GULARIA CHINI MILLS
(A UNIT OF BALRAMPUR CHINI MILLS LTD.)
FACTORY : VILL. GULARIA, P.O. : NAUSHAR GULARIA, DISTT. : LAKHIMPUR KHERI (U.P.) PIN-262901
EPABX : 05870-242902/242906, Vodafone : 09721450393, FAX : 25870-242910, CIN- L15421WB1975PLC030118
Email : gcm_fy@rediffmail.com bcml.gcm@bcml.in

Ref no. 112/ENV/BCML GUL/2019
Date: 07.06.2019

To,
The Member Secretary
Industry –II
Ministry Of Environment, Forest and Climate Change,
Indira Paryawaran Bhawan
JorBagh Road New Delhi-110003

Proposal No.: IA/UP/IND2/75830/2018

Subject: Reply of query generated in 7th Expert Appraisal Committee (Industry-2) Meeting Held during 8 May, 2019

Regarding: M/s GulariaChini Mills (Distillery Unit) (A unit of BalrampurChini Mills Limited) has proposed to establish a 160 KLD (RS/ENA/AA), molasses based distillery along with 8.0 MW of Co- Generation Power Plant.

Respected Sir,

This is connection to above mentioned subject; our point wise reply is as follows:

Sl no	MINUTES OF THE 7th EXPERT APPRAISAL COMMITTEE (INDUSTRY-2) MEETING HELD DURING 8 MAY, 2019	Reply
1.	The EAC, after deliberations, observed that incremental concentrations for critical air pollutants namely PM_{10}&SO_2 were on much higher side and asked for confirmation of the same. Further, in view of increased transportation activities due to the project and thus more vehicular emissions, the Committee desired for prediction of maximum GLC for NOx also.	The earlier prediction was based on an emission concentration of 12.60 g/sec taking into consideration the sulphur content in slop (0.6%). We have now rerun the air model based on an air emission (SO_2) of 11.2 g/sec considering the nature of fuel being a mixed fuel. With the above emission load, the maximum incremental concentration works out to be **1.03 µg/m³** Similarly in the case of PM_{10} where the emission is expected to be 3.42 g/sec taking into consideration the removal of particulate matter in the air pollution control system. The maximum ground level concentration works out to be **1.34 µg/m³.** We have also remodeled the air emission on revised stack height of 80 meter instead of 72 meters diameter of 2.2 meter against earlier diameter of 4.0 meters.

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		Regarding the incremental NO_X concentration due to the proposed project, the traffic analysis performed by us suggests an incremental load of only 13.43 PCU/hour after the proposed project. The 2 way 2 lane road (SH-90) has carrying capacity of 625 PCU per hour as per IRC 64-1990 guidelines. The current density is 72.5 PCU/hr and expected values after proposed establishment work out to be 83.93 PCU/hr. incremental concentrations are expected to be negligible and neither the carrying capacity for the road is being exceeded. We have however estimated the incremental NO_X concentration from stack emissions. The maximum incremental works out to be **0.58** $\mu g/m^3$.

It is requested kindly grant us EC for the same for which we shall be obliged.

Regards

Thanking you,
Yours faithfully,
For GULARIA CHINI MILLS
(A unit of Balrampur Chini Mills Ltd.)

[N.K.AGARWAL]
EXECUTIVE PRESIDENT

Enclosure;

1 Revised Chapter on Air Modelling

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1. Model Data AERMOD 8.2: Impact Prediction

Emission and Stack Details

The main pollutant from the proposed Distillery plant based on boiler shall be particulate matter form the stack.

The Particulate Matter emission in Distillery plant shall be restricted below 150 mg/Nm^3.

Table: 1: The details of stack emission from proposed Distillery and existing sugar plant

Sr. No	Parameter	Existing Sugar unit	Proposed in Distillery
1	Major Pollutant	PM	PM&SO_xNOx
2	No. of Stack	01 No	01 No
3	Stack attach to	Boiler through wet scrubber	Boiler through ESP
4	Material of Construction	RCC	RCC
5	Height of Stack	72 meters	**80 meters**
6	Capacity of Boiler	90 TPH (2.0 no.s)	Proposed new 01 no. of 60.0 TPH
7	Diameter at the top of Stack	4.0 Meters	**2.2 Meters**
8	Temperature	110°C	140°C
9	Flue gas Exit velocity	12 m/s	11.8 m/s
10	Rate of Emission		
A	PM	5.48 g/s	3.42 g/s
B	SOx Emission	-	**11.2 g/s (from slop + bagasse)** • Slop and bagasse shall be mixed in the ratio of 1.0:1.1 and his mixture shall be used as fuel. The sulphur content of slop is 0.6% and that of bagasse is 0.05%. The mixture containing almost equal quantities of slop and bagasse shall have average sulphur content of 0.325 % (0.6+0.05/2).
C	NOx Emission	2.6g/s	5.2 g/s

2. Simulation Model for Prediction using AERMOD view 8.2

Post Project Scenario:

Predicted maximum ground level concentrations considering micro meteorological data during the study period superimposed on the maximum baseline concentrations obtained during the

study period to estimate the post project scenario, which would prevail at the post operational phase.

Presentation of Results:

Model simulations have been carried out for the post monsoon season. For the short-term simulations, the concentrations were estimated around 1200 receptor points chosen to obtain an optimum description of variation in concentration over the site in 10.0 km radius covering 12 directions.

Table No. : 2 Prediction of Incremental Concentrations due to proposed project

S. No.	24 Hrs. Concentrations	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_x ($\mu g/m^3$)	NO_x ($\mu g/m^3$)
1	Maximum Background Concentrations (24 Hrs.)	88.8	58.2	16.8	26.4
2	Predicted Max. GLC (24 Hrs.)	**1.34**	**1.005**	**1.03**	**0.58**
3	Total Concentration	90.14	59.205	17.83	26.98
4	NAAQS - Industrial Limits	≤100	≤60	≤80	≤80

The predicted incremental ground levels concentrations for a period are given in Table-3.

Table-3 Periodic Incremental Modeling Results:

Pollutant	Incremental Levels ($\mu g/m^3$)	Distance(m)	Direction
PM_{10}	0.430	480	East
$PM_{2.5}$	0.241	320	East
SO_x	0.253	510	East&West
NO_x	0.141	390	East

The net resultant concentration of during operation of the proposed project are well within the Revised National Ambient Air Quality Standards (NAAQS) stipulated by MOEF vide notification dated 16.11.2009.

Hence, there shall not be any adverse impact on the air environment due to the proposed project.

The isoplepths of the study area are given in figure no. 1 A to 1H

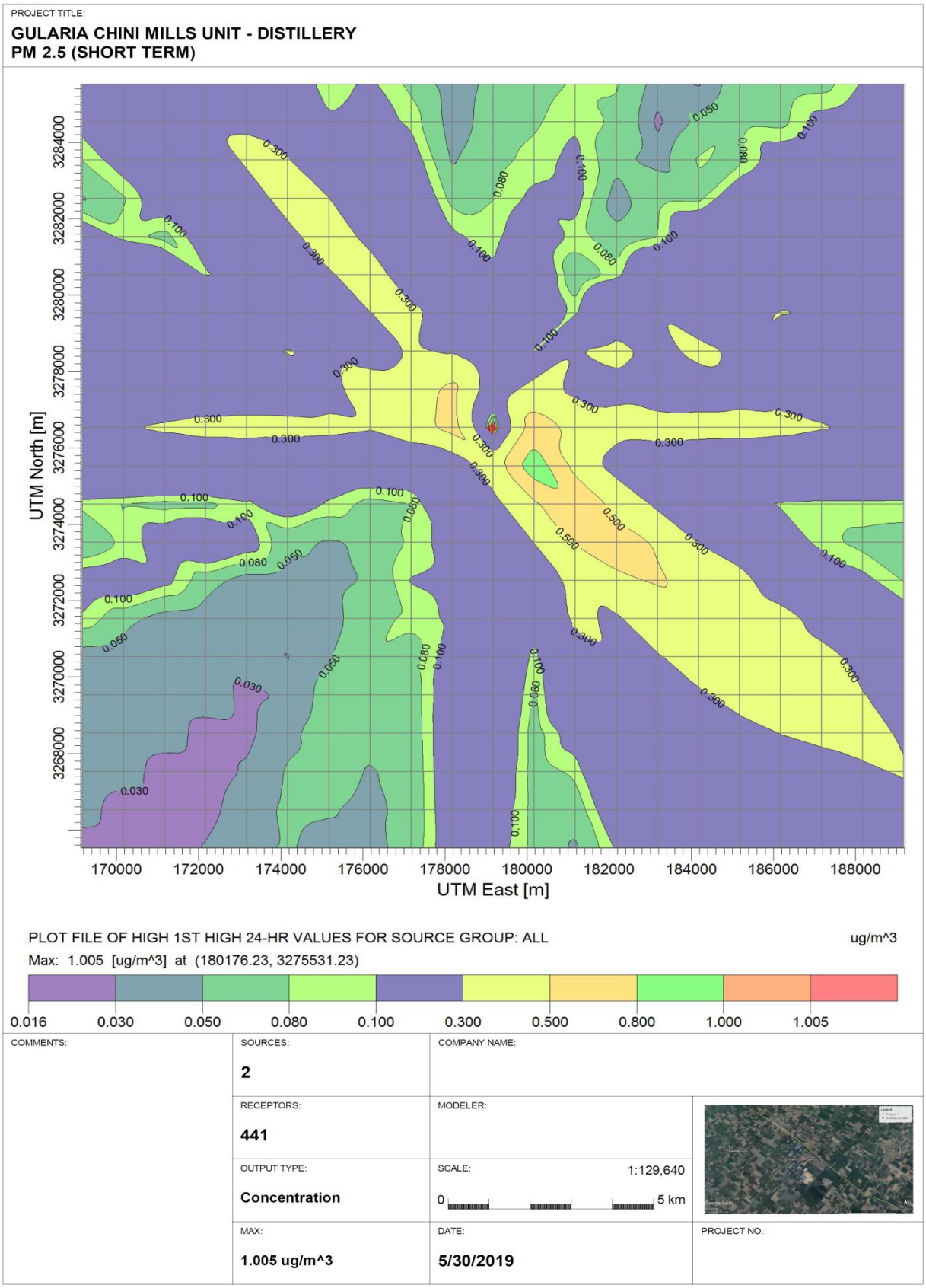

Figure- 1(A) Incremental GLC concentration of $PM_{2.5}$ 24 hrs

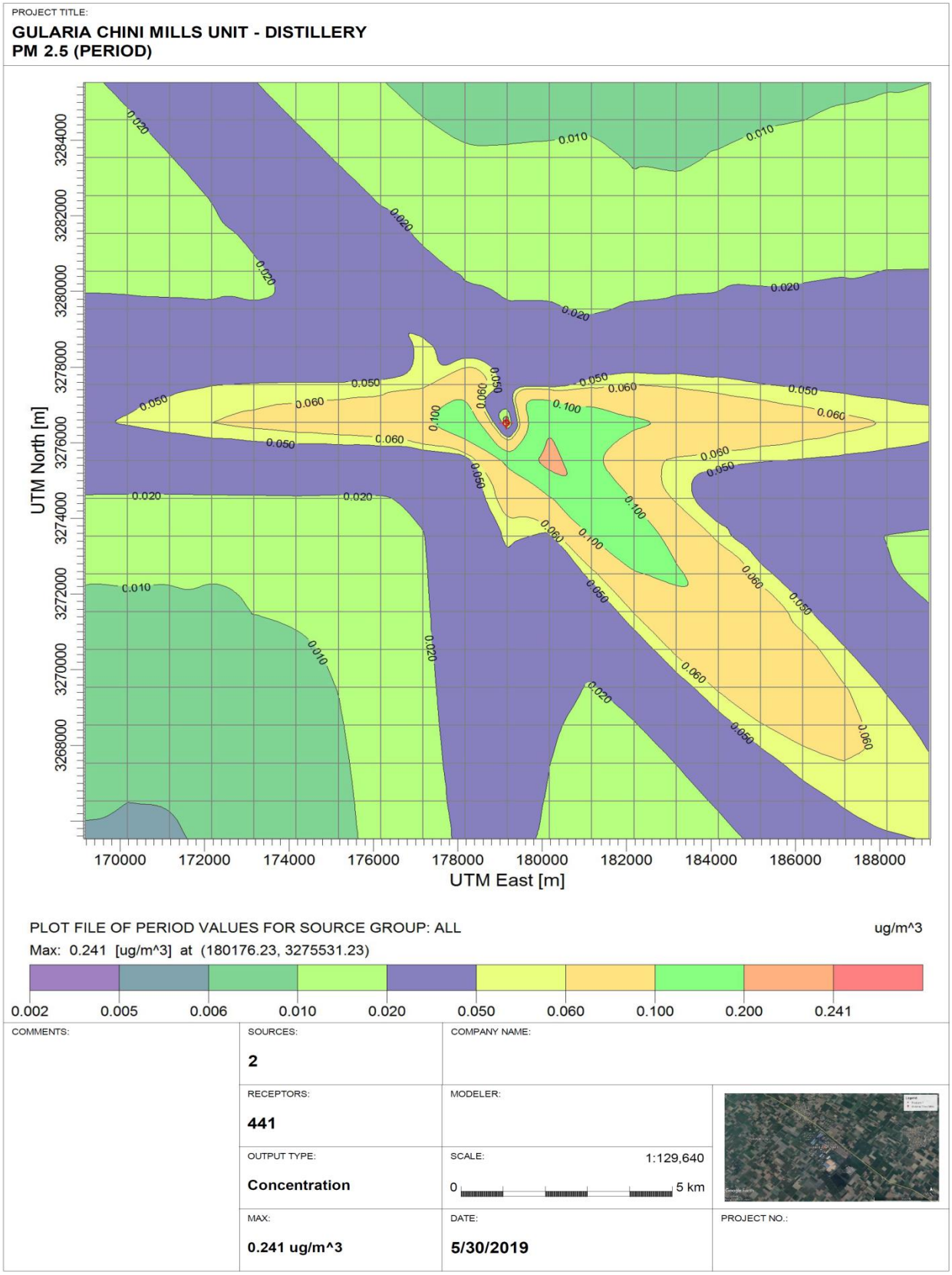

Figure- 1(B) Incremental GLC concentration of $PM_{2.5}$ period

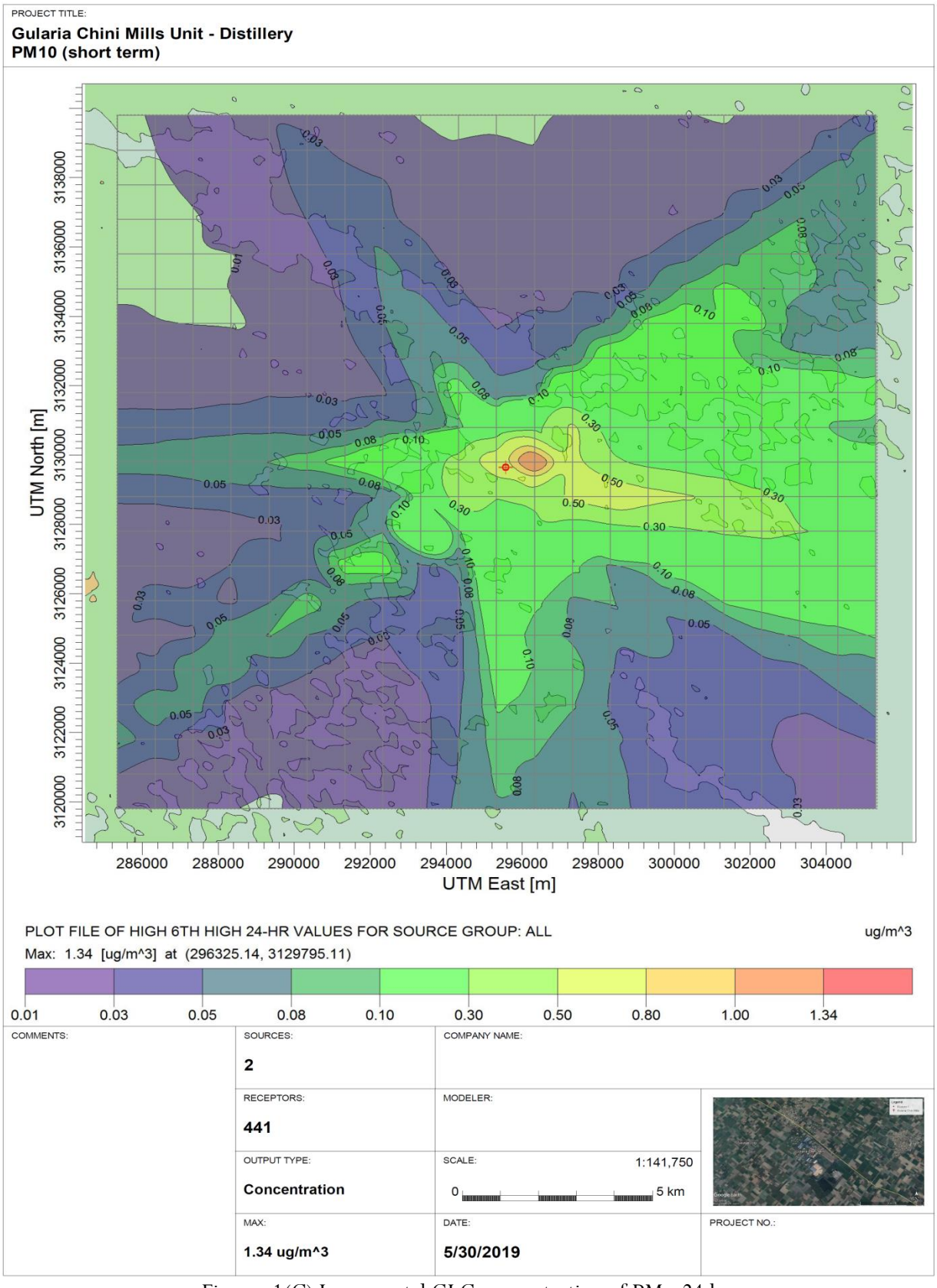

Figure- 1(C) Incremental GLC concentration of PM_{10} 24 hrs

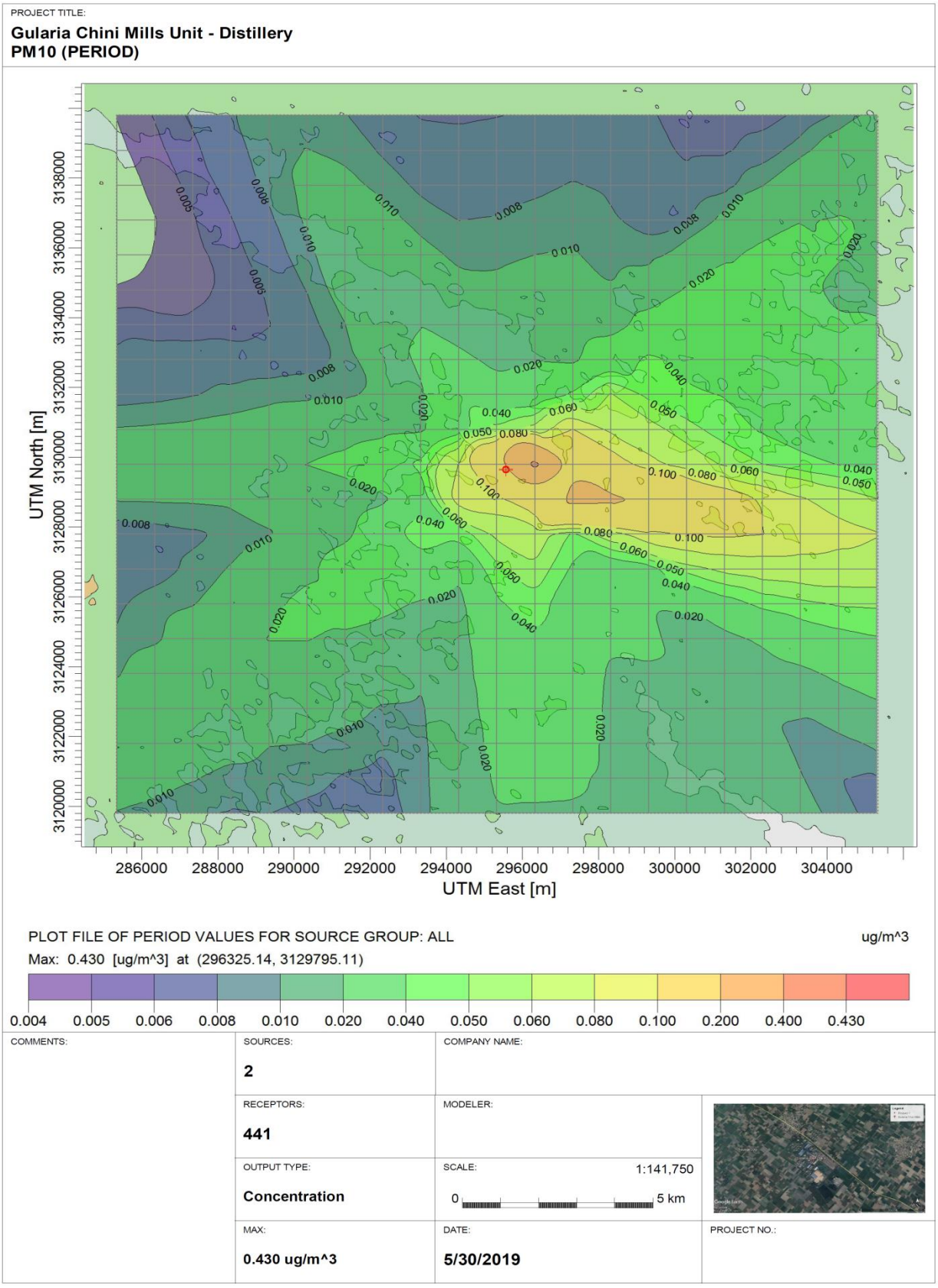

Figure- 1(D) Incremental GLC concentration of PM_{10} period

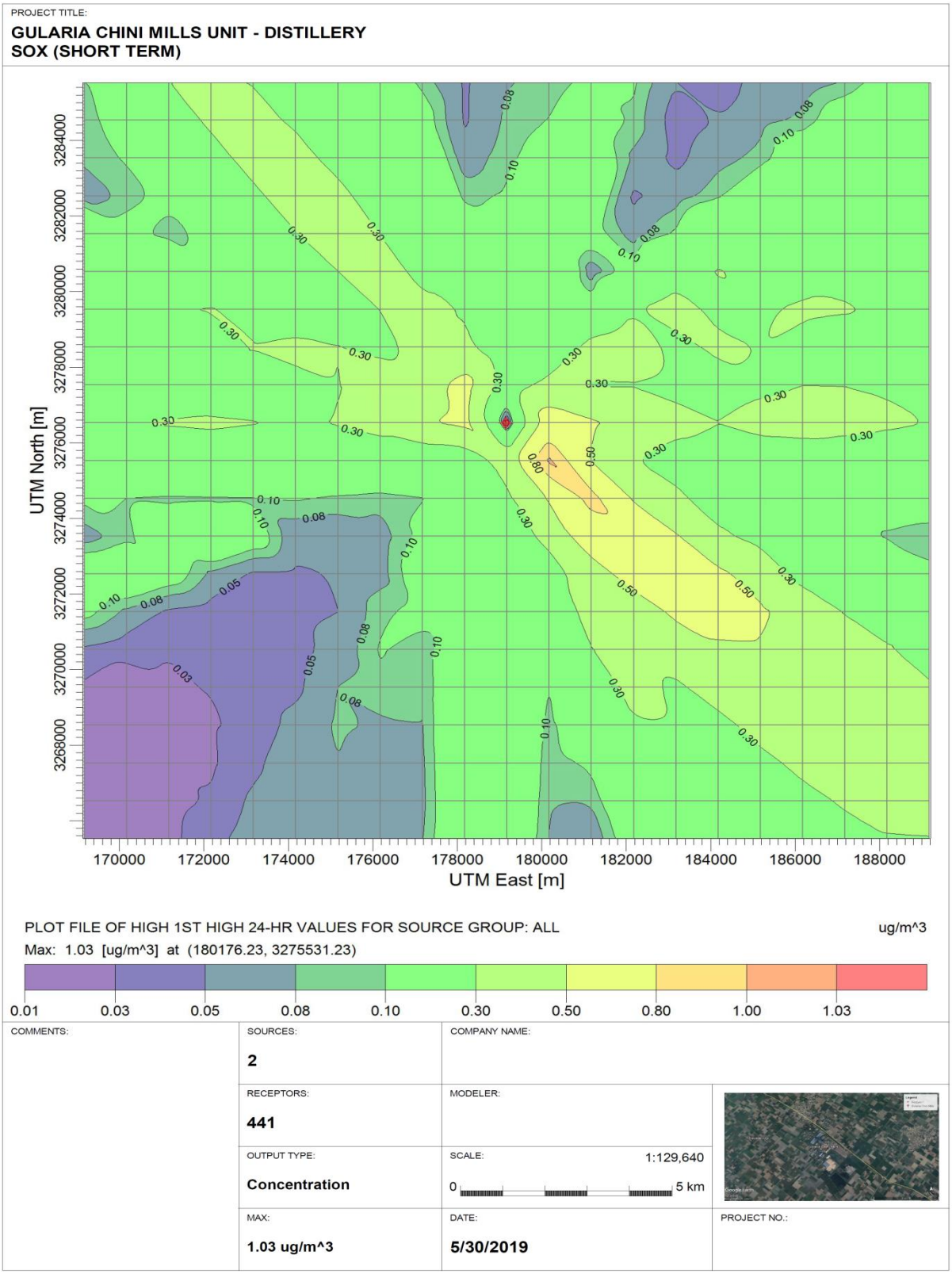

Figure- 1(E) Incremental GLC concentration of SOx 24 hrs

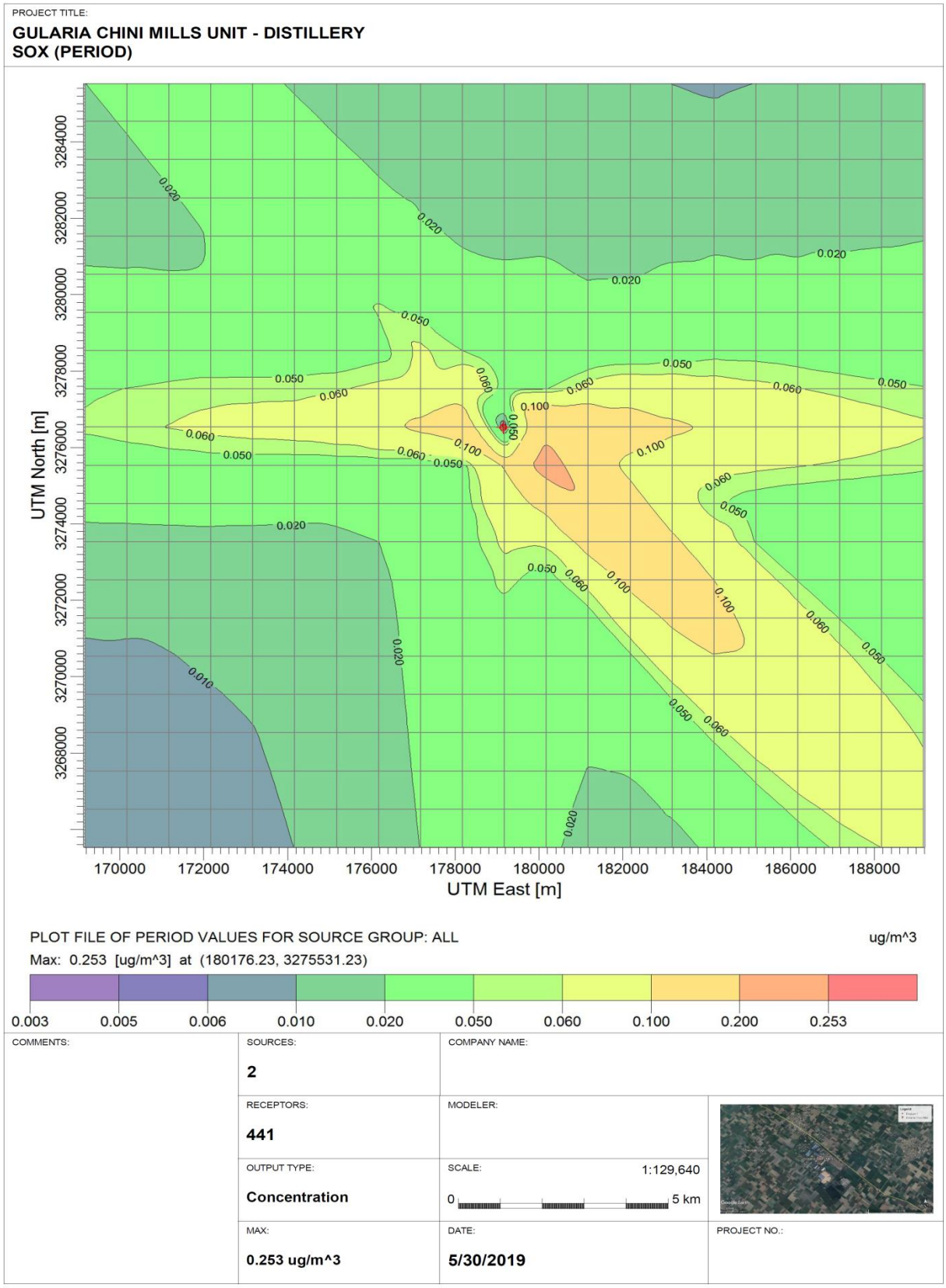

Figure- 1(F) Incremental GLC concentration of SOx period

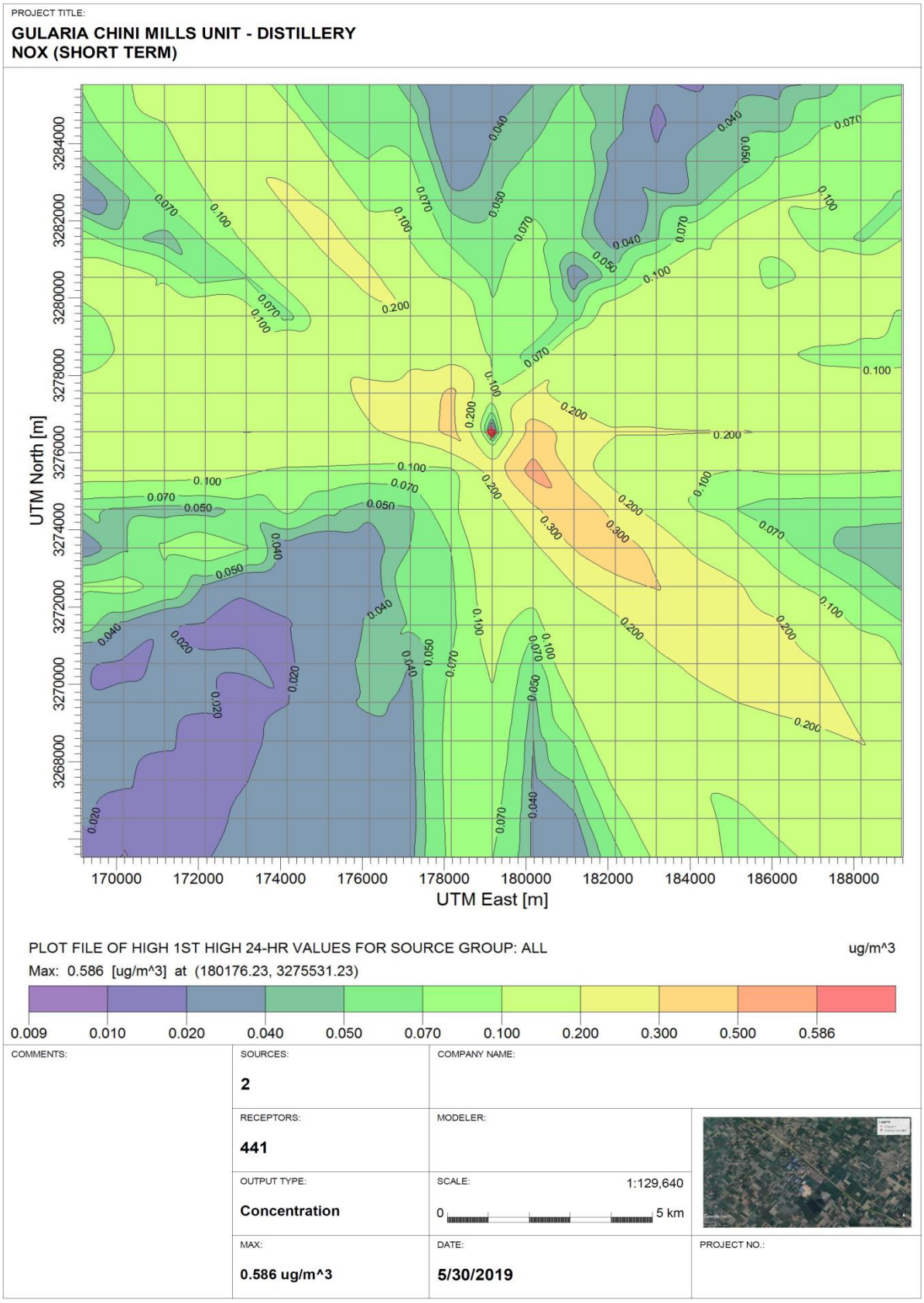

Figure- 1(G) Incremental GLC concentration of NOX 24 hrs

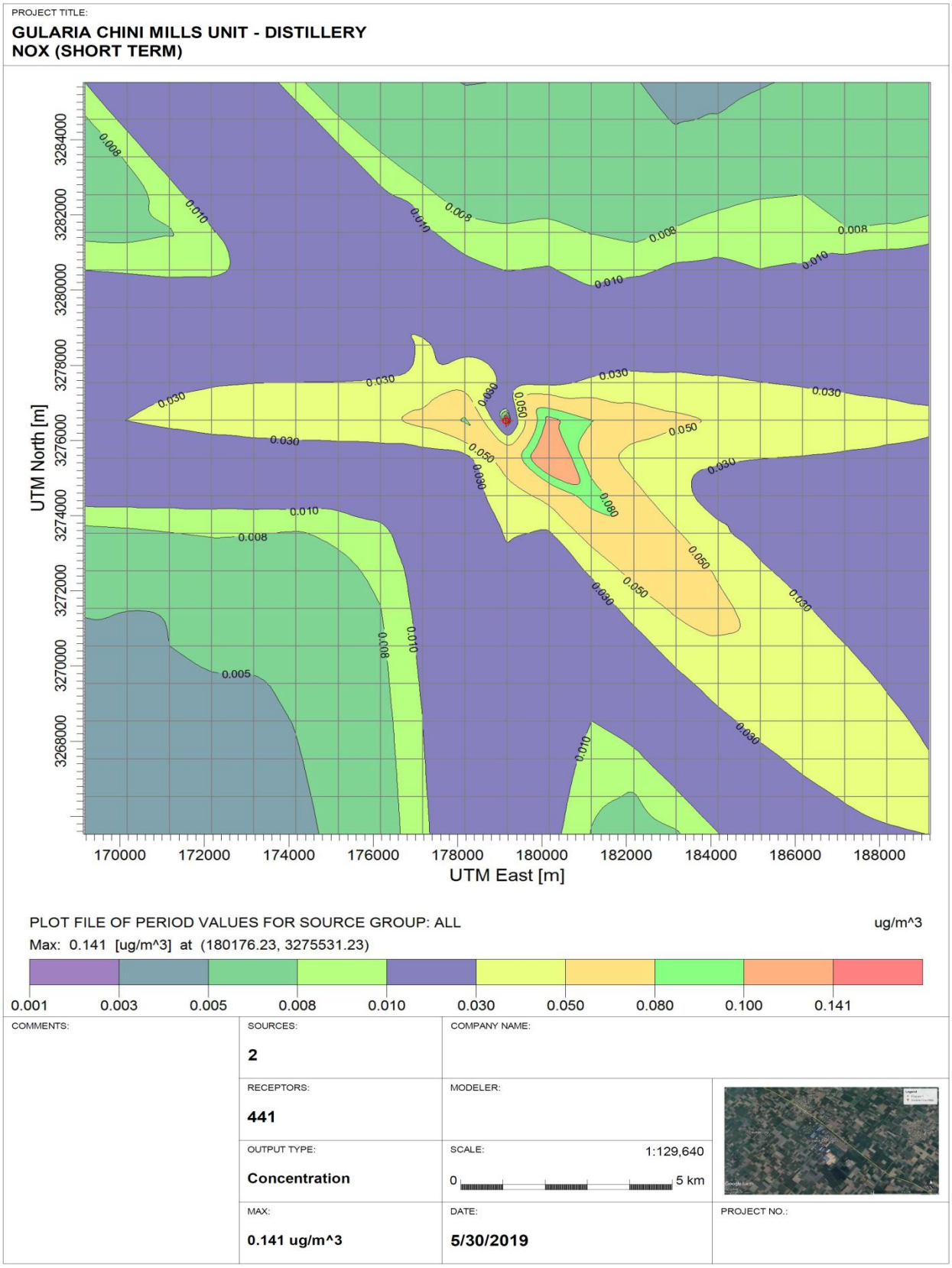

Figure- 1(H) Incremental GLC concentration of NO_X period