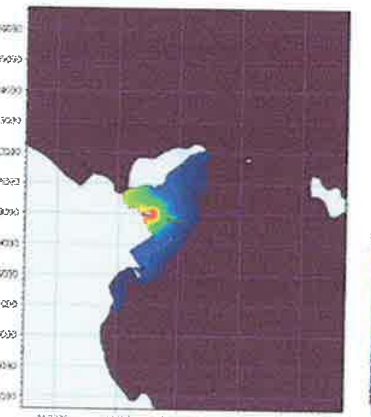
24 01 30 7462018 Time Step 24 of 95 Sigma Layer 3 of 5



28 01 30 7462018 Time Step 28 of 95 Sigma Layer 4 of 5



32 01 30 7462018 Time Step 32 of 95 Sigma Layer 4 of 5

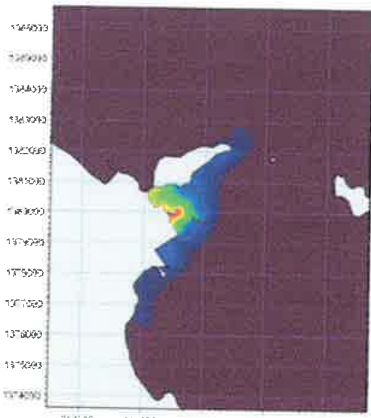


36 01 30 7462018 Time Step 36 of 95 Sigma Layer 5 of 5

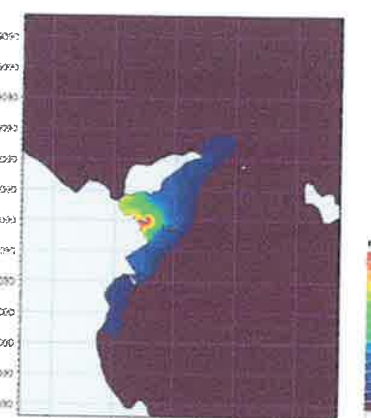


40 01 30 7462018 Time Step 40 of 95 Sigma Layer 5 of 5

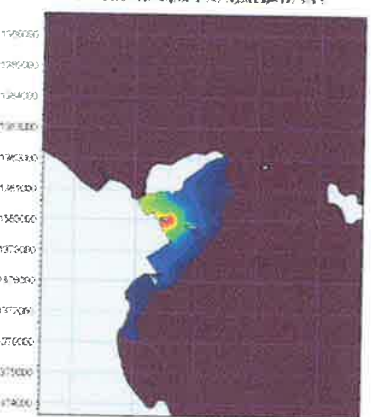
8



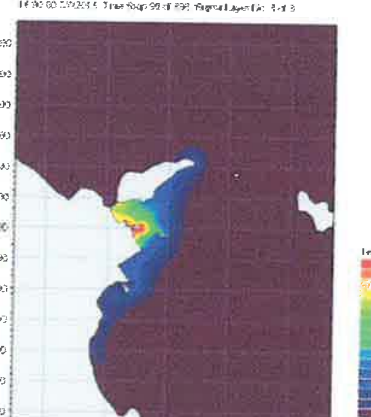
12:00:00 07/20/14 Time Step 41 of 496 Sigma Layer 121 5 of 5



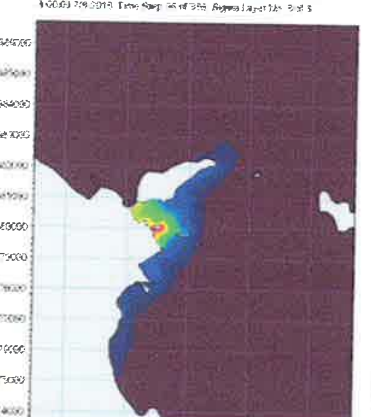
14:00:00 07/20/14 Time Step 99 of 496 Sigma Layer 121 5 of 5



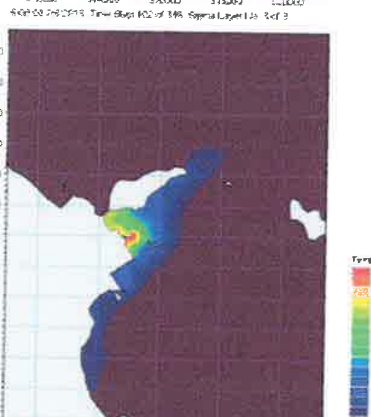
16:00:00 07/20/14 Time Step 147 of 496 Sigma Layer 121 5 of 5



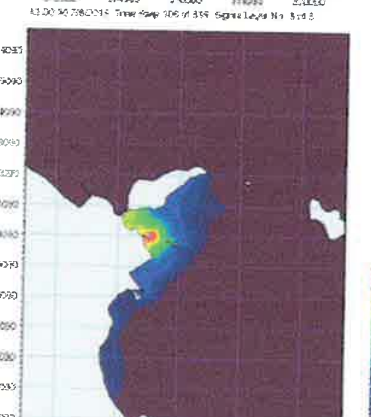
18:00:00 07/20/14 Time Step 195 of 496 Sigma Layer 121 5 of 5



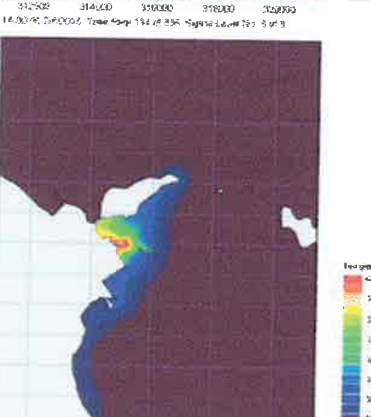
20:00:00 07/20/14 Time Step 243 of 496 Sigma Layer 121 5 of 5



22:00:00 07/20/14 Time Step 291 of 496 Sigma Layer 121 5 of 5

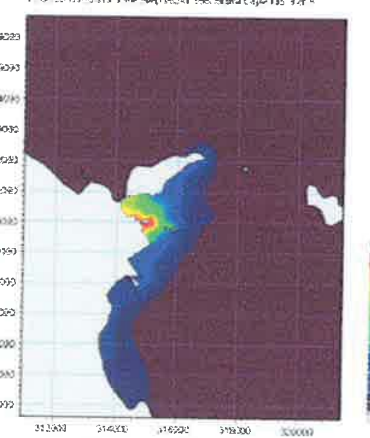
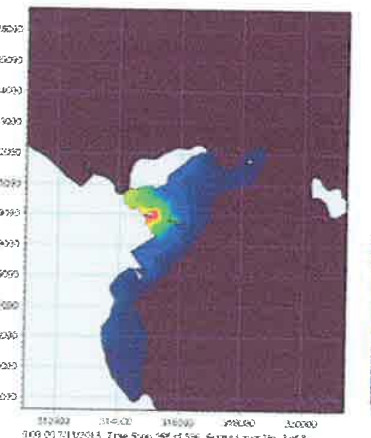
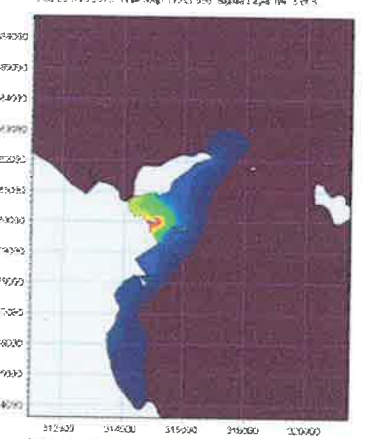
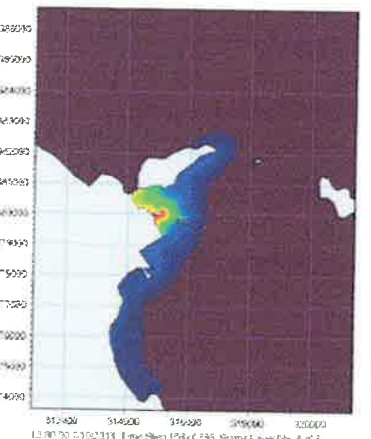
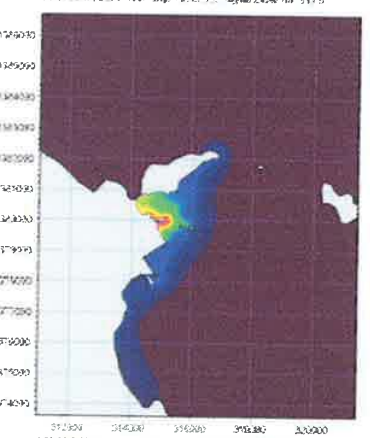
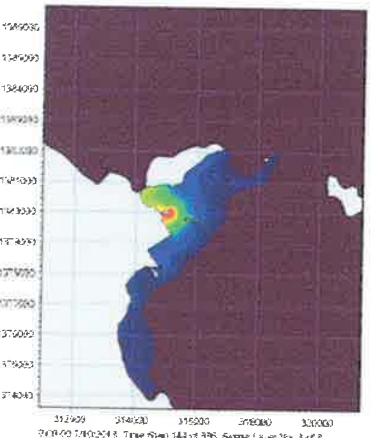
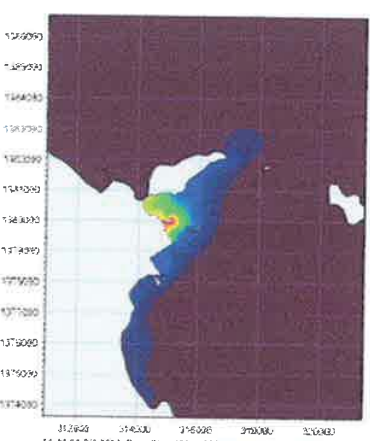
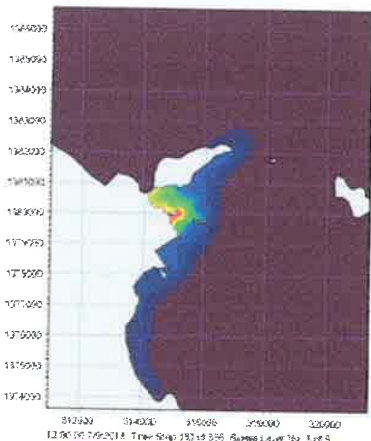


00:00:00 07/21/14 Time Step 339 of 496 Sigma Layer 121 5 of 5

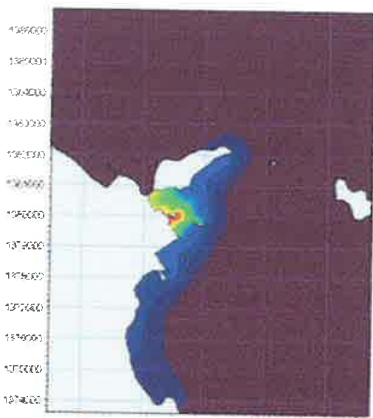


02:00:00 07/21/14 Time Step 387 of 496 Sigma Layer 121 5 of 5

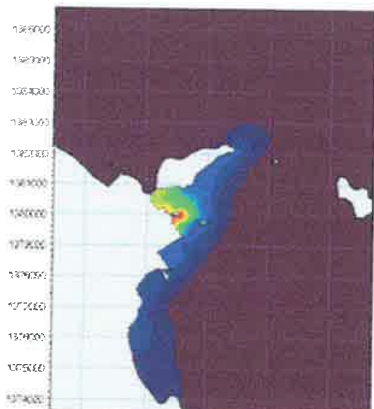
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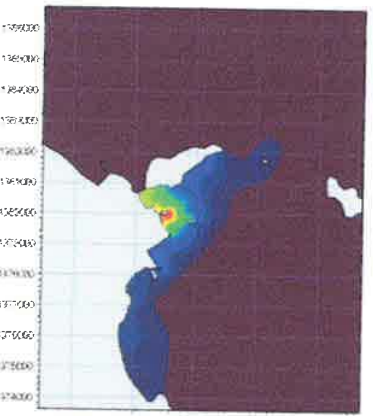
8



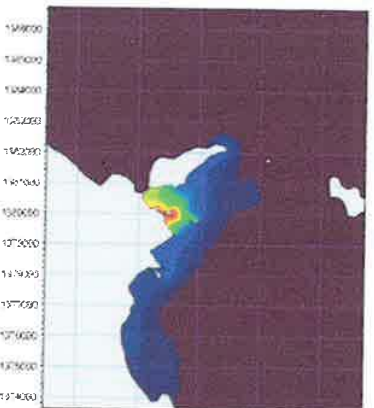
12:30:00 2/12/2018 Time Step 182 of 186 Sigma Layer 181 of 187



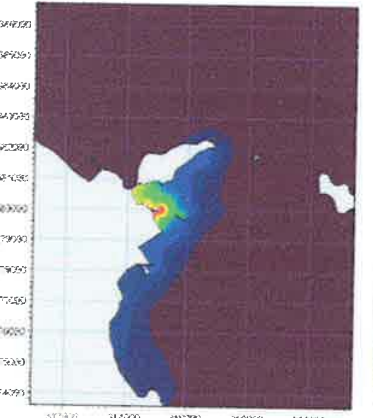
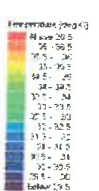
14:30:00 2/12/2018 Time Step 190 of 195 Sigma Layer 181 of 187



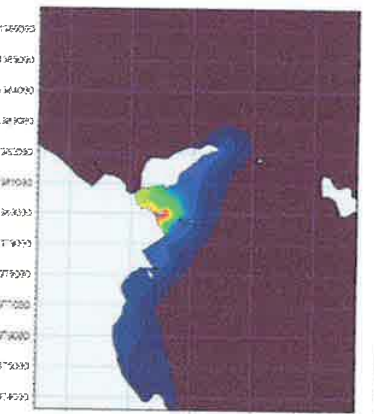
16:30:00 2/12/2018 Time Step 212 of 216 Sigma Layer 181 of 187



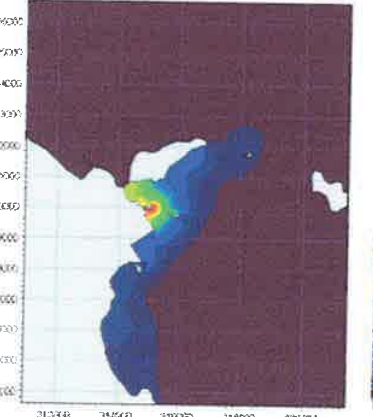
18:30:00 2/12/2018 Time Step 246 of 254 Sigma Layer 181 of 187



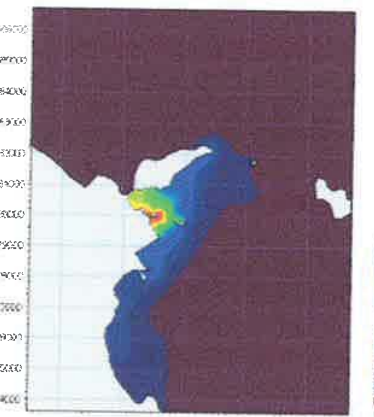
20:30:00 2/12/2018 Time Step 274 of 278 Sigma Layer 181 of 187



22:30:00 2/12/2018 Time Step 311 of 315 Sigma Layer 181 of 187



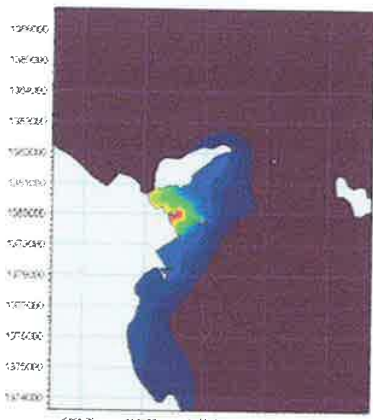
00:30:00 2/13/2018 Time Step 335 of 339 Sigma Layer 181 of 187



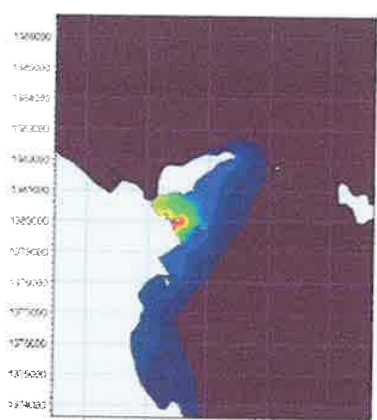
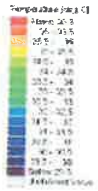
02:30:00 2/13/2018 Time Step 372 of 376 Sigma Layer 181 of 187



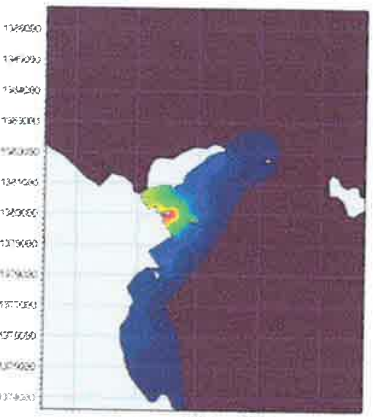
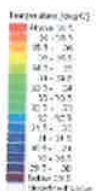
8



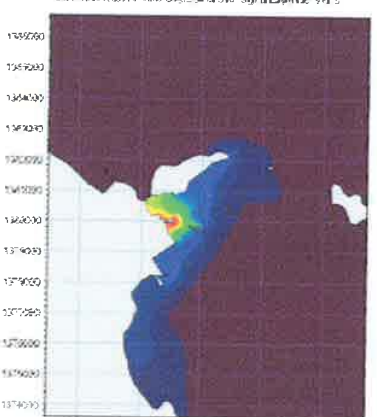
11:30:00 07/15/2014 Time Step 225 of 596 Sigma Layer 10 1 of 5



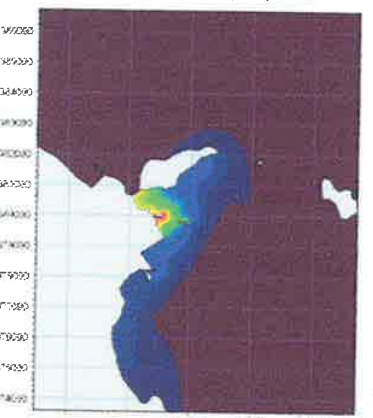
12:00:00 07/15/2014 Time Step 234 of 596 Sigma Layer 10 1 of 5



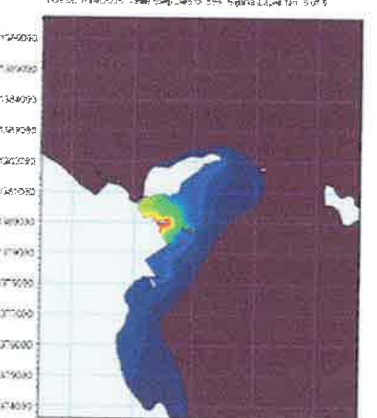
13:00:00 07/15/2014 Time Step 243 of 596 Sigma Layer 10 1 of 5



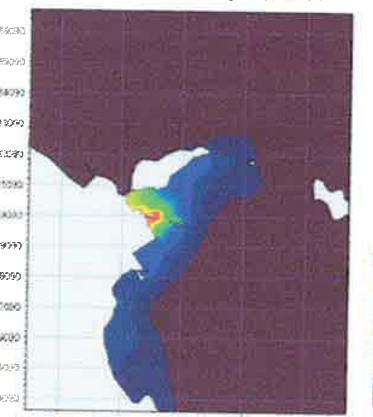
14:00:00 07/15/2014 Time Step 254 of 596 Sigma Layer 10 1 of 5



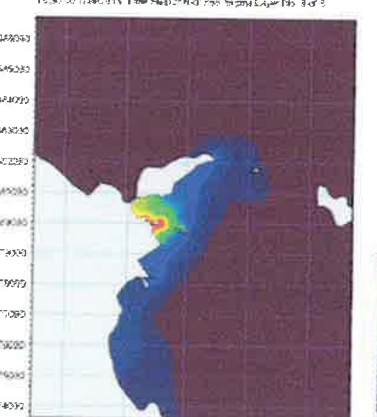
15:00:00 07/15/2014 Time Step 264 of 596 Sigma Layer 10 1 of 5



16:00:00 07/15/2014 Time Step 274 of 596 Sigma Layer 10 1 of 5



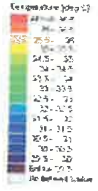
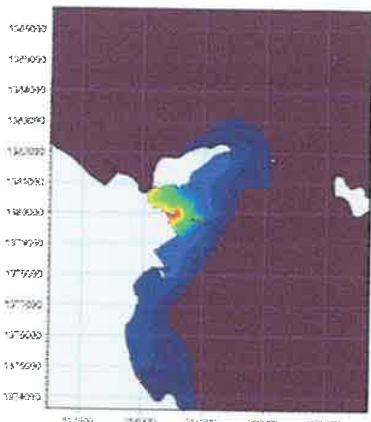
17:00:00 07/15/2014 Time Step 284 of 596 Sigma Layer 10 1 of 5

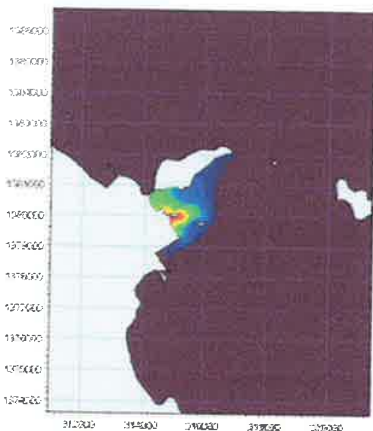


18:00:00 07/15/2014 Time Step 294 of 596 Sigma Layer 10 1 of 5

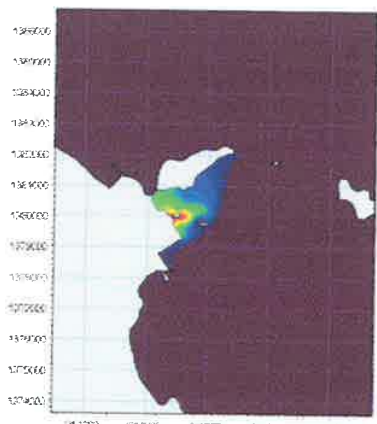


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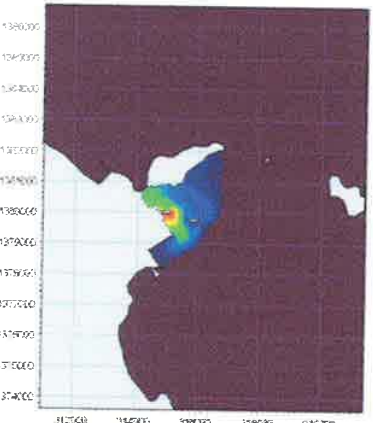




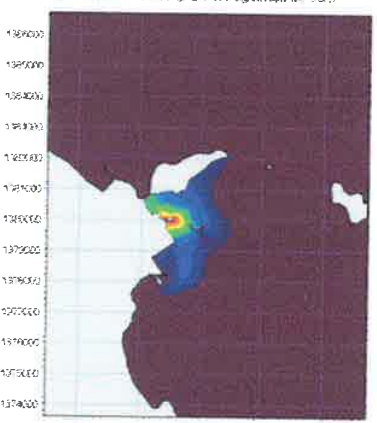
12:35:00 7/15/2011 Time Step 43 of 296 Sigma Layer No. 5 of 8



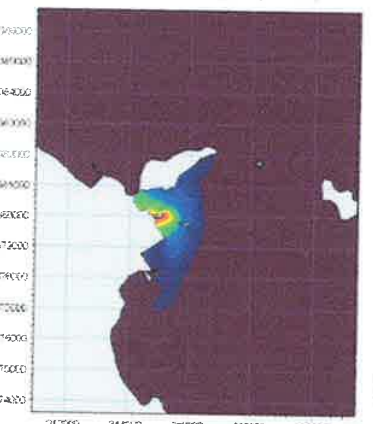
16:30:00 7/15/2011 Time Step 42 of 296 Sigma Layer No. 5 of 8



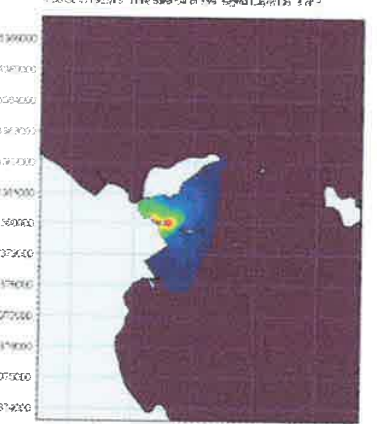
0:09:00 7/16/2011 Time Step 20 of 296 Sigma Layer No. 5 of 8



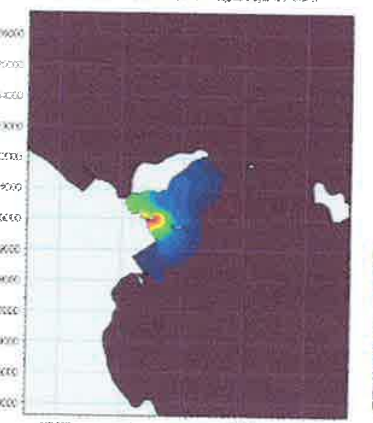
4:03:00 7/16/2011 Time Step 54 of 296 Sigma Layer No. 5 of 8



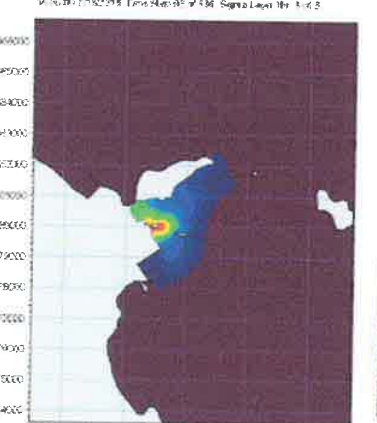
12:35:00 7/16/2011 Time Step 90 of 296 Sigma Layer No. 5 of 8



16:30:00 7/16/2011 Time Step 147 of 296 Sigma Layer No. 5 of 8



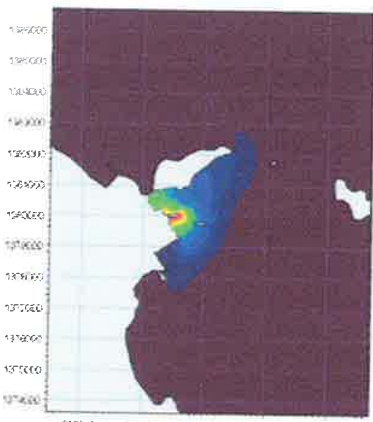
0:09:00 7/17/2011 Time Step 22 of 296 Sigma Layer No. 5 of 8



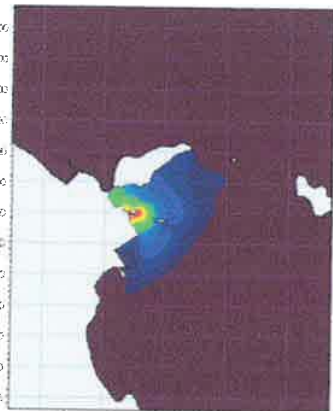
4:03:00 7/17/2011 Time Step 78 of 296 Sigma Layer No. 5 of 8



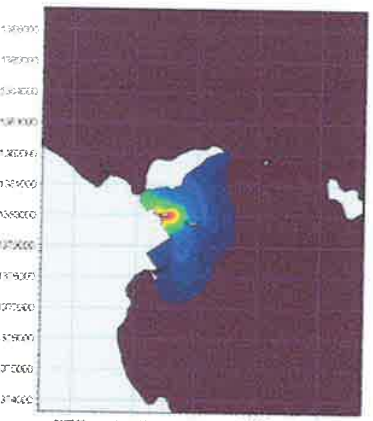
8



12:30:00 2/16/2011 Time Step 112 of 199 Sigma Layer 10: 3 of 3



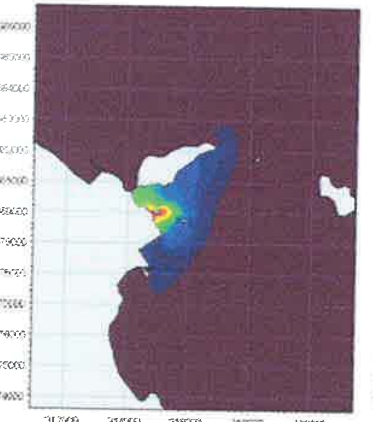
16:30:00 2/16/2011 Time Step 150 of 199 Sigma Layer 10: 3 of 3



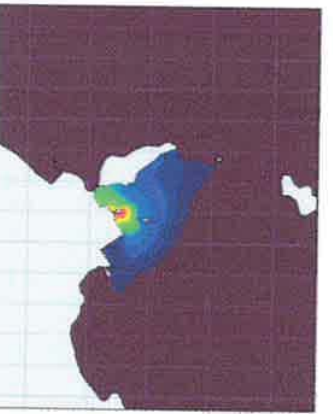
6:30:00 2/17/2011 Time Step 29 of 199 Sigma Layer 10: 3 of 3



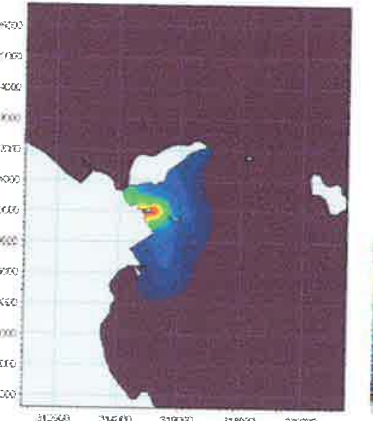
6:30:00 2/17/2011 Time Step 90 of 199 Sigma Layer 10: 3 of 3



12:30:00 2/17/2011 Time Step 159 of 199 Sigma Layer 10: 3 of 3



16:30:00 2/17/2011 Time Step 210 of 199 Sigma Layer 10: 3 of 3

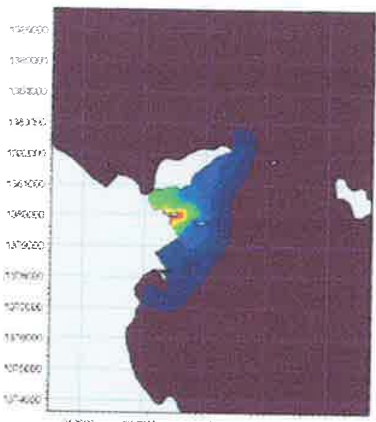


6:30:00 2/18/2011 Time Step 366 of 199 Sigma Layer 10: 3 of 3

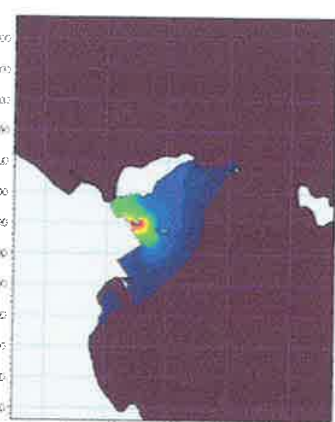


16:30:00 2/18/2011 Time Step 414 of 199 Sigma Layer 10: 3 of 3

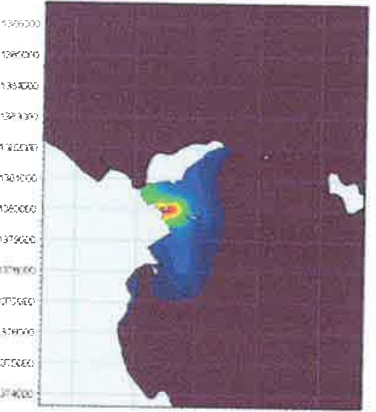
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12:00:00 Time Step 100 of 198 Sigma Layer No. 3 of 3



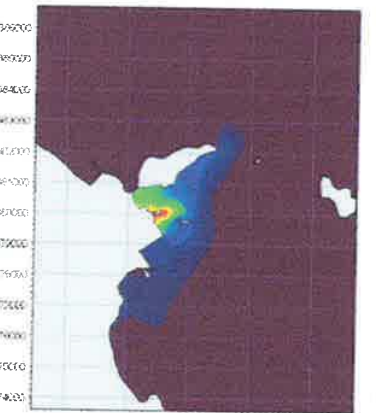
14:00:00 Time Step 100 of 198 Sigma Layer No. 3 of 3



16:00:00 Time Step 100 of 198 Sigma Layer No. 3 of 3



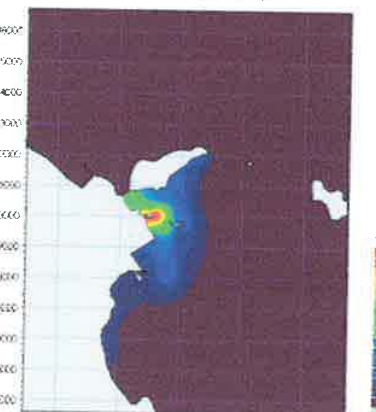
18:00:00 Time Step 100 of 198 Sigma Layer No. 3 of 3



20:00:00 Time Step 100 of 198 Sigma Layer No. 3 of 3



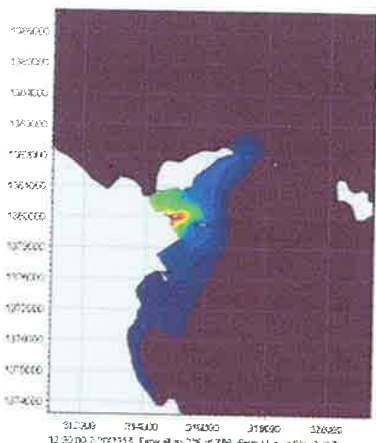
22:00:00 Time Step 100 of 198 Sigma Layer No. 3 of 3



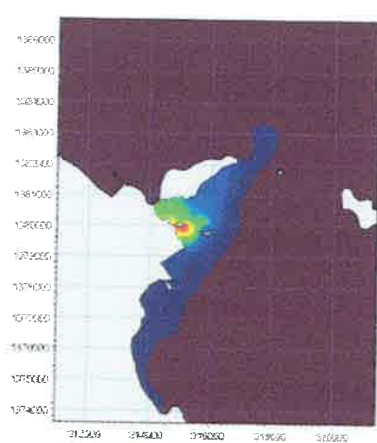
00:00:00 Time Step 100 of 198 Sigma Layer No. 3 of 3



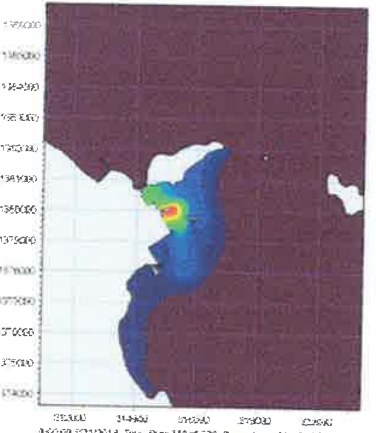
02:00:00 Time Step 100 of 198 Sigma Layer No. 3 of 3



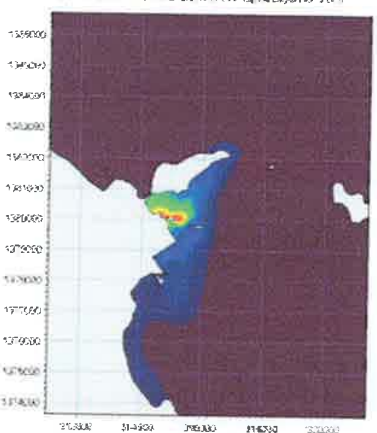
12:50:00 02/27/2014 Time Step 226 of 298 Sigma Layer 10 3 of 3



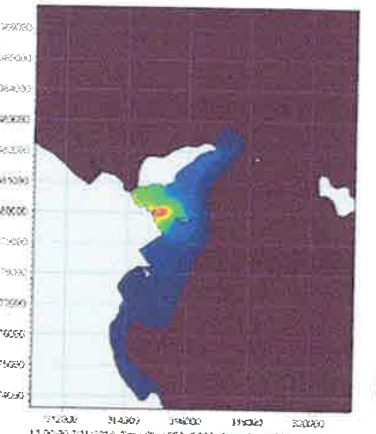
14:50:00 02/27/2014 Time Step 234 of 298 Sigma Layer 10 3 of 3



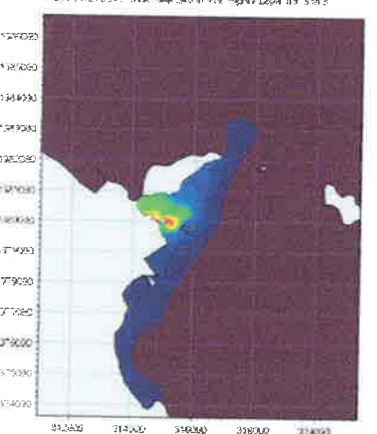
16:50:00 02/27/2014 Time Step 242 of 298 Sigma Layer 10 3 of 3



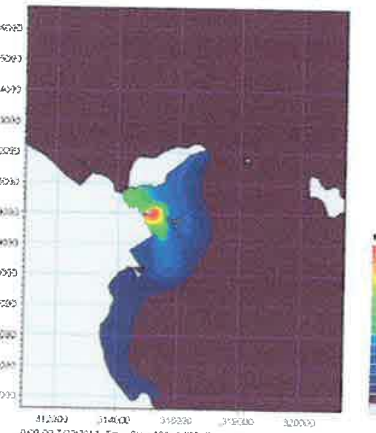
18:50:00 02/27/2014 Time Step 250 of 298 Sigma Layer 10 3 of 3



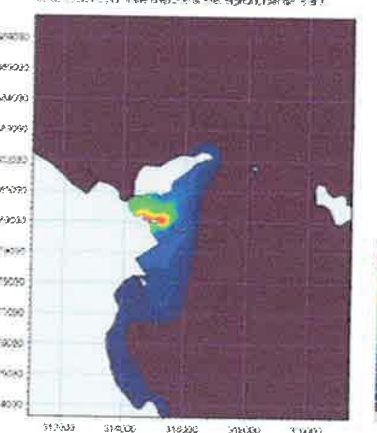
20:50:00 02/27/2014 Time Step 258 of 298 Sigma Layer 10 3 of 3



22:50:00 02/27/2014 Time Step 266 of 298 Sigma Layer 10 3 of 3



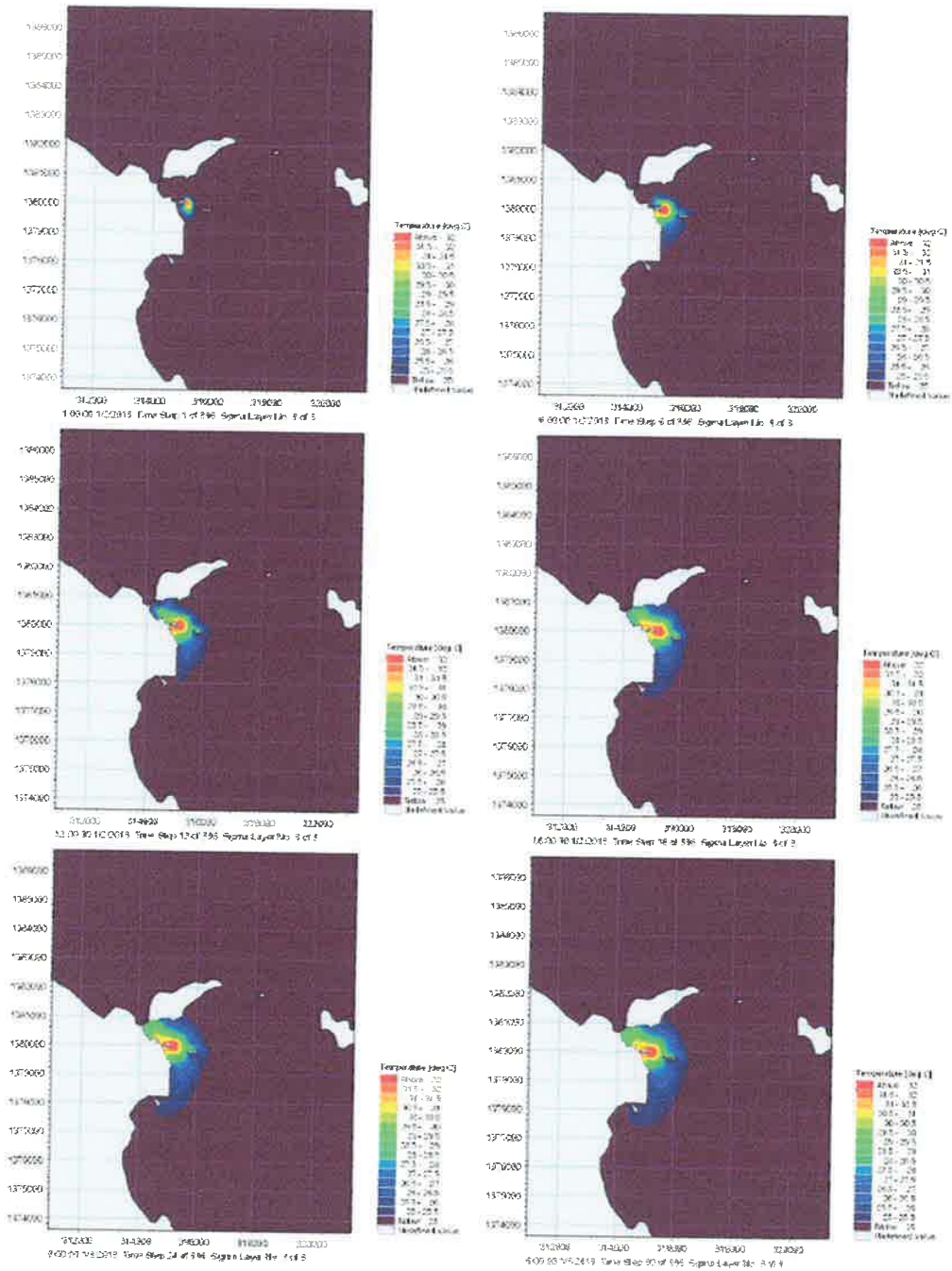
00:00:00 02/28/2014 Time Step 274 of 298 Sigma Layer 10 3 of 3

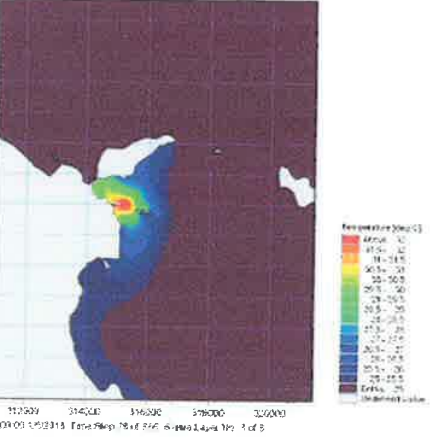
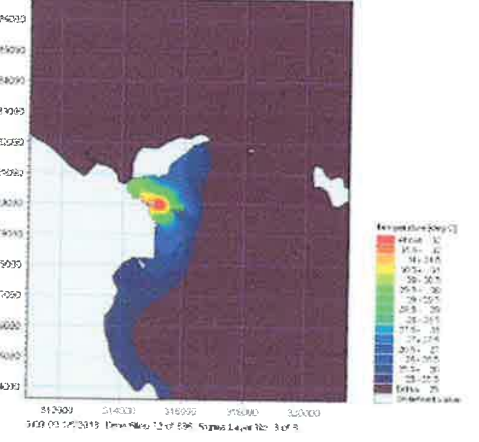
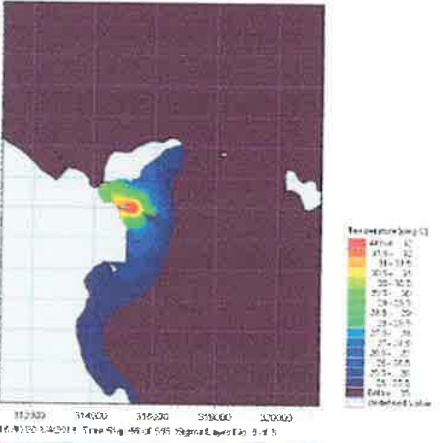
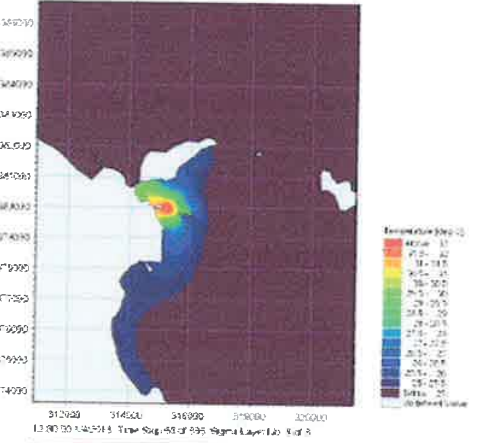
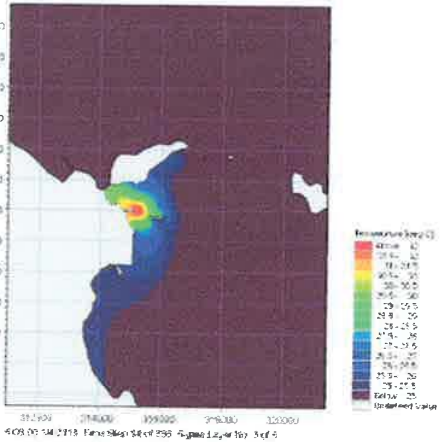
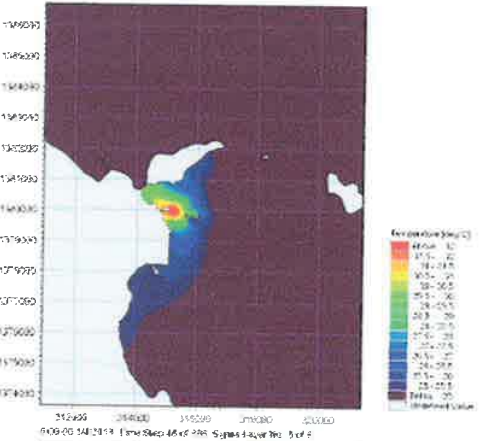
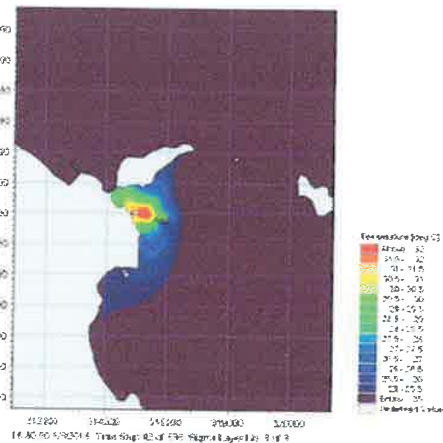
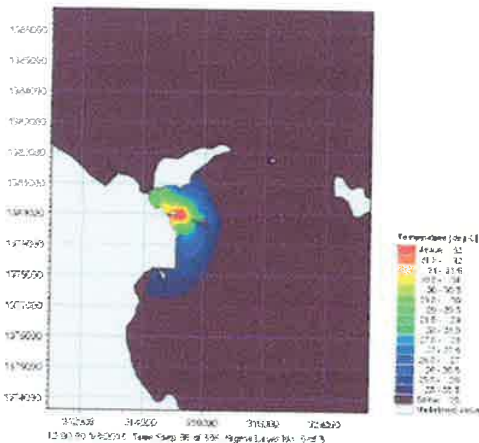


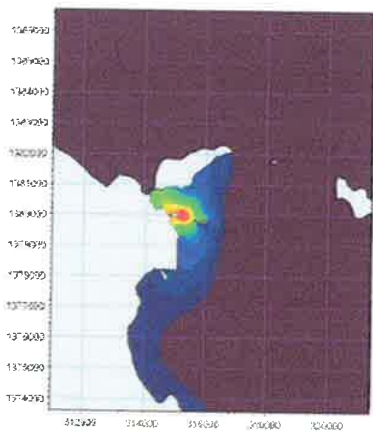
02:00:00 02/28/2014 Time Step 282 of 298 Sigma Layer 10 3 of 3

1

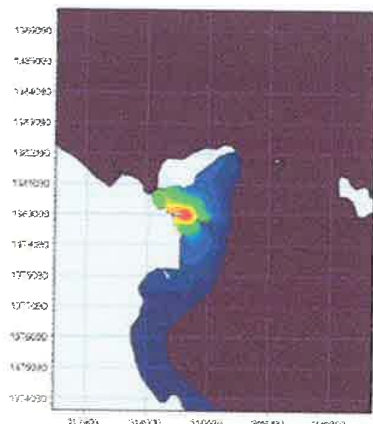
Phụ lục 2.1: Kịch bản mùa đông VVP21



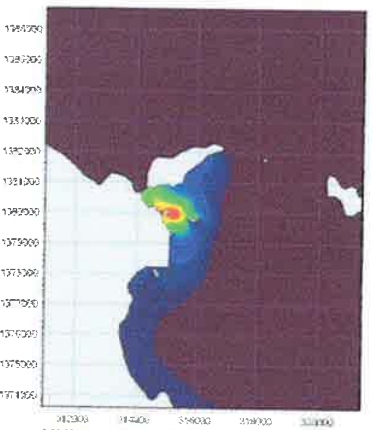




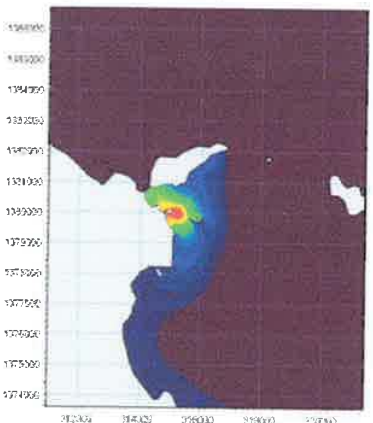
12:00:00 14/02/14 Time Step: 64 of 346 Sigma Layer: 9 of 3



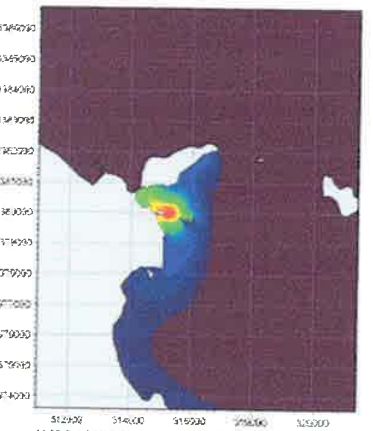
14:00:00 14/02/14 Time Step: 96 of 346 Sigma Layer: 9 of 3



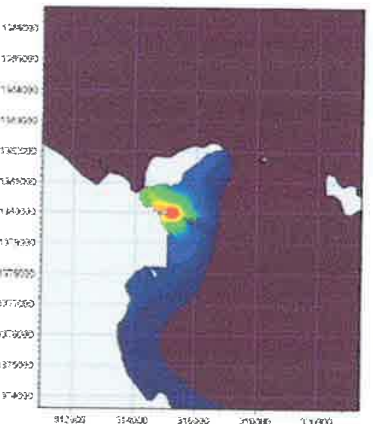
16:00:00 14/02/14 Time Step: 128 of 346 Sigma Layer: 9 of 3



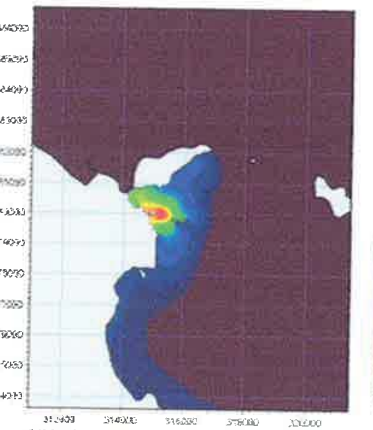
18:00:00 14/02/14 Time Step: 160 of 346 Sigma Layer: 9 of 3



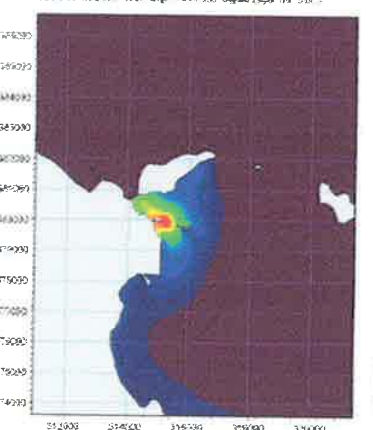
20:00:00 14/02/14 Time Step: 192 of 346 Sigma Layer: 9 of 3



22:00:00 14/02/14 Time Step: 224 of 346 Sigma Layer: 9 of 3

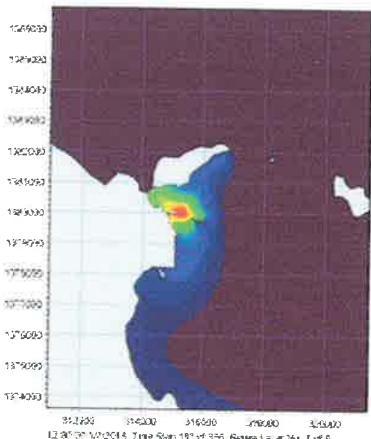


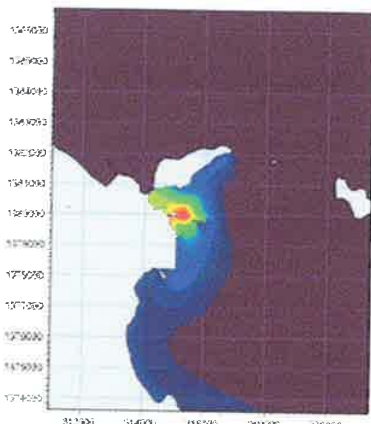
00:00:00 15/02/14 Time Step: 256 of 346 Sigma Layer: 9 of 3



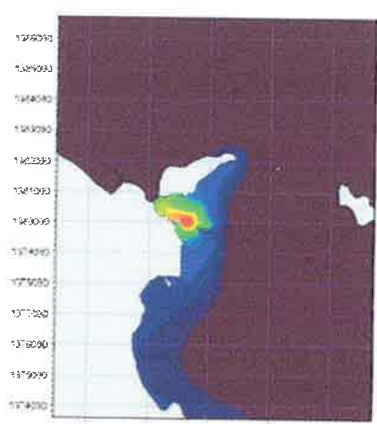
02:00:00 15/02/14 Time Step: 288 of 346 Sigma Layer: 9 of 3

8

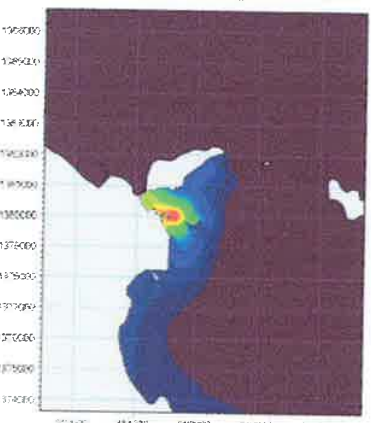
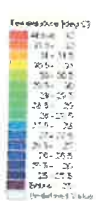




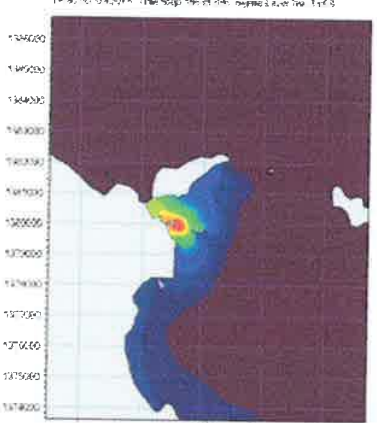
12:30:00 12/02/2014 Time Step 192 of 596 Sigma Layer No. 1 of 5



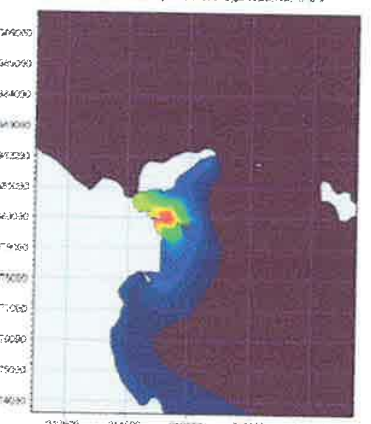
14:30:00 12/02/2014 Time Step 195 of 596 Sigma Layer No. 1 of 5



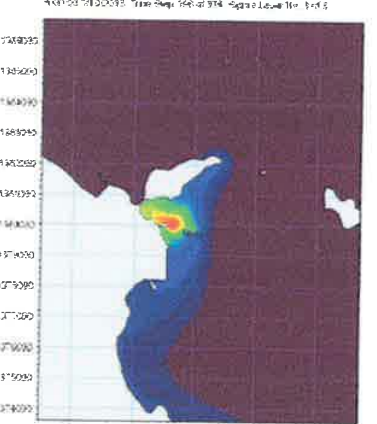
16:00:00 12/02/2014 Time Step 197 of 596 Sigma Layer No. 1 of 5



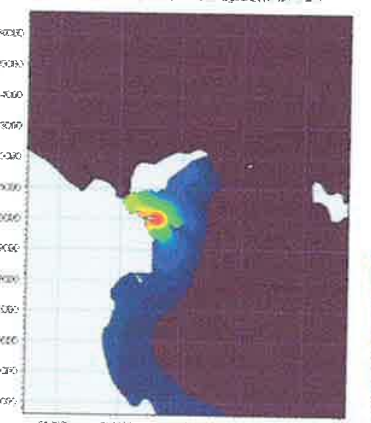
17:30:00 12/02/2014 Time Step 199 of 596 Sigma Layer No. 1 of 5



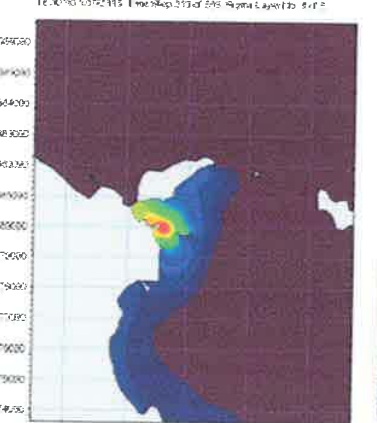
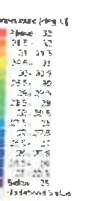
19:00:00 12/02/2014 Time Step 204 of 596 Sigma Layer No. 1 of 5



20:30:00 12/02/2014 Time Step 213 of 596 Sigma Layer No. 1 of 5

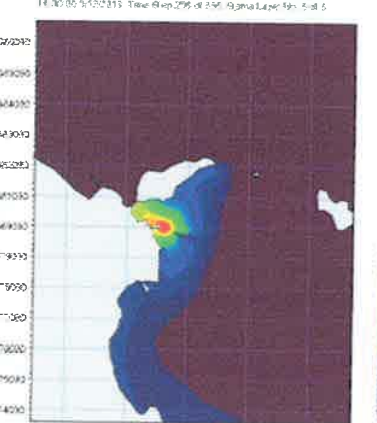
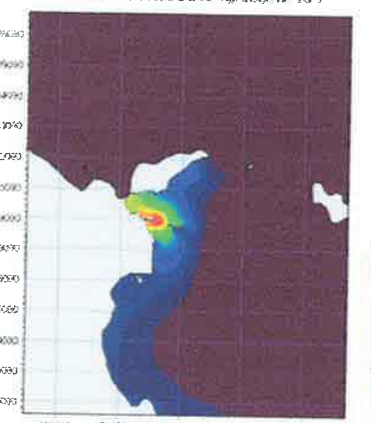
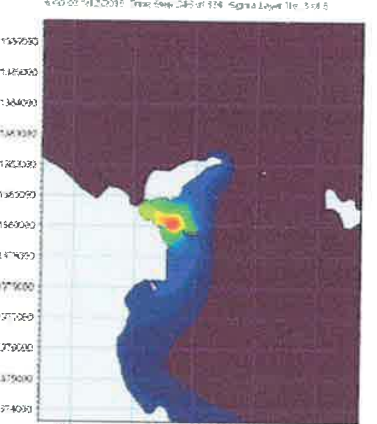
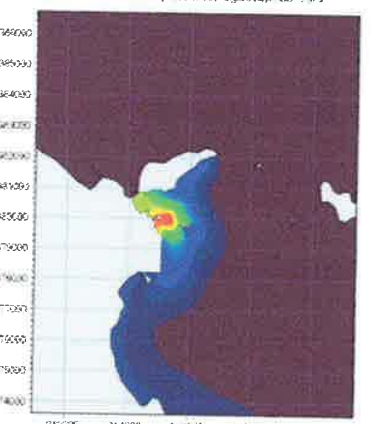
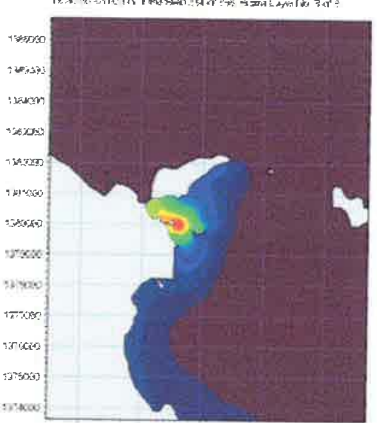
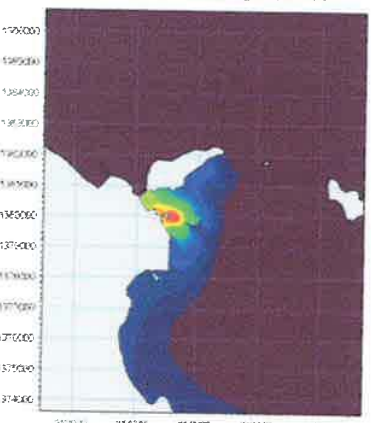
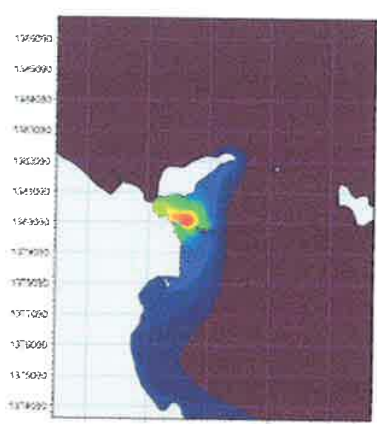
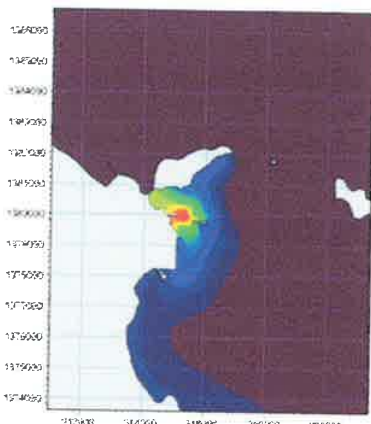


21:00:00 12/02/2014 Time Step 216 of 596 Sigma Layer No. 1 of 5

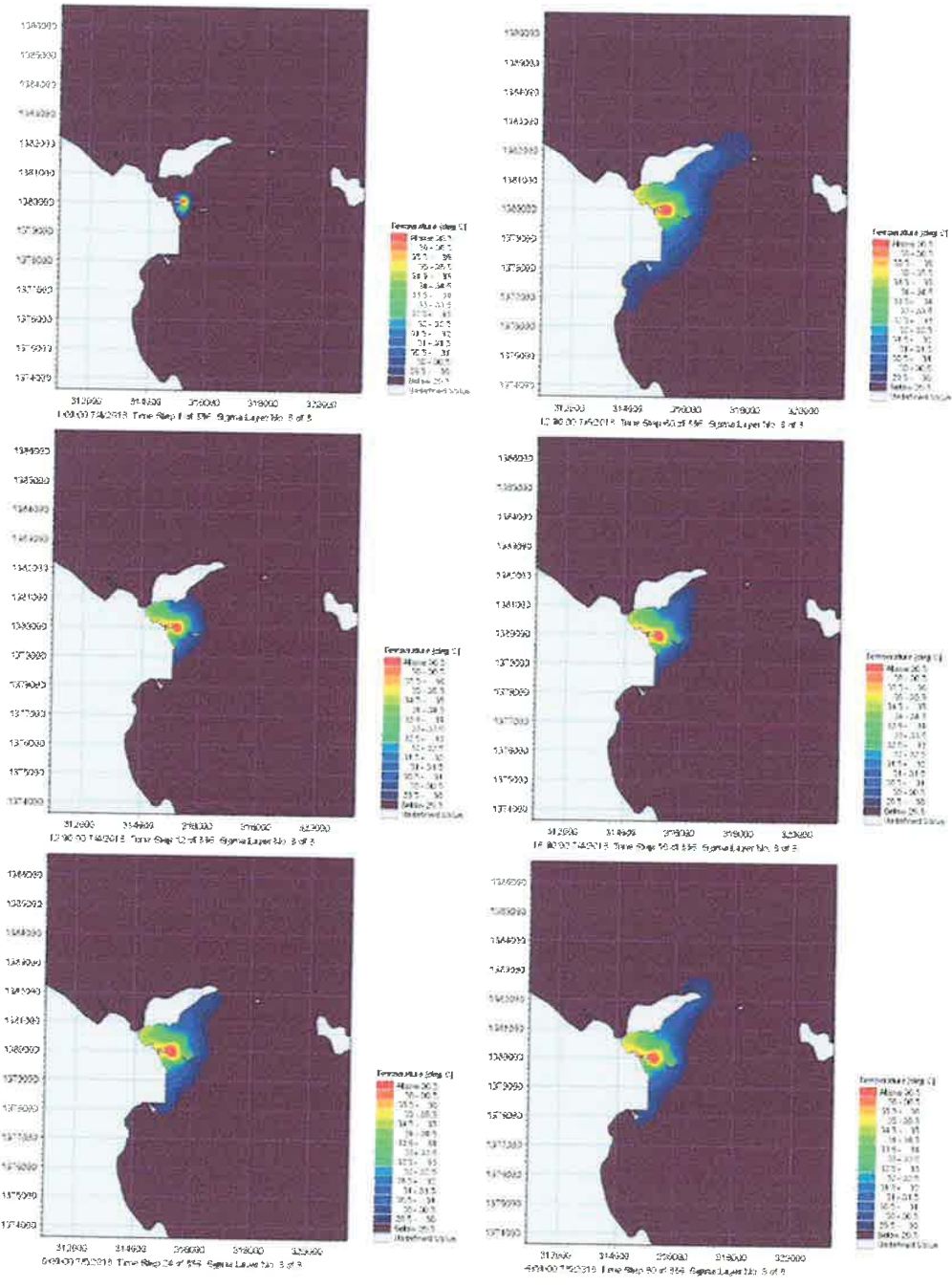


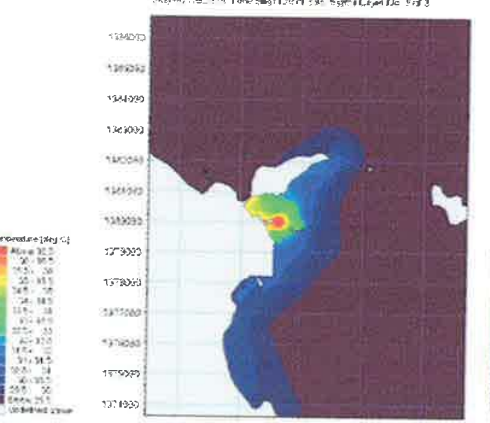
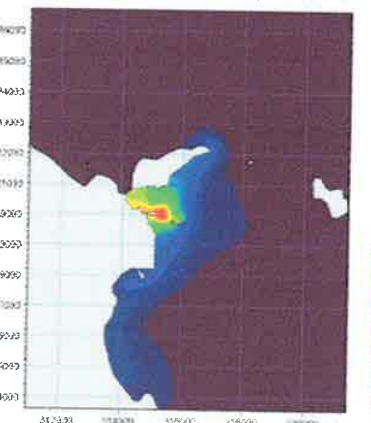
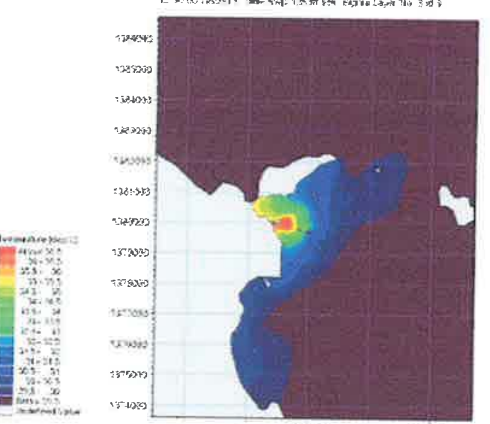
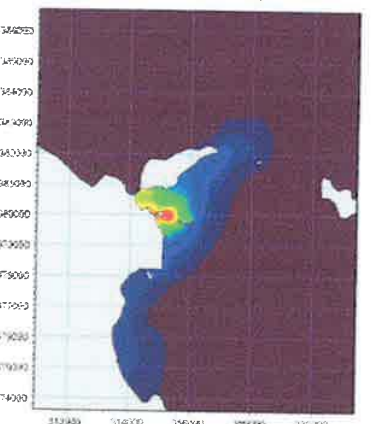
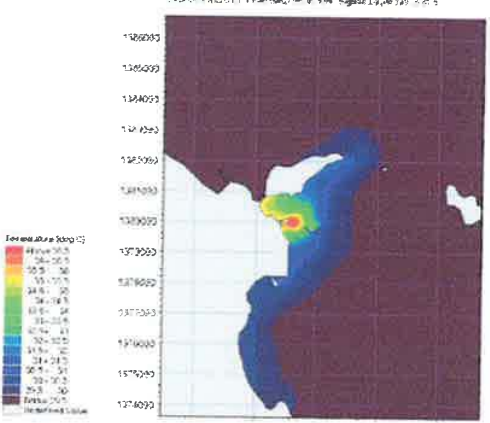
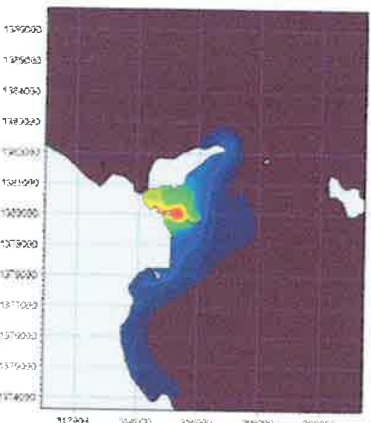
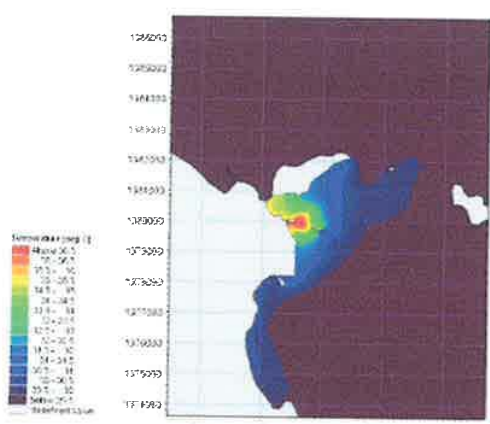
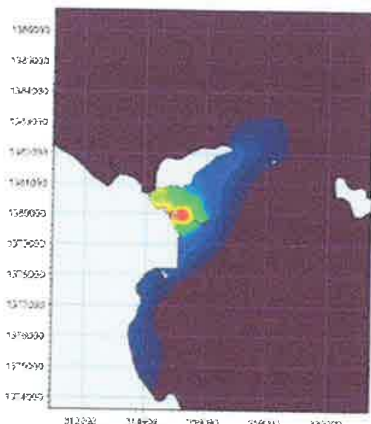
21:30:00 12/02/2014 Time Step 222 of 596 Sigma Layer No. 1 of 5



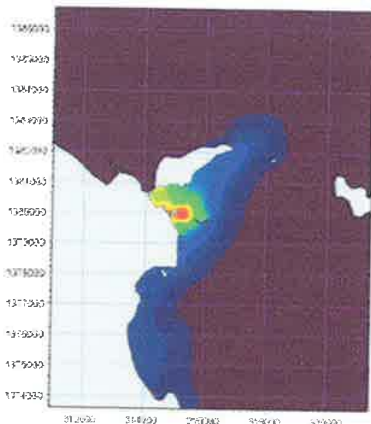


Phụ lục 2.2: Kịch bản mùa hè VVP22

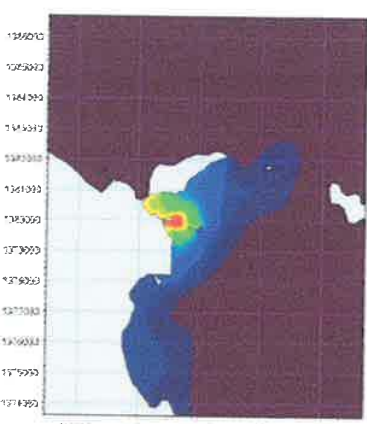
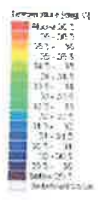




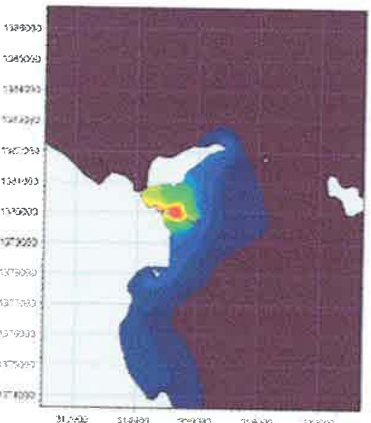
l



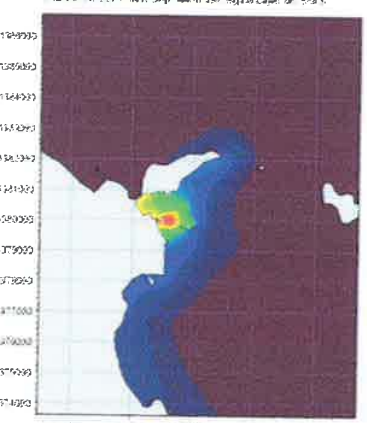
14:30:00 7/6/2014 Time Step 136 of 144 Sigma Layer No. 4 of 8



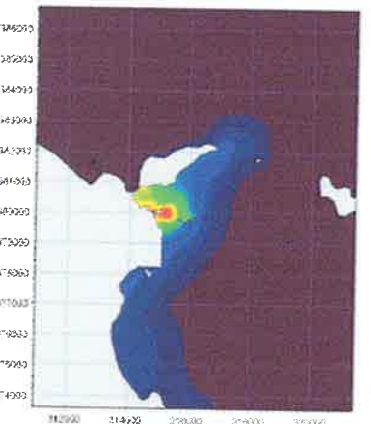
16:00:00 7/6/2014 Time Step 140 of 144 Sigma Layer No. 4 of 8



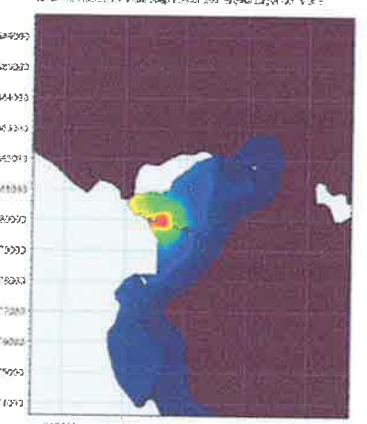
16:30:00 7/6/2014 Time Step 144 of 144 Sigma Layer No. 4 of 8



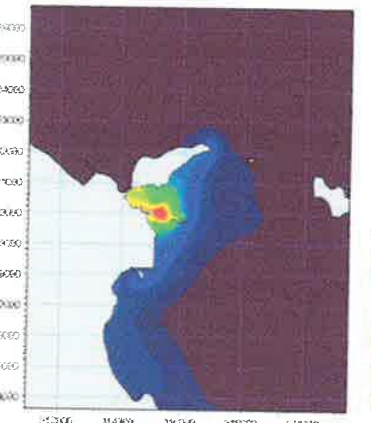
18:00:00 7/6/2014 Time Step 148 of 144 Sigma Layer No. 4 of 8



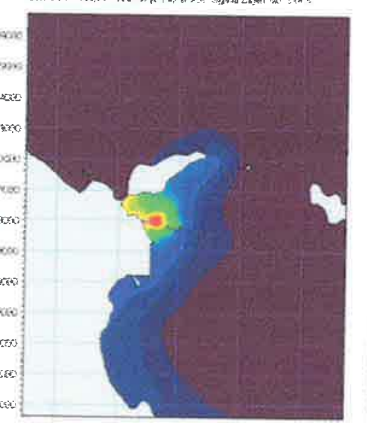
18:30:00 7/6/2014 Time Step 152 of 144 Sigma Layer No. 4 of 8



20:00:00 7/6/2014 Time Step 156 of 144 Sigma Layer No. 4 of 8

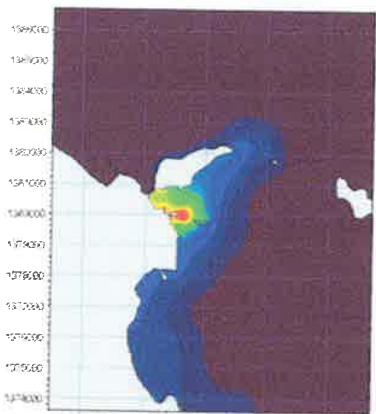


21:00:00 7/6/2014 Time Step 158 of 144 Sigma Layer No. 4 of 8

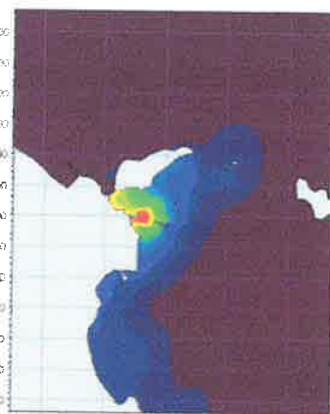


22:00:00 7/6/2014 Time Step 163 of 144 Sigma Layer No. 4 of 8

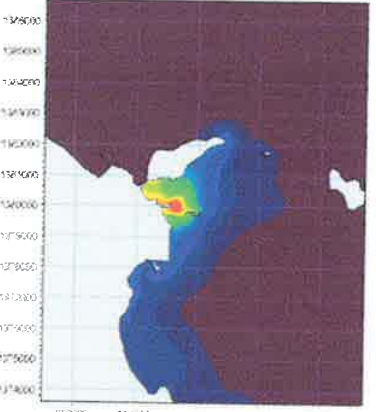




07:00:00.0000 Time Step: 01 of 500 Signal Layer No. 1 of 5



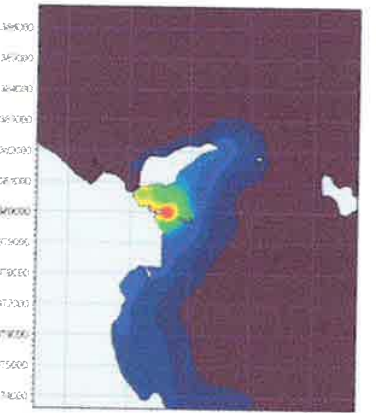
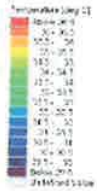
07:00:00.0000 Time Step: 02 of 500 Signal Layer No. 2 of 5



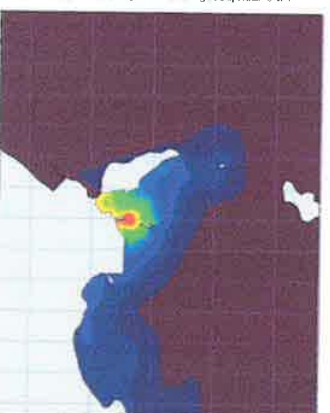
07:00:00.0000 Time Step: 03 of 500 Signal Layer No. 3 of 5



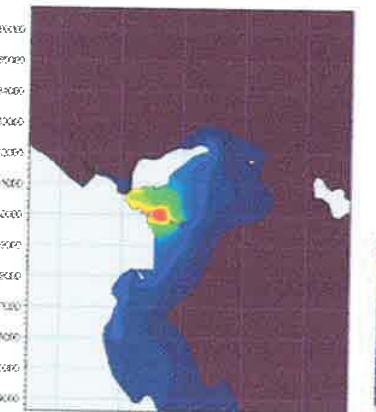
07:00:00.0000 Time Step: 04 of 500 Signal Layer No. 4 of 5



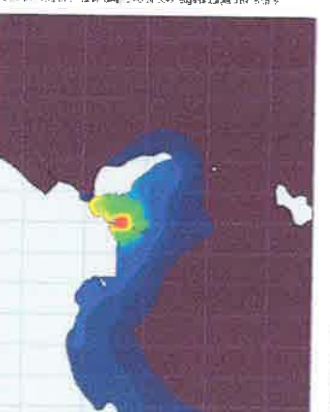
07:00:00.0000 Time Step: 05 of 500 Signal Layer No. 5 of 5



07:00:00.0000 Time Step: 01 of 500 Signal Layer No. 1 of 5



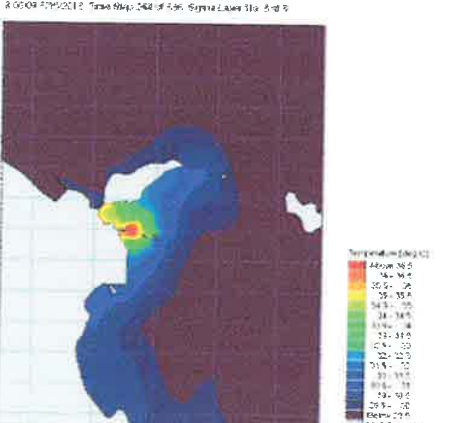
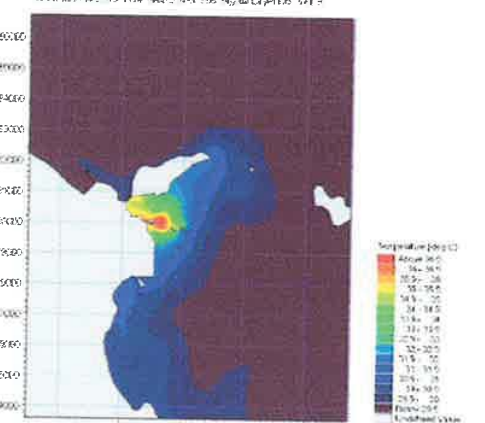
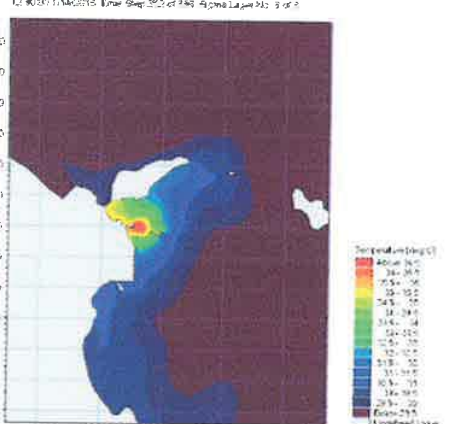
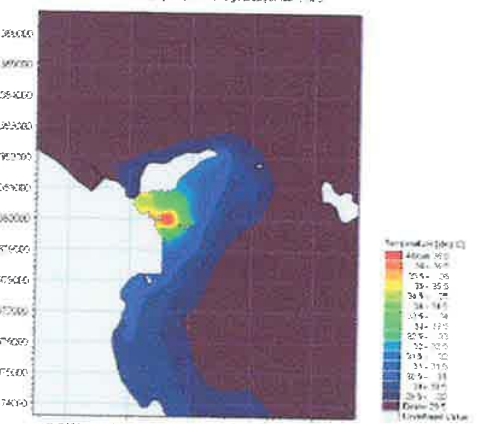
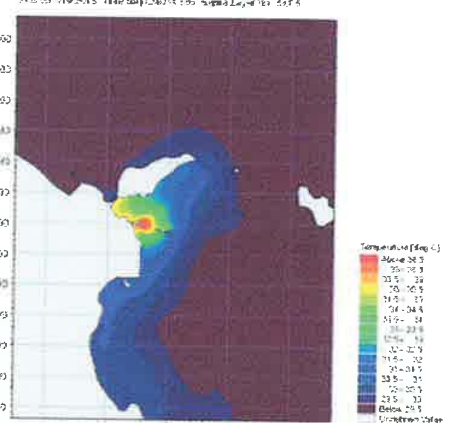
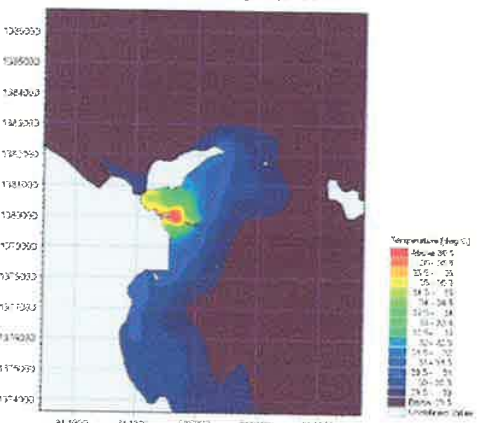
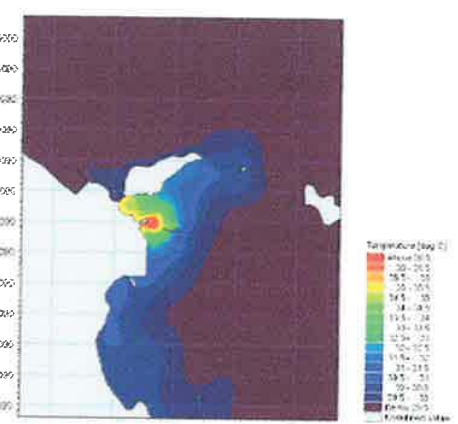
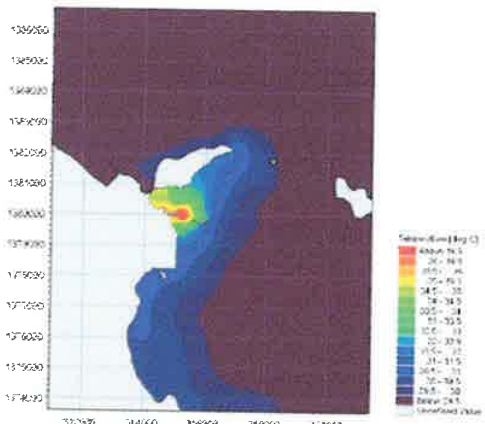
07:00:00.0000 Time Step: 02 of 500 Signal Layer No. 2 of 5



07:00:00.0000 Time Step: 03 of 500 Signal Layer No. 3 of 5

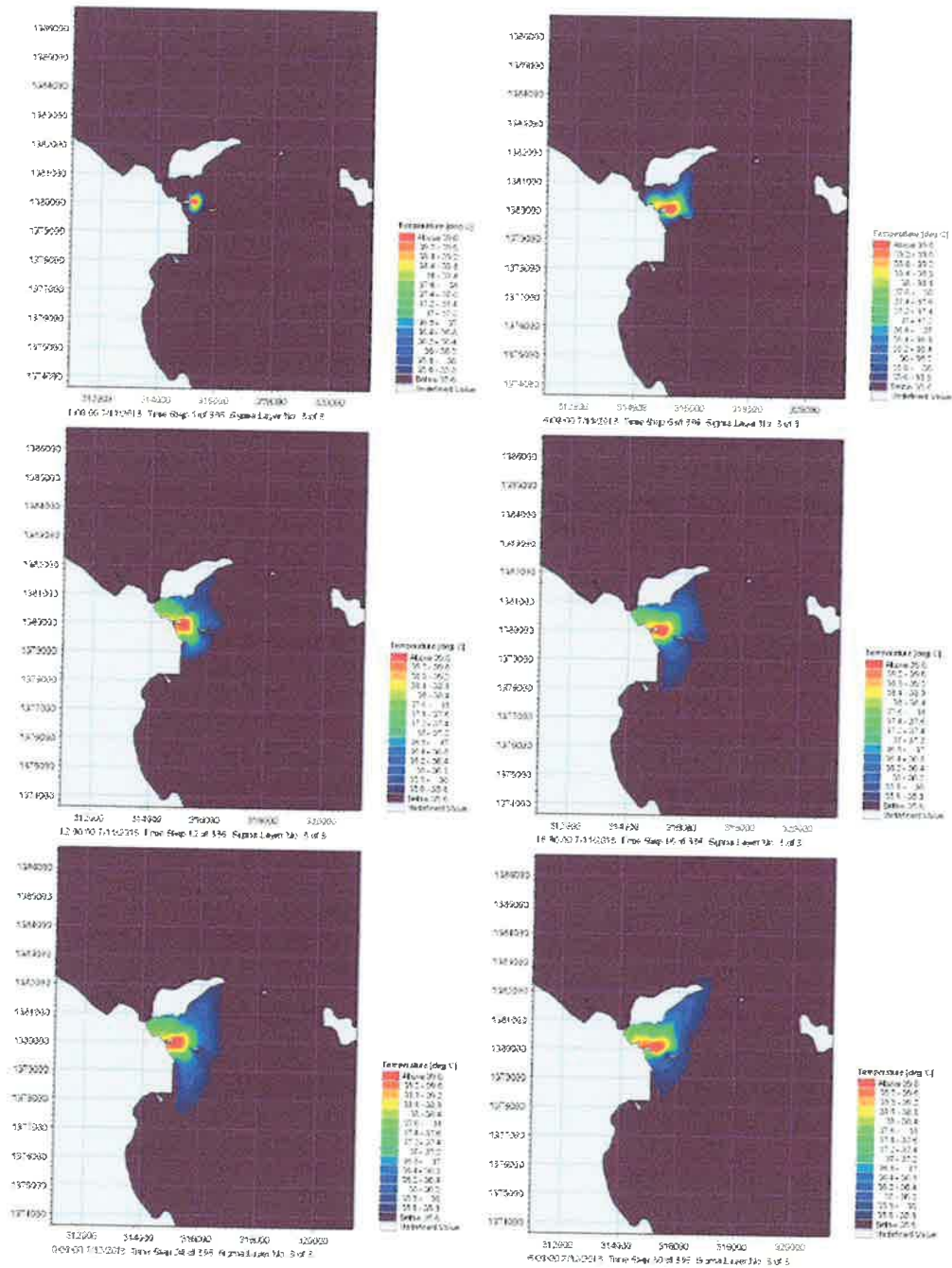


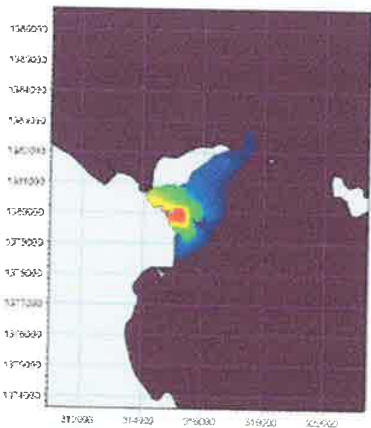
8



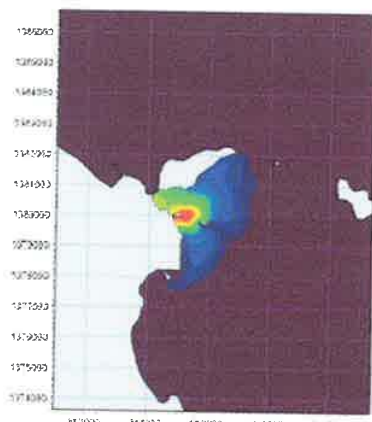
2

Phụ lục 2.3: Kịch bản cực đoạn VVP23

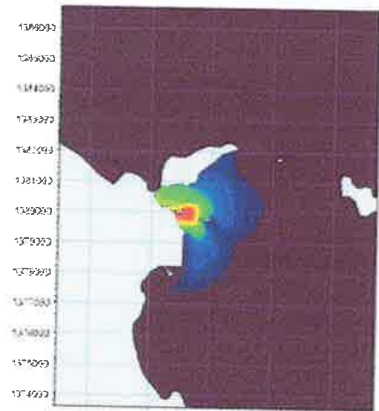




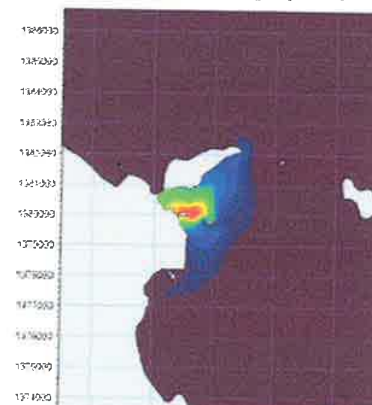
12.30.00 7/12/2018 Time Step 30 of 446 Sigma Layer No. 3 of 5



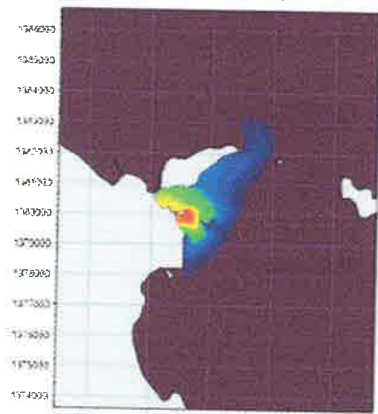
16.30.00 7/12/2018 Time Step 42 of 446 Sigma Layer No. 3 of 5



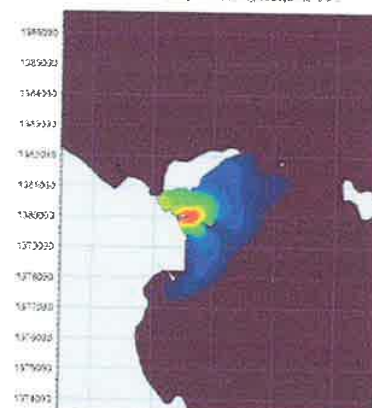
00.00 7/15/2018 Time Step 46 of 446 Sigma Layer No. 3 of 5



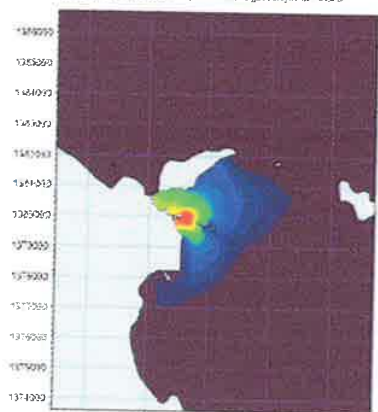
04.00 7/15/2018 Time Step 58 of 446 Sigma Layer No. 3 of 5



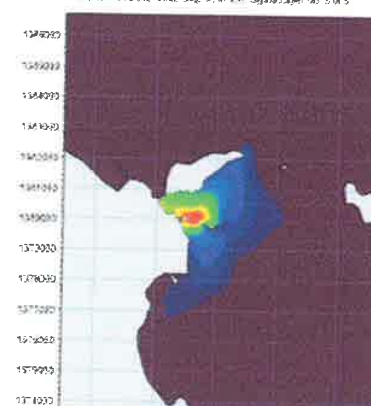
12.30.00 7/15/2018 Time Step 68 of 446 Sigma Layer No. 3 of 5



16.30.00 7/15/2018 Time Step 78 of 446 Sigma Layer No. 3 of 5



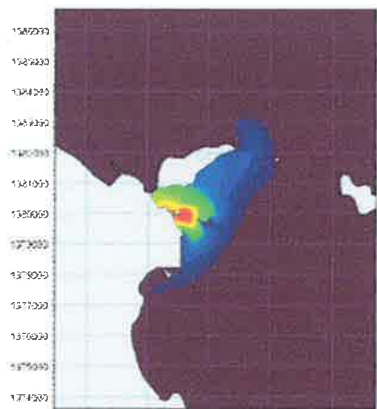
00.00 7/14/2018 Time Step 96 of 446 Sigma Layer No. 3 of 5



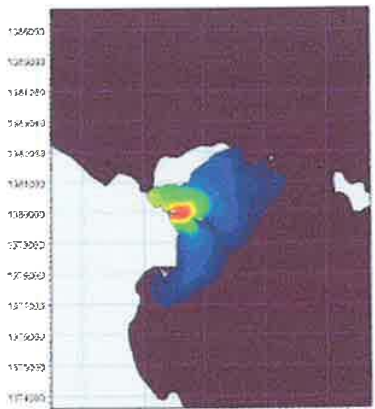
00.00 7/14/2018 Time Step 96 of 446 Sigma Layer No. 3 of 5



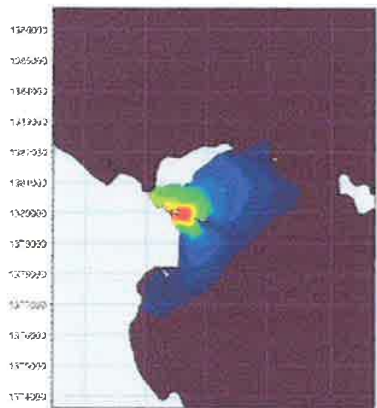
8



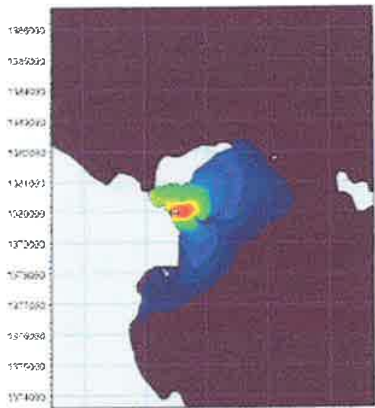
12:30:00 07/04/2015 Time Step 04 of 04 Sigma Layer No. 1 of 5



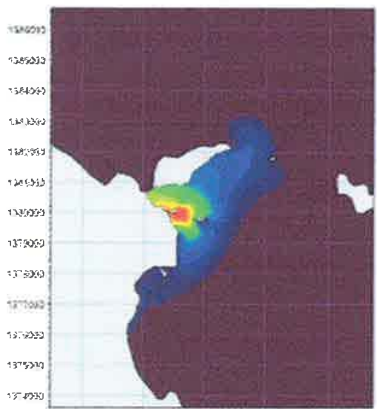
14:00:00 07/04/2015 Time Step 05 of 04 Sigma Layer No. 2 of 5



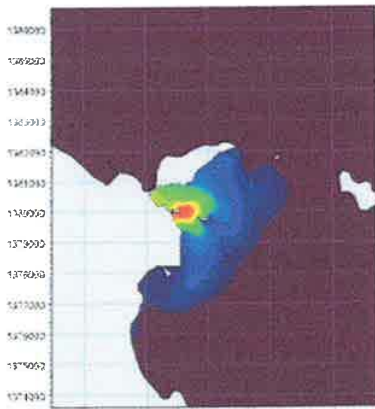
00:00:00 07/05/2015 Time Step 06 of 04 Sigma Layer No. 3 of 5



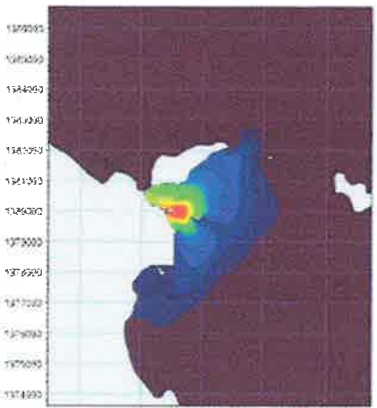
02:00:00 07/05/2015 Time Step 07 of 04 Sigma Layer No. 4 of 5



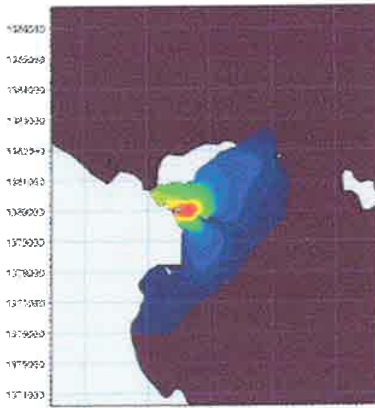
12:30:00 07/05/2015 Time Step 08 of 04 Sigma Layer No. 5 of 5



14:00:00 07/05/2015 Time Step 09 of 04 Sigma Layer No. 6 of 5

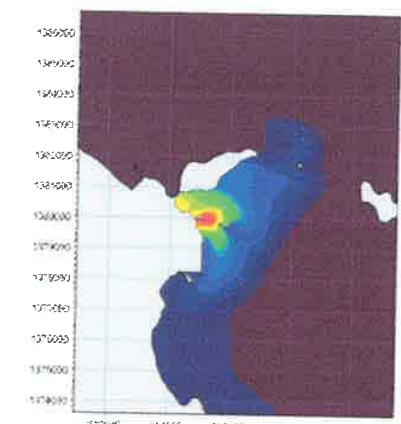


00:00:00 07/06/2015 Time Step 10 of 04 Sigma Layer No. 7 of 5

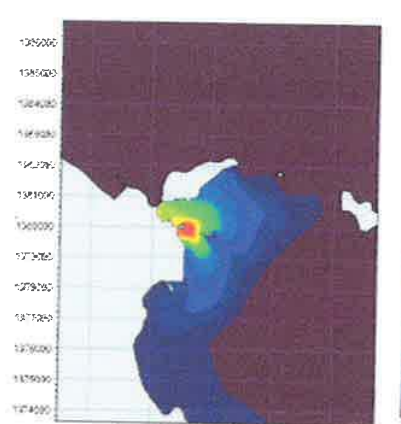


02:00:00 07/06/2015 Time Step 11 of 04 Sigma Layer No. 8 of 5

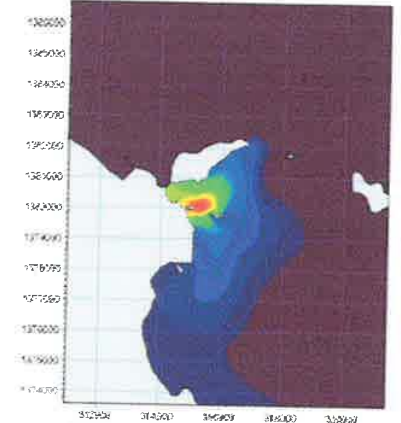




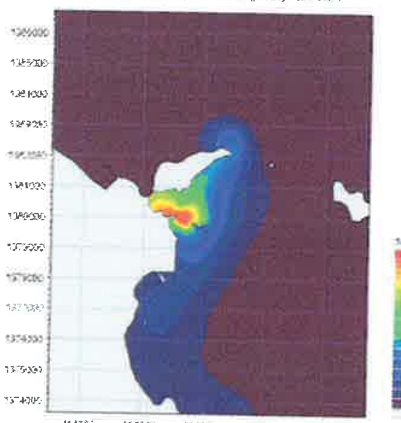
12:00:00 12/2/2018 Time Step 224 of 496 Sigma Layer No. 5 of 5



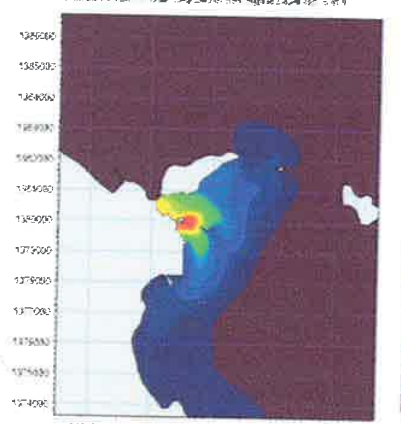
16:00:00 12/2/2018 Time Step 234 of 496 Sigma Layer No. 5 of 5



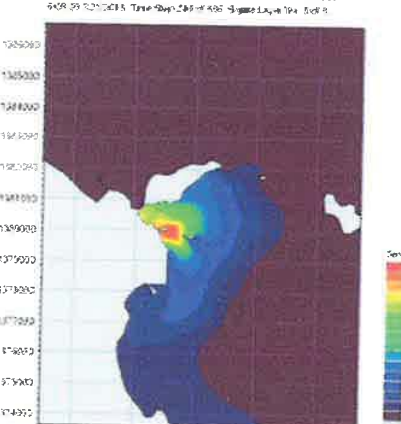
04:00:00 12/12/2018 Time Step 280 of 496 Sigma Layer No. 5 of 5



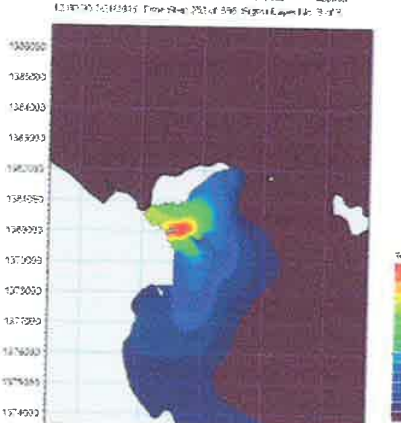
08:00:00 12/12/2018 Time Step 280 of 496 Sigma Layer No. 5 of 5



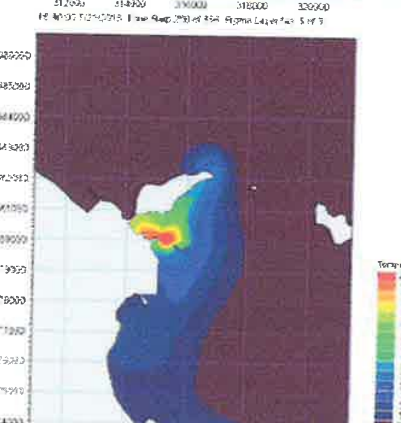
12:00:00 12/12/2018 Time Step 281 of 496 Sigma Layer No. 5 of 5



16:00:00 12/12/2018 Time Step 290 of 496 Sigma Layer No. 5 of 5



04:00:00 12/22/2018 Time Step 284 of 496 Sigma Layer No. 5 of 5



08:00:00 12/22/2018 Time Step 290 of 496 Sigma Layer No. 5 of 5



