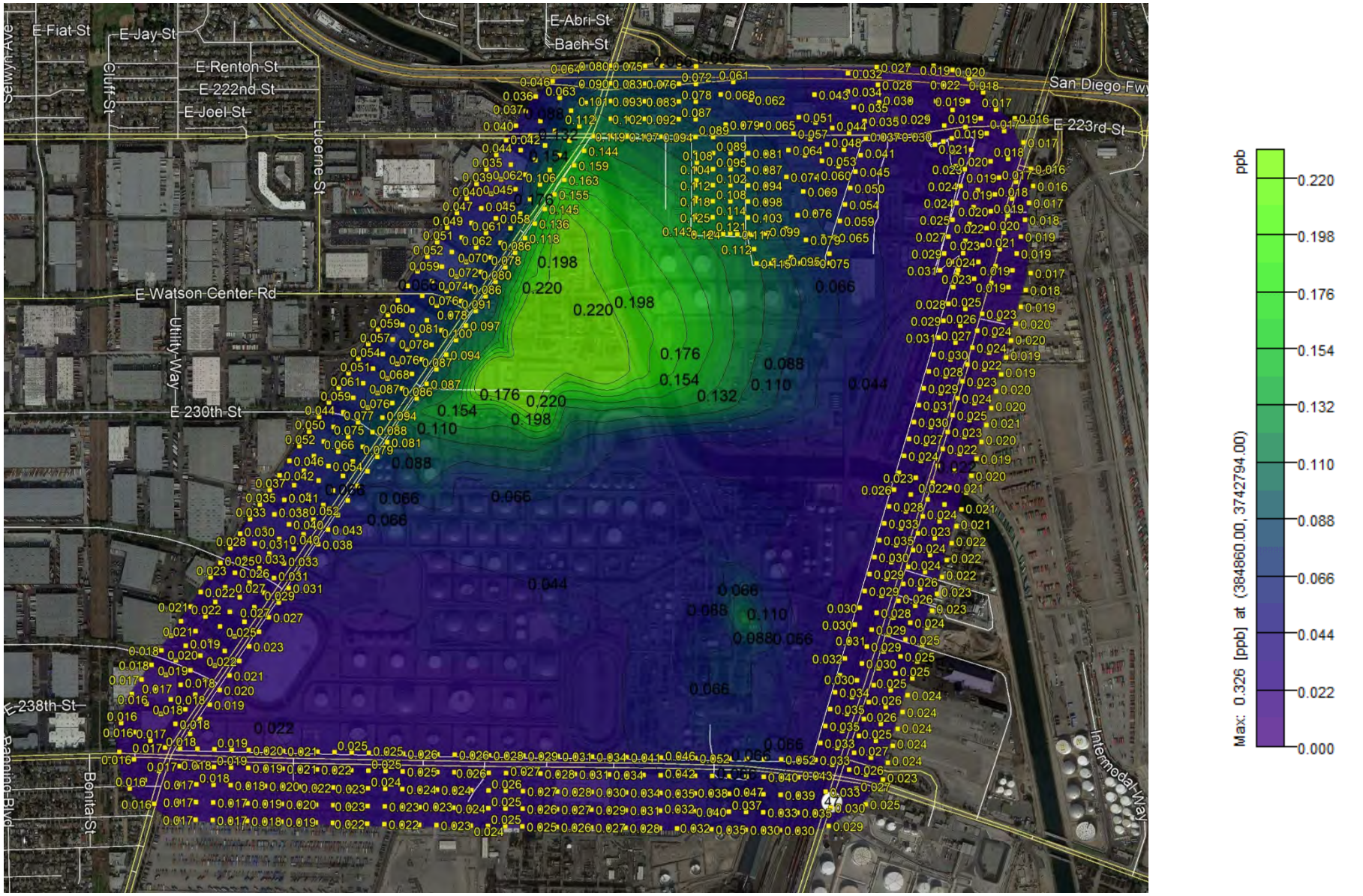
Appendix B. Refinery Identification Maps

TESORO
Los Angeles Refinery
Carson Operations
(LAR-C)
NORTH ZONE
SOUTH ZONE
FLAGPOLE
HYDROGEN PLANT
HYDROCRACKER
JET HYDROTREATER
HYDROCRACKER FRACTIONATION
NORTH PROCESSING
GATE 7 PARKING
NORTH CHANGE ROOM
GATE 7
GATE 6
GATE 5
GATE 4
GATE 3
GATE 10
GATE 21
GATE 22
GATE 60
GATE 62
WAREHOUSE
COGEN
RESERVOIR NO. 506
BABIKIAN AVE.
PROPANE BULLETS
SPHERES 73-76,78,79
BUTANE SPHERES
OLD 503
NO. 502 RESERVOIR
NO. 501 RESERVOIR
WEST BASIN
EAST BASIN
LPG RACK
PUMP SLAB
SLOUGH
COKER
SULFUR
COMPOUND
SCAFFOLD YARD
SCRAP YARD
SOUTH YARD
BRM
PARKING
WILMINGTON AVENUE
SEPULVEDA BLVD
SAFETY ISSUE
FIRE & SAFETY INSPECTION
WEIGH STATION
C3 SPLITTER
BUTAMER
PENTANE SPHERES
SPILL RESPONSE EQUIPMENT
POLYPROPYLENE UNIT
RAIL CARS
FIRE TRAINING GROUNDS
CONTRACTOR LAYDOWN YARDS
MAINTENANCE BUILDING
NORTHEAST PROPERTY
CARSON CAMPUS ONE
PP TECH CENTER
PP ADMIN
GATE 62 PARKING LOT
PROPYLENE BULLETS
ECX BRIDGE
COKER FLARE
HYDROCRACKER FLARE
POLYMER 3RD PROP SPHERES
HDS FLARE
F.C.C. FLARE
KHYBER PASS
CHANNEL AVE.
FRONT ST.
MANVILLE RD
A
B
C
D
E
F
G
H
I
J
K

KINDER-MORGAN
COMPANY
HTU4
HCU2
HGU1
HCU
FGR
CRU3
HTU2
HTU3
CRU2
BENSAT
HTU1
GCP
DESALTER
BWTU
DCU
CRUDE
ALKY
BOHO #2
FCCU
COGEN
HCOD
TREATER

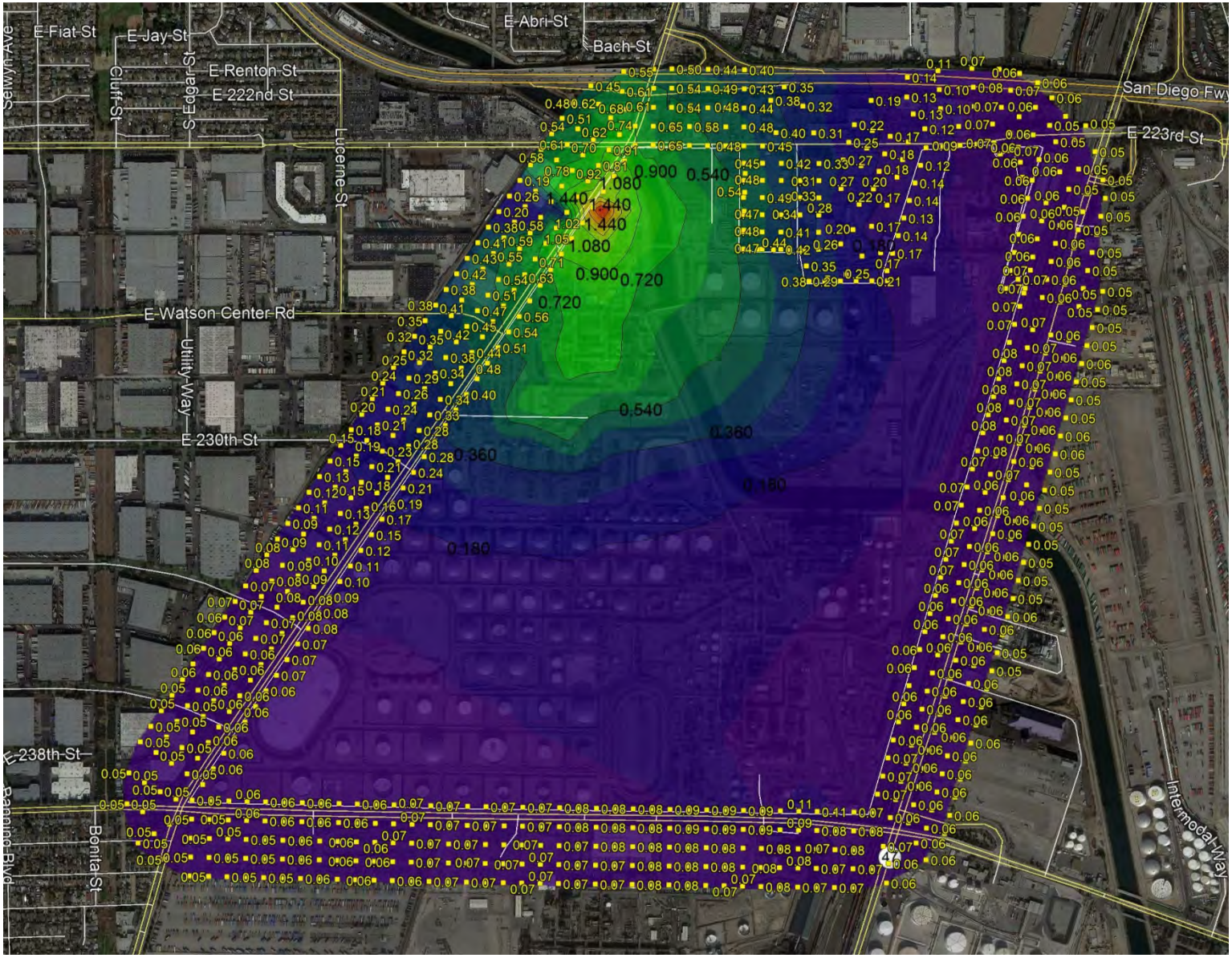
Appendix C. AERMOD Modeling Contours

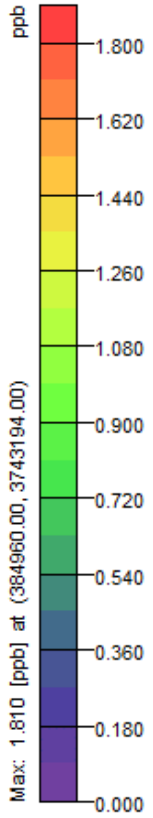
1,3-Butadiene Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

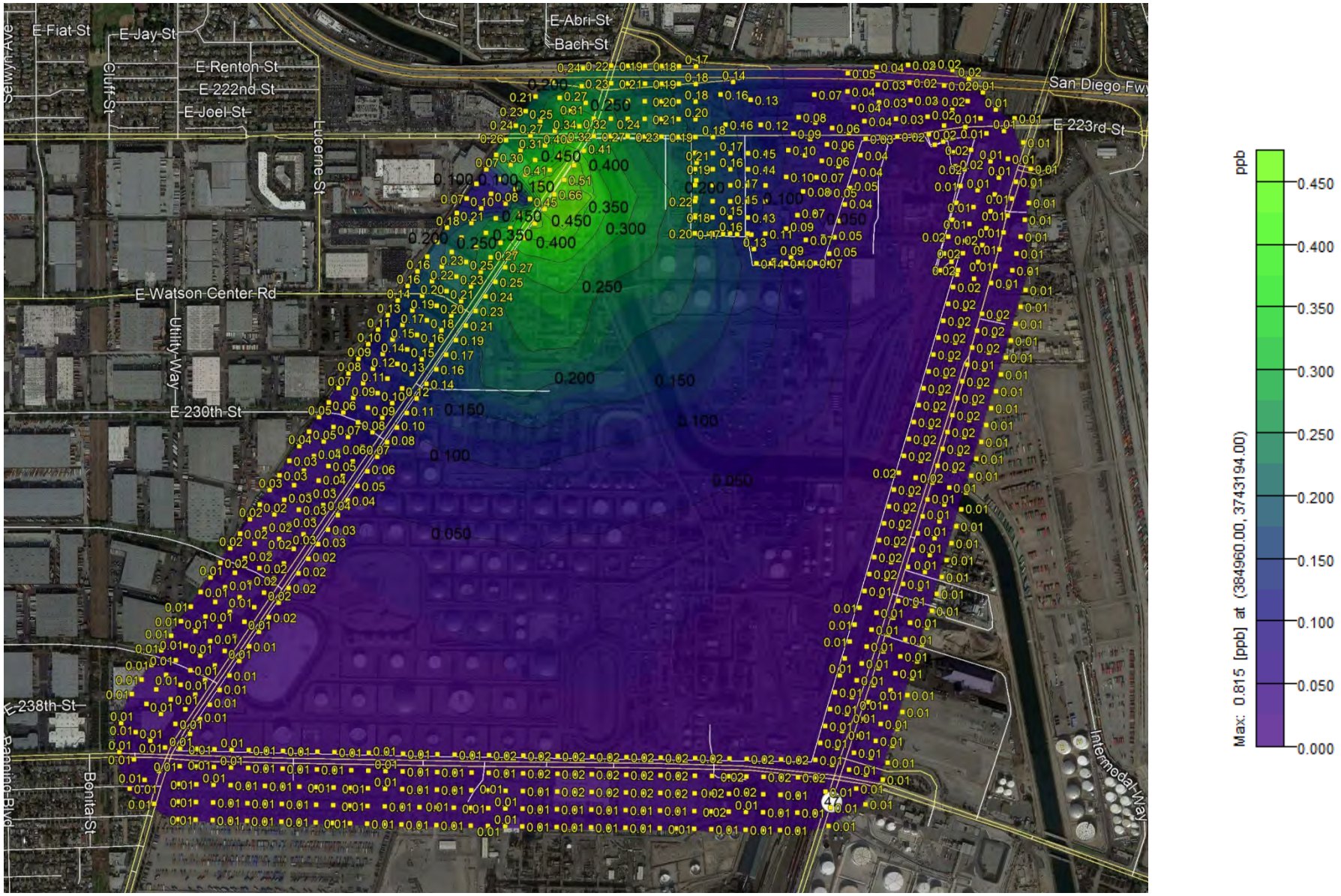
Acetaldehyde Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson





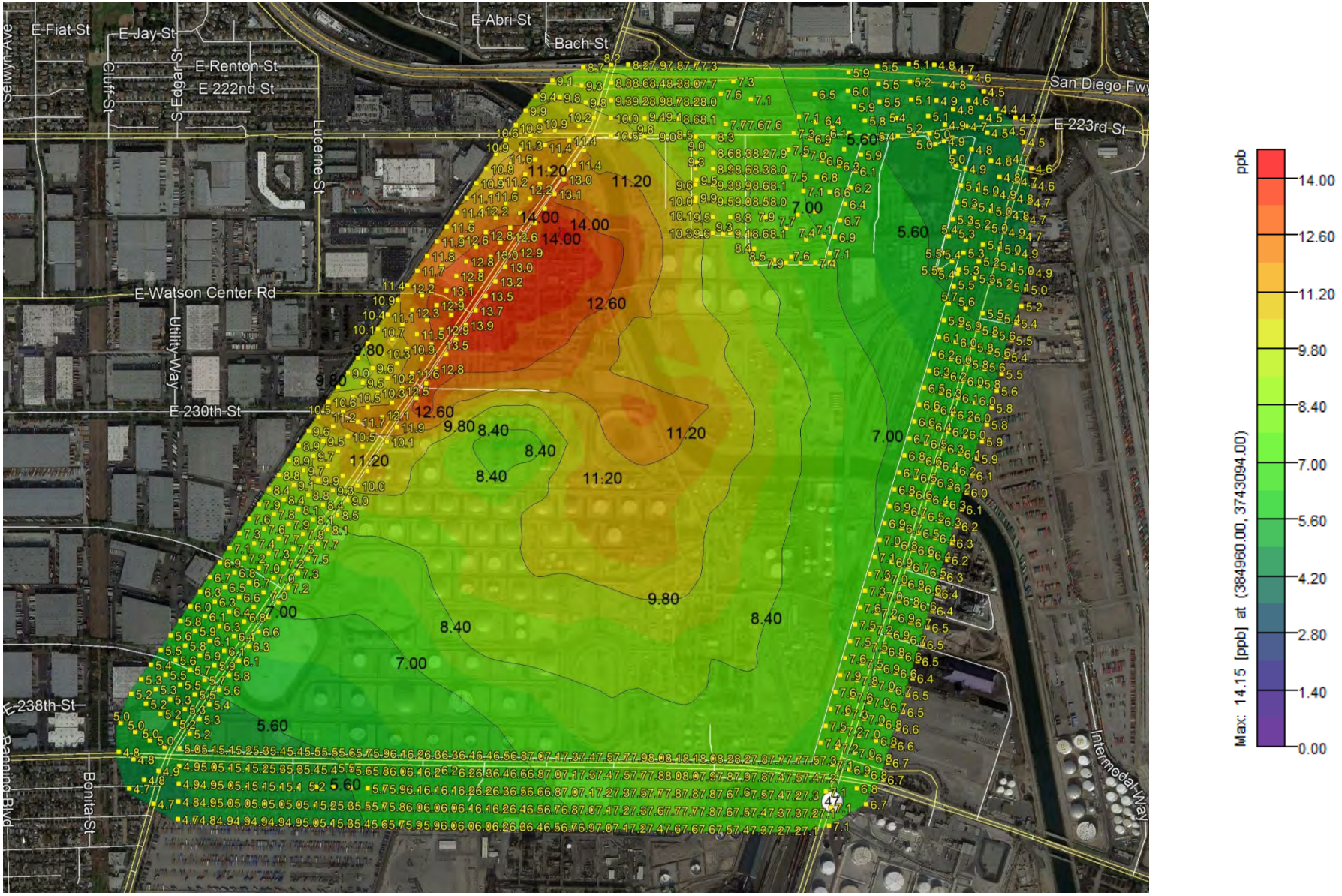
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Acrolein Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



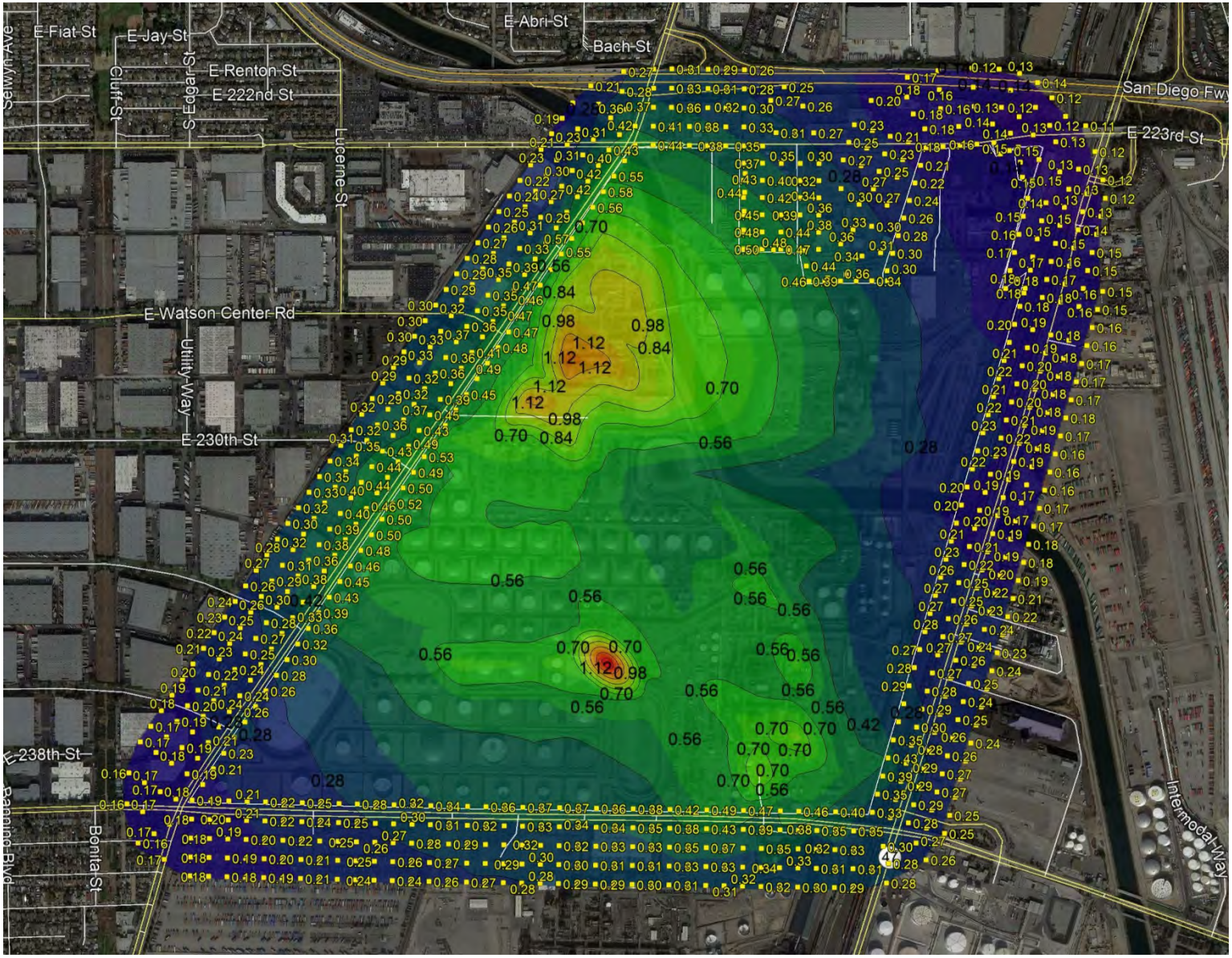
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Ammonia Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



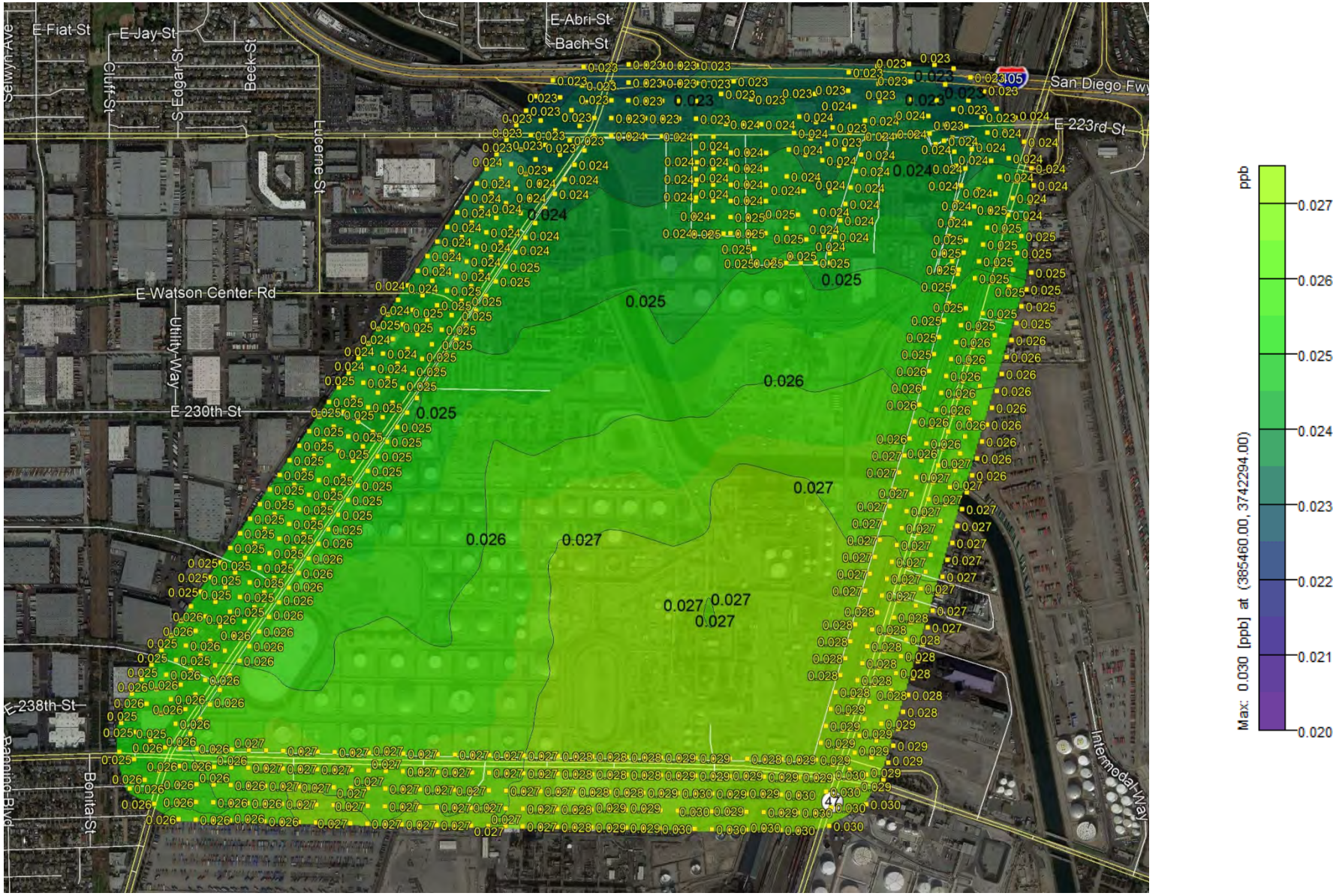
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Benzene Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



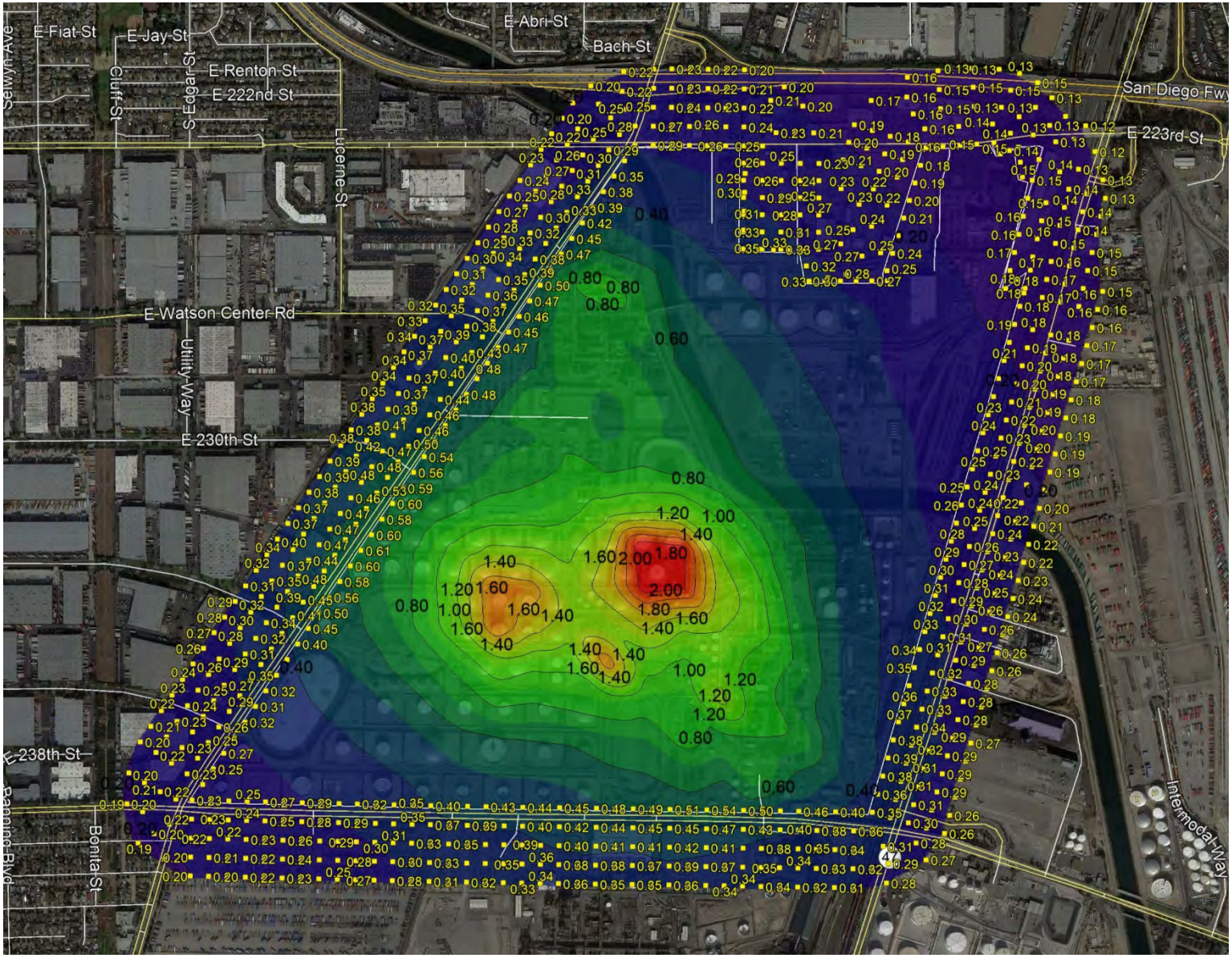
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Carbonyl Sulfide Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



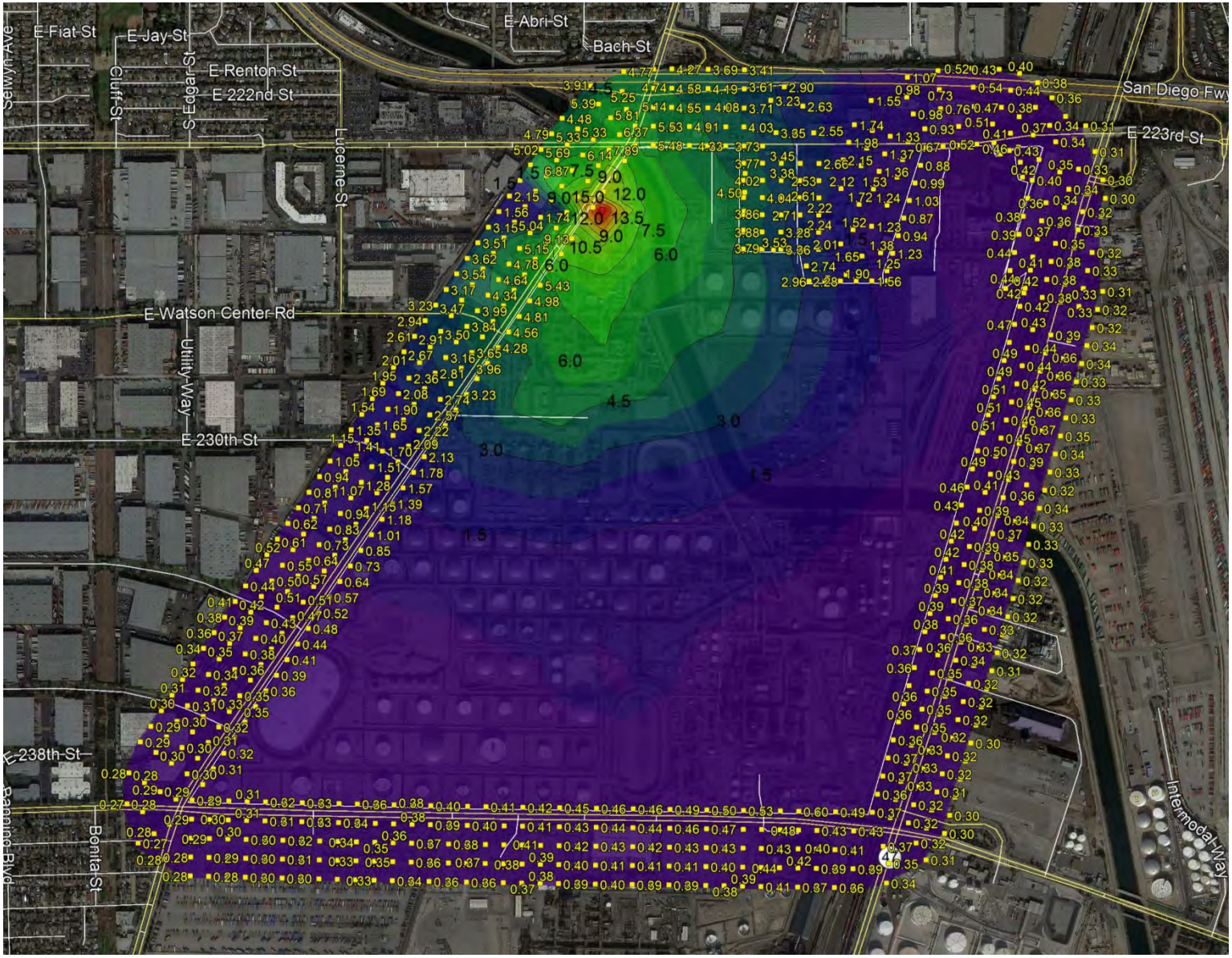
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Ethylbenzene Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



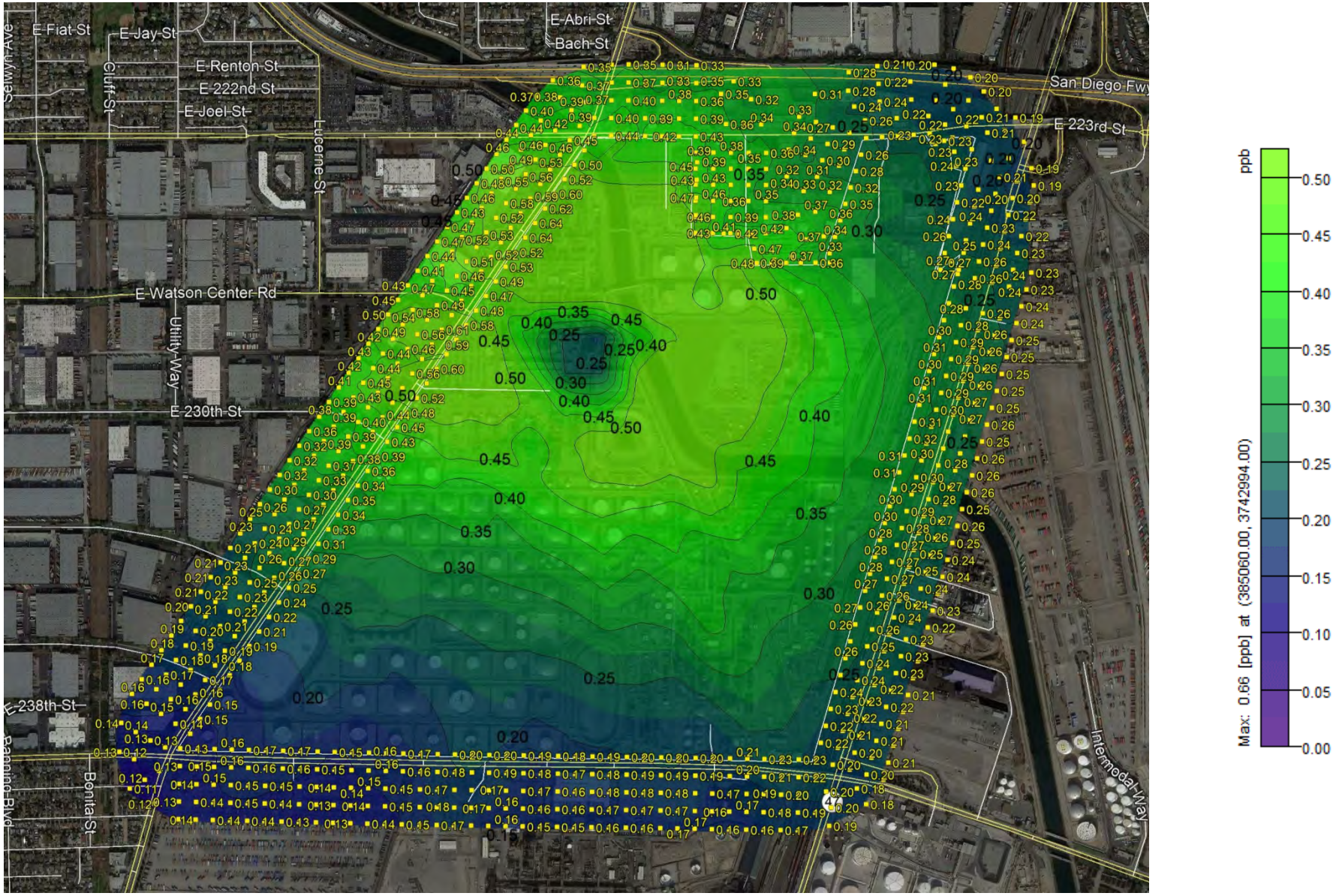
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Formaldehyde Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



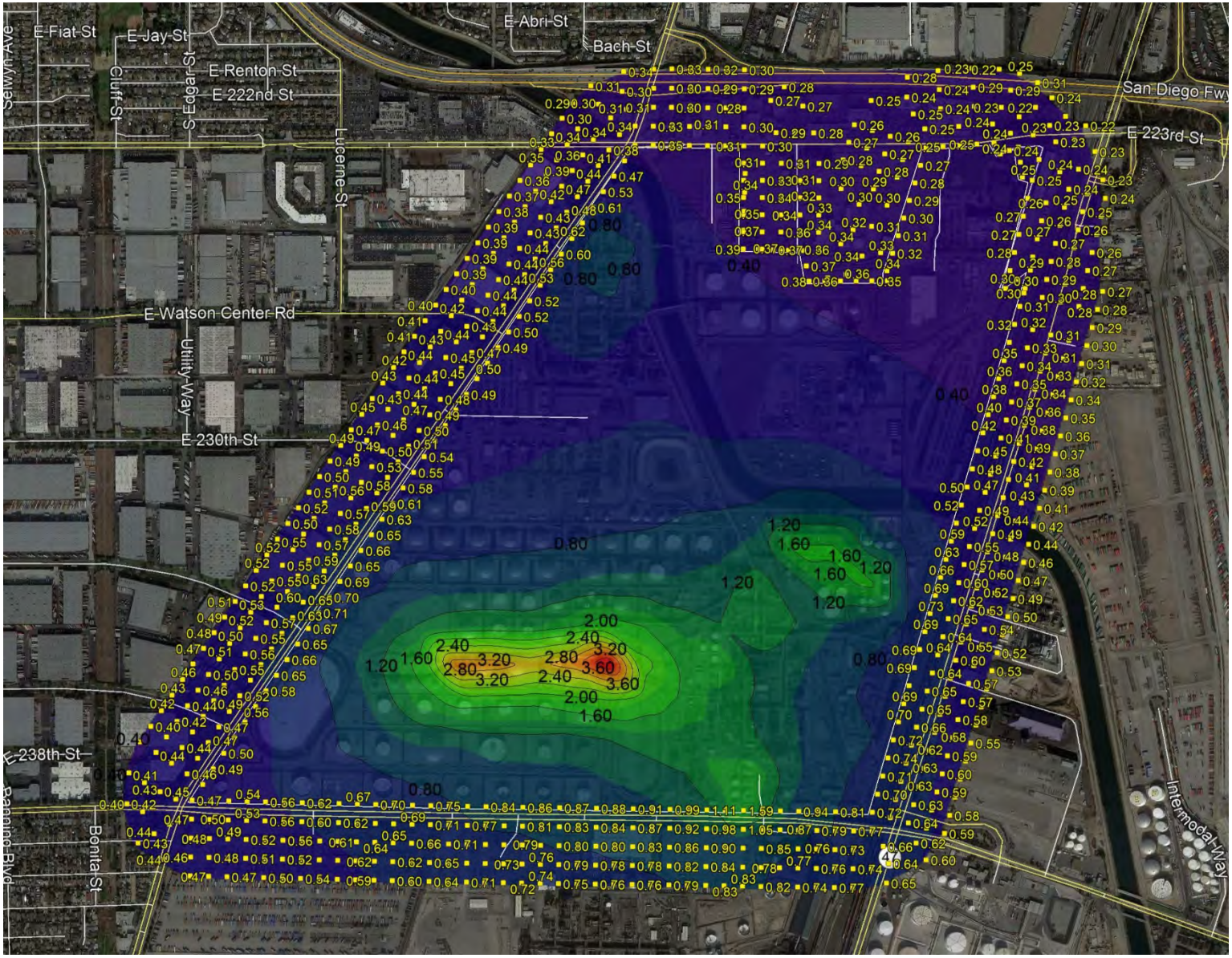
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Hydrogen Cyanide Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



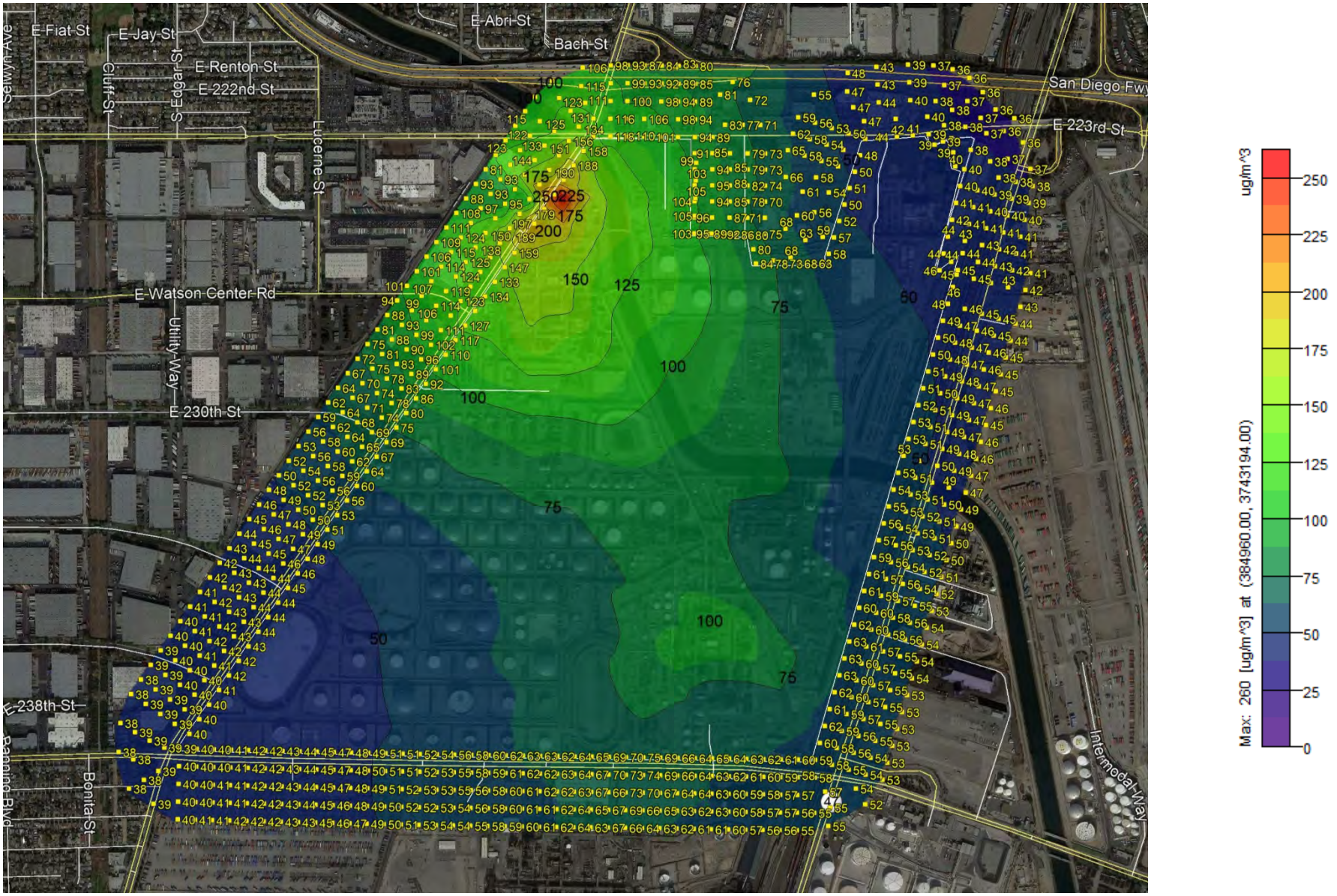
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Hydrogen Sulfide Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



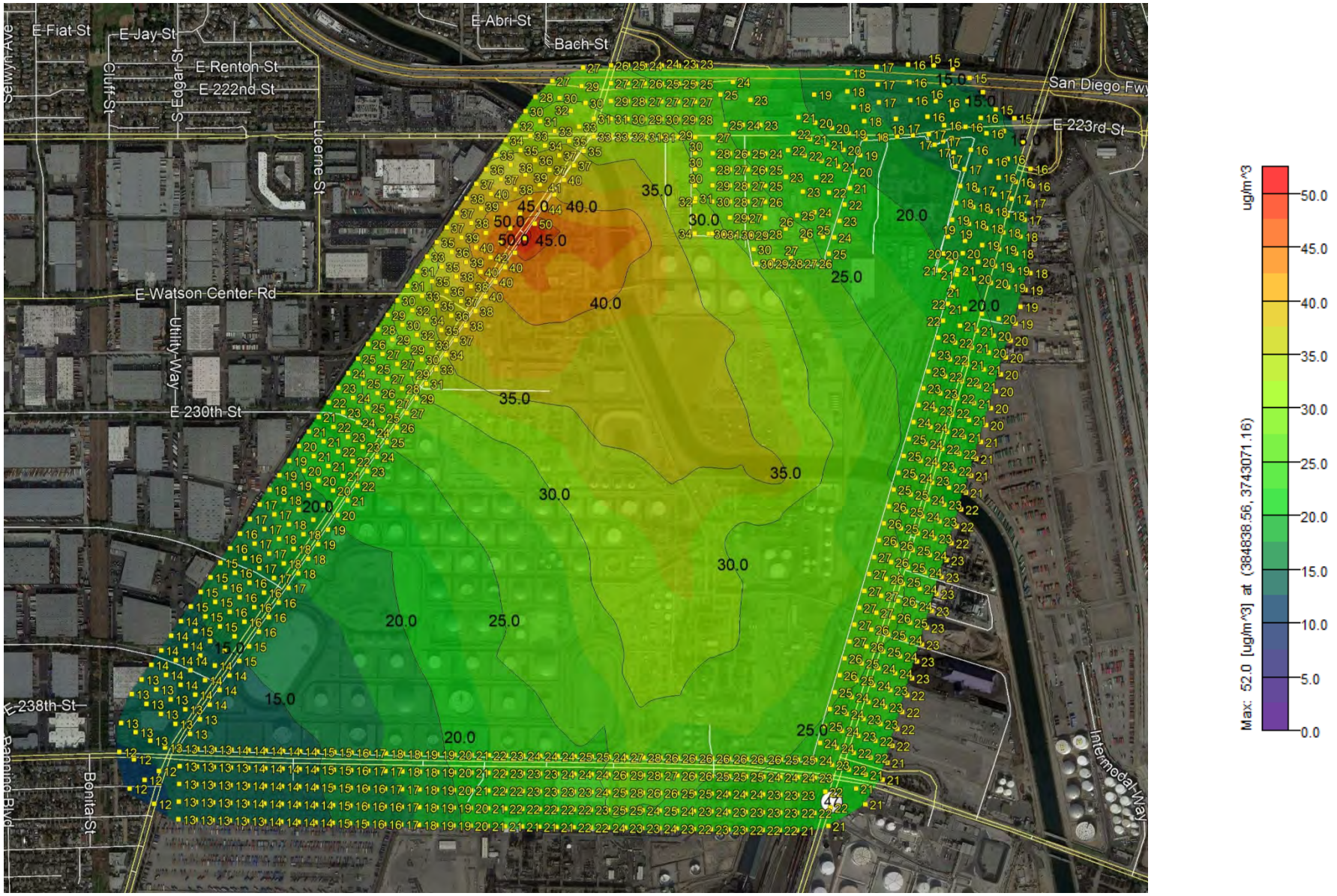
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

NOx Maximum 1-hour Average Concentrations (µg/m3), Tesoro Refinery, Carson



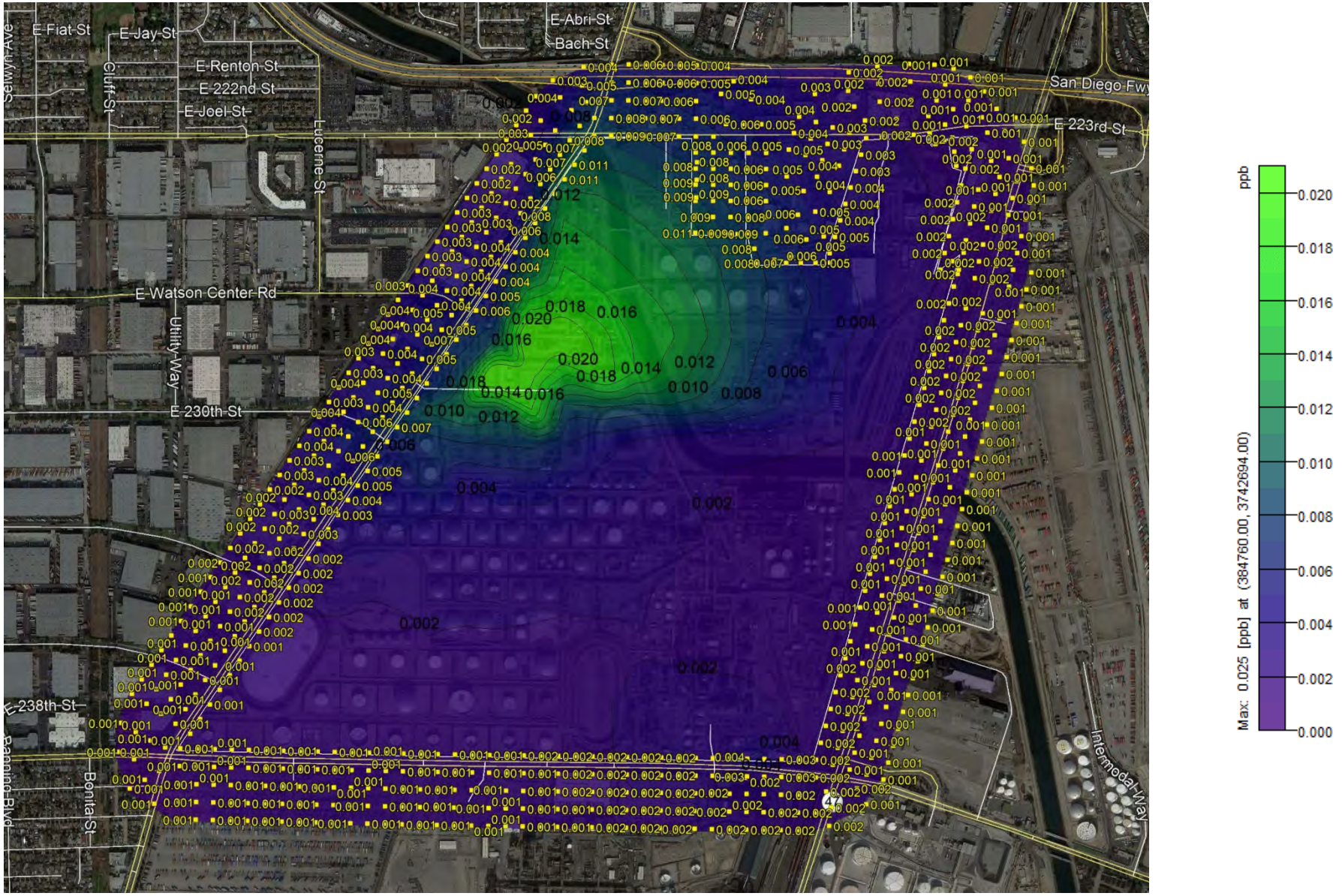
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

SOx Maximum 1-hour Average Concentrations (µg/m3), Tesoro Refinery, Carson



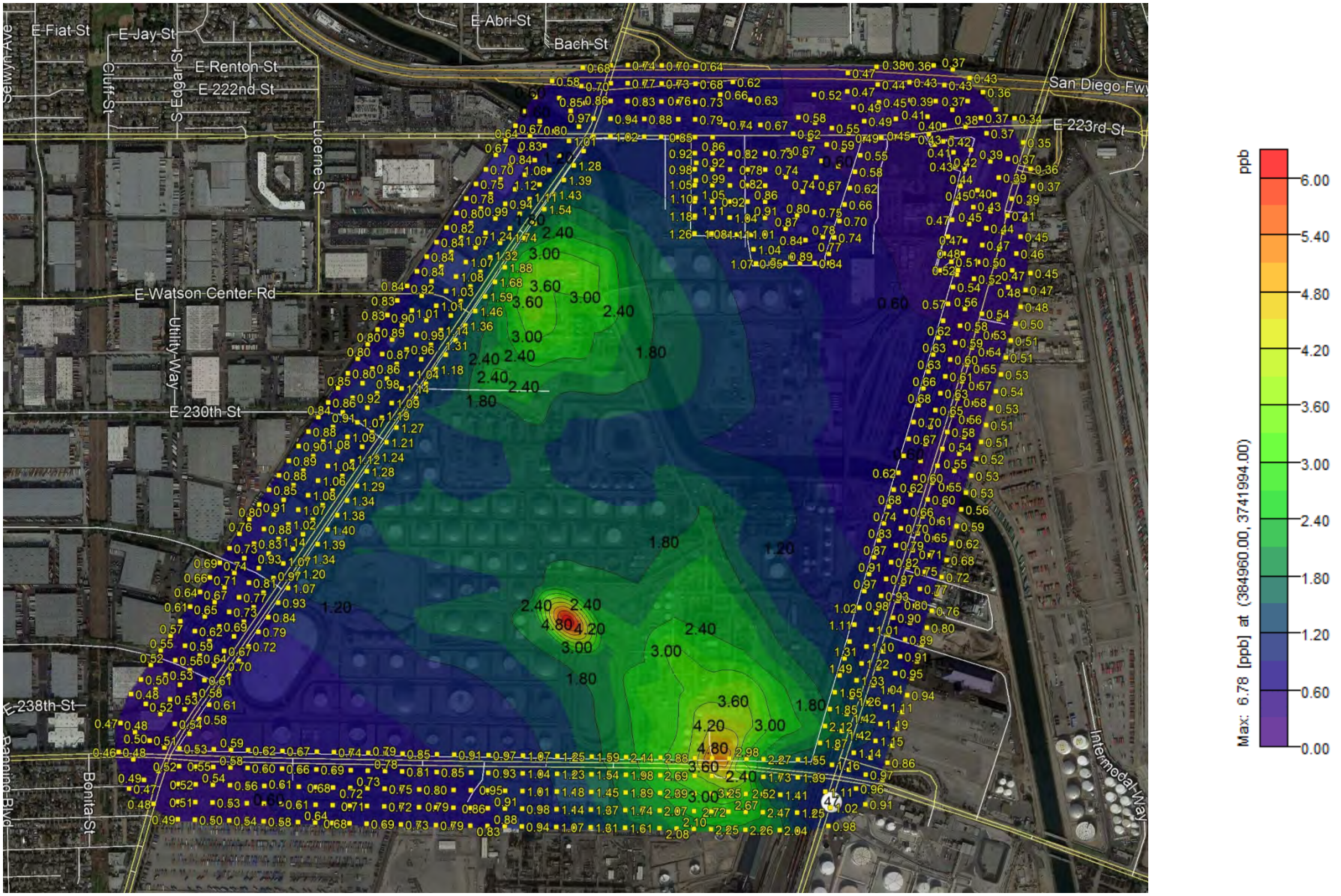
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Styrene Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



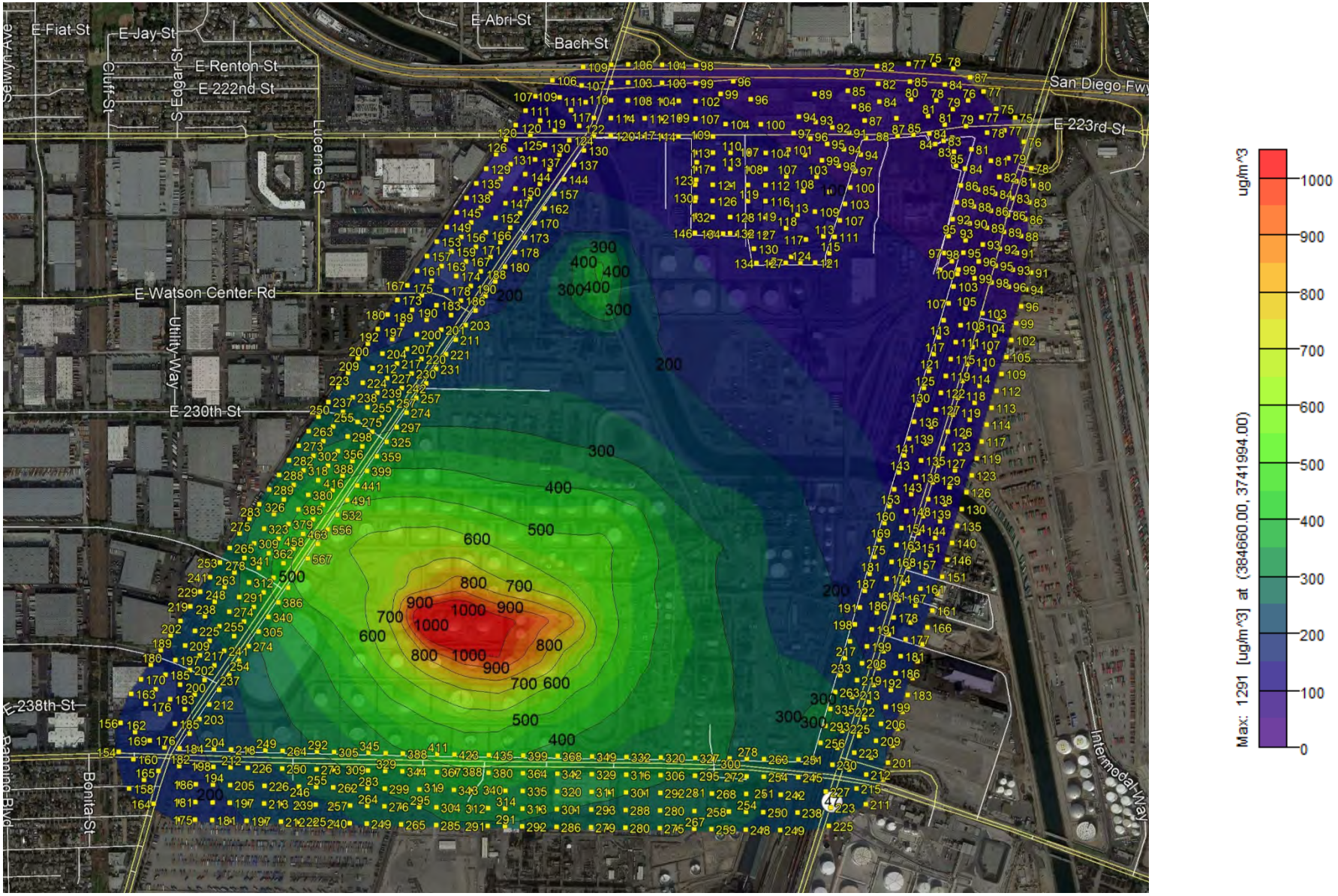
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Toluene Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



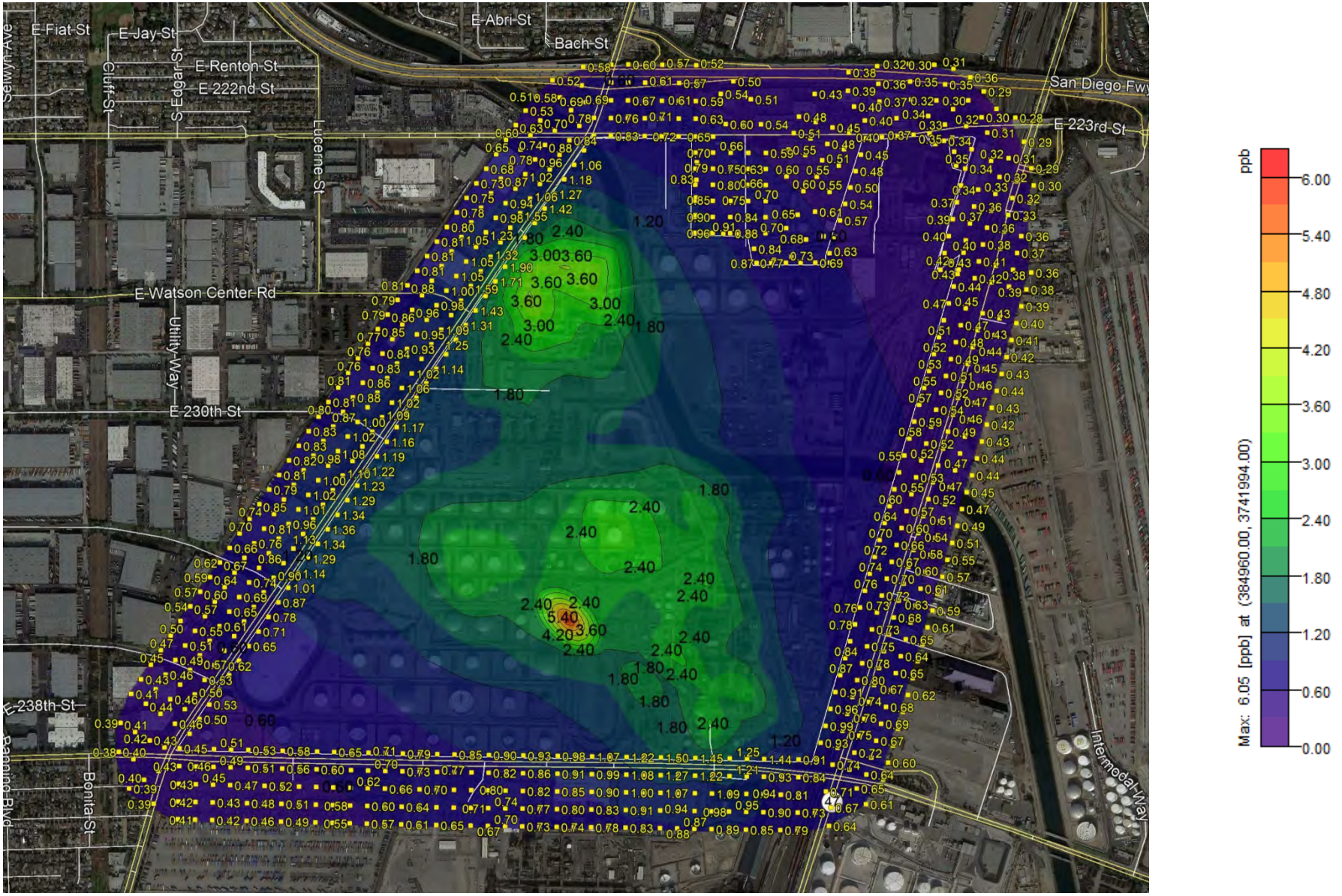
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

VOC Maximum 1-hour Average Concentrations (µg/m3), Tesoro Refinery, Carson



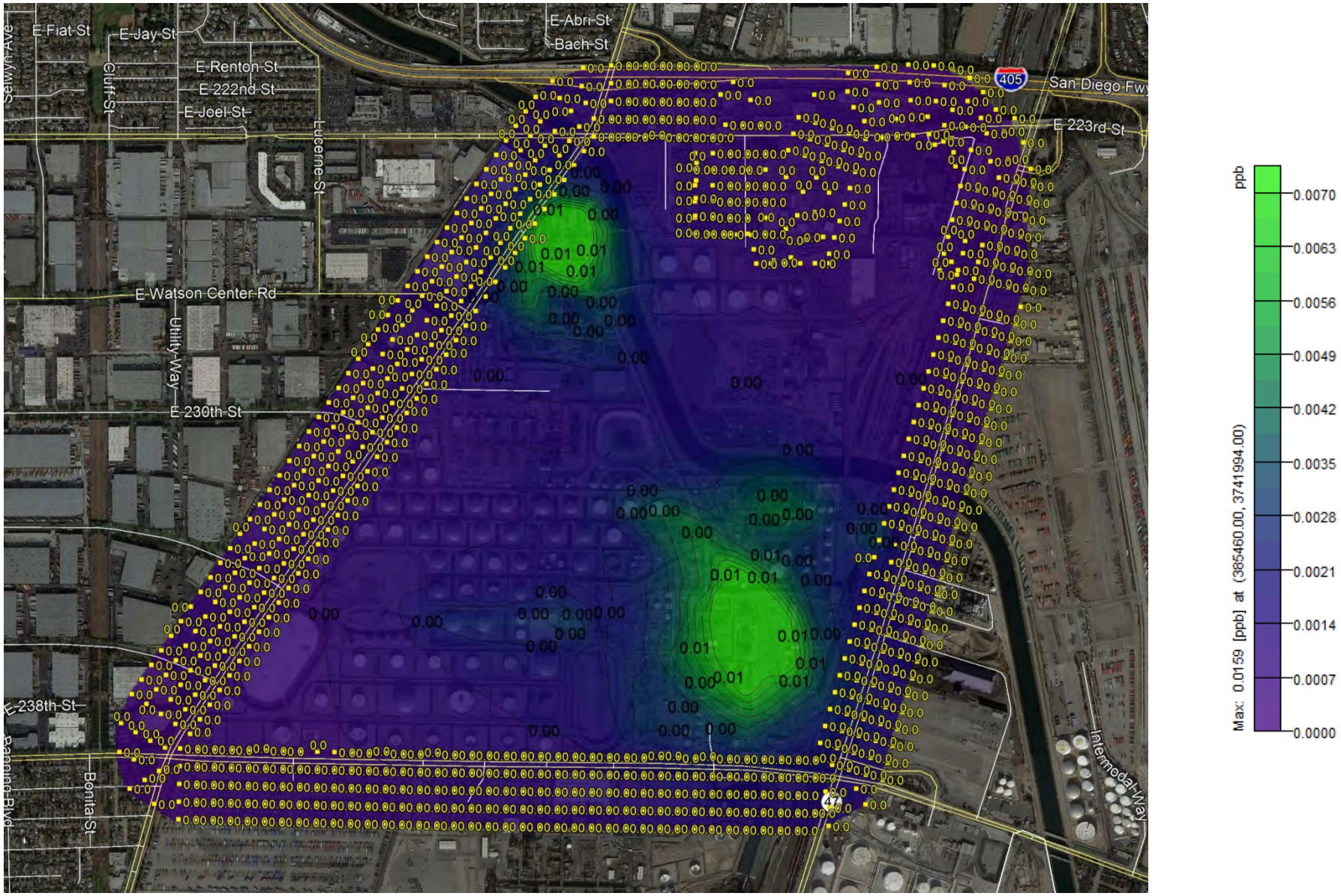
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Xylenes Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Carson



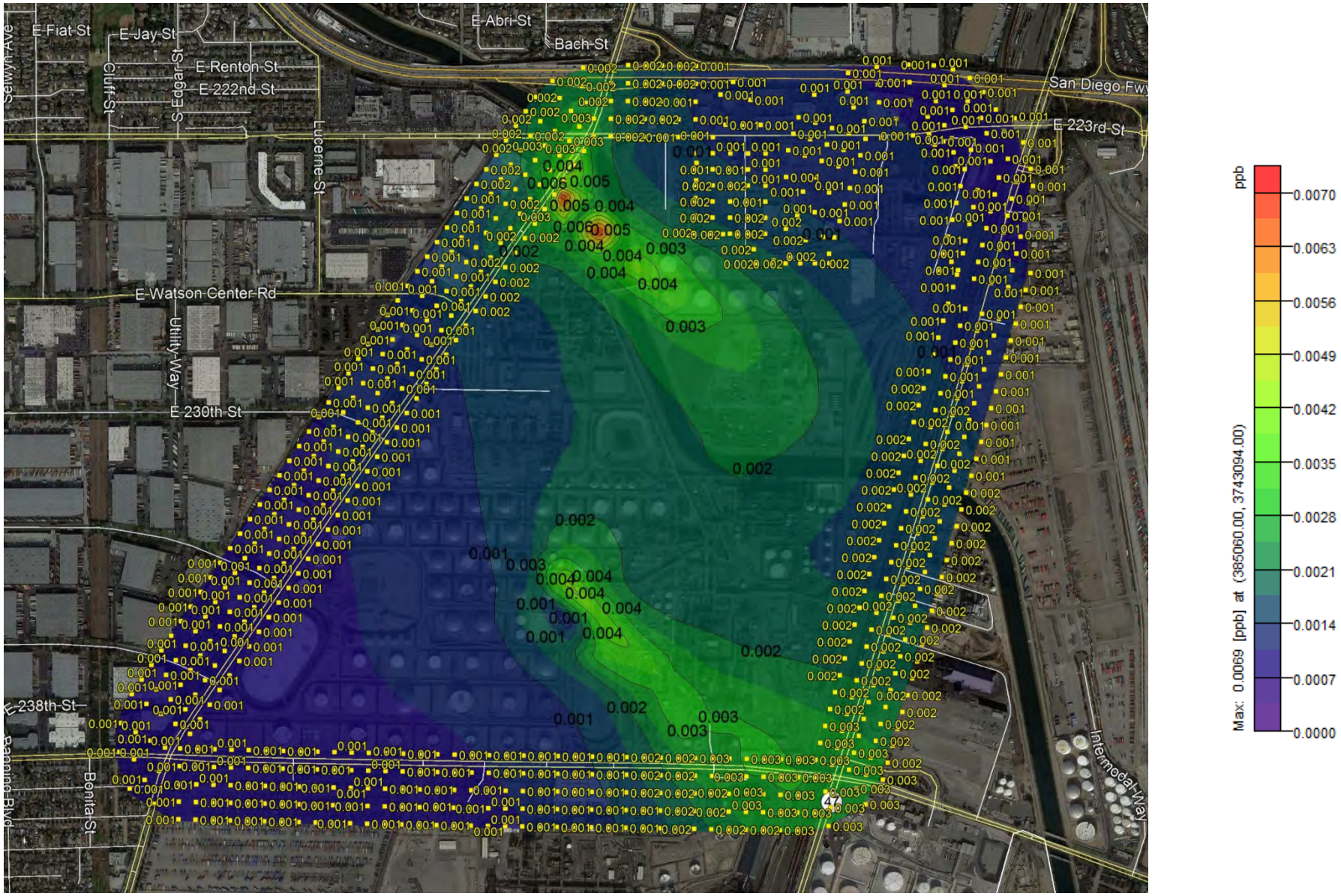
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

1,3-Butadiene 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



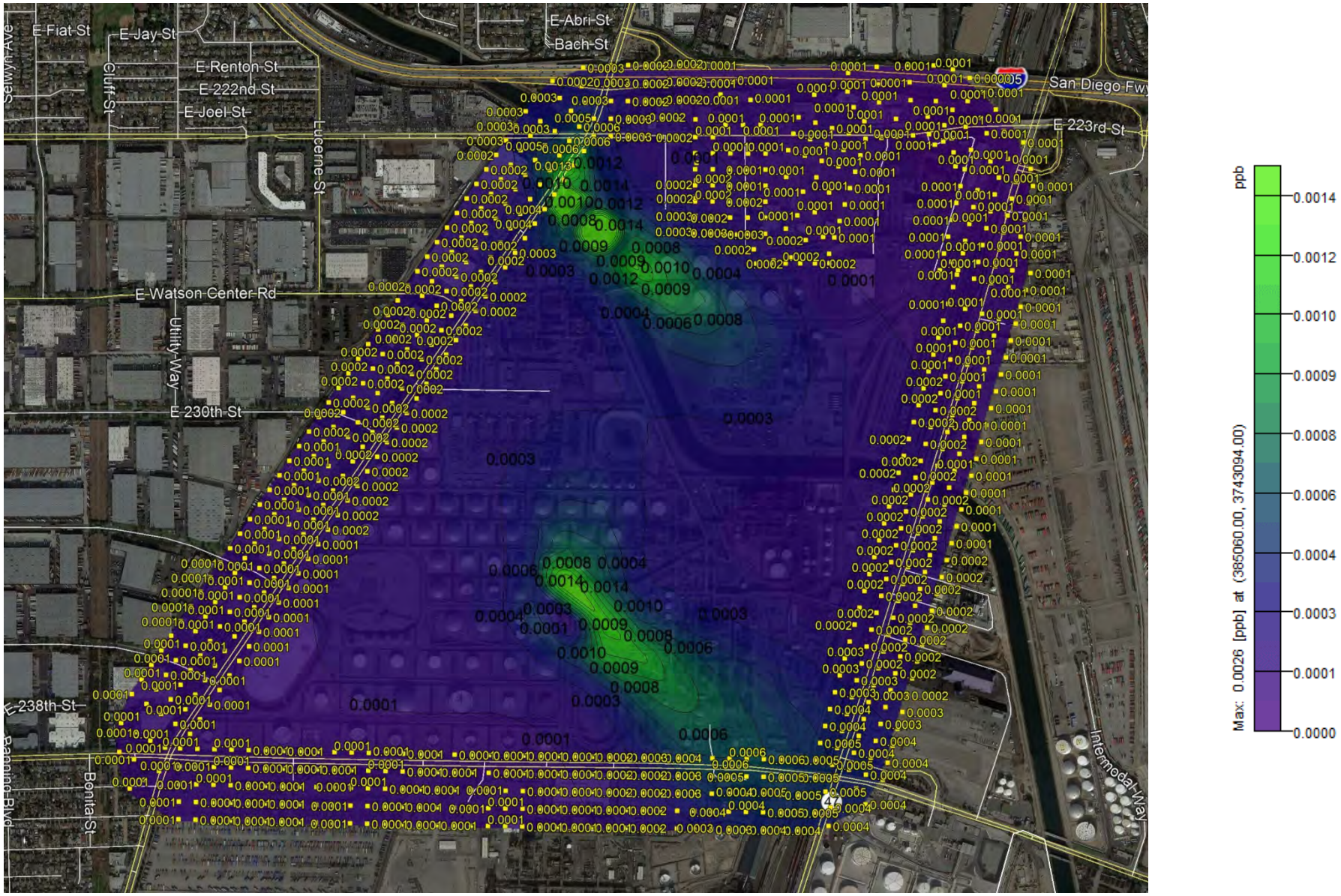
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Acetaldehyde 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



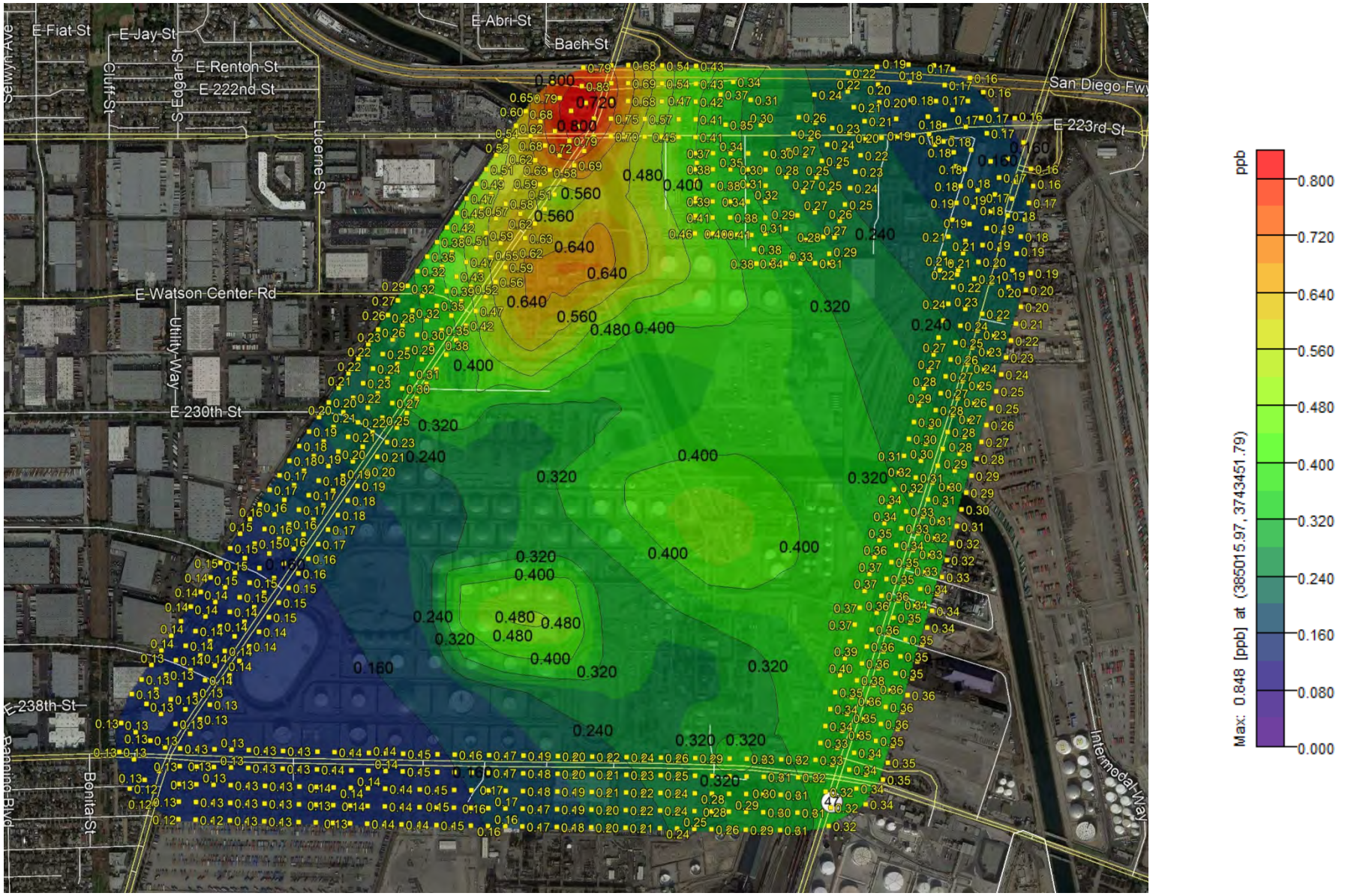
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Acrolein 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



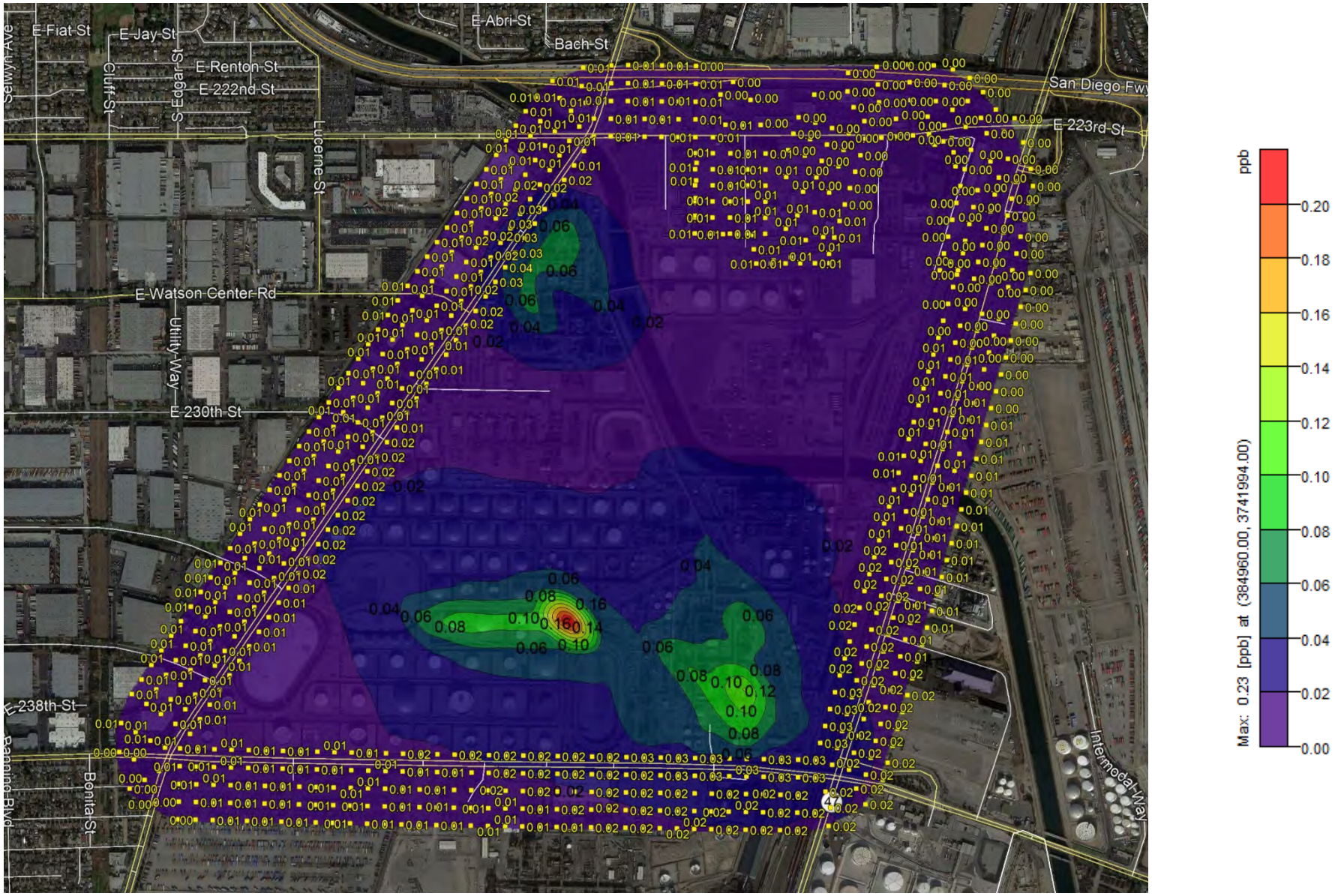
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Ammonia 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



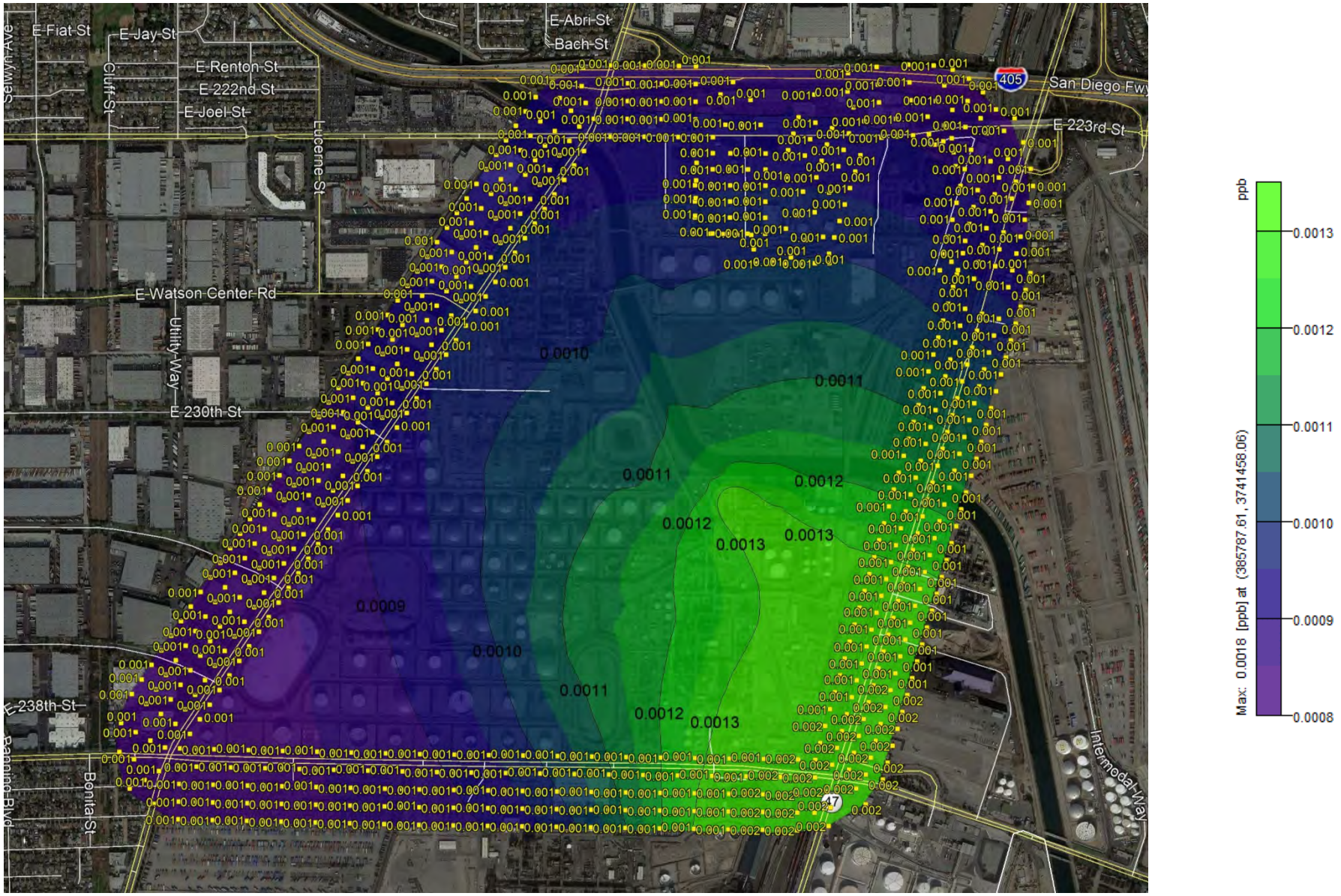
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Benzene 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



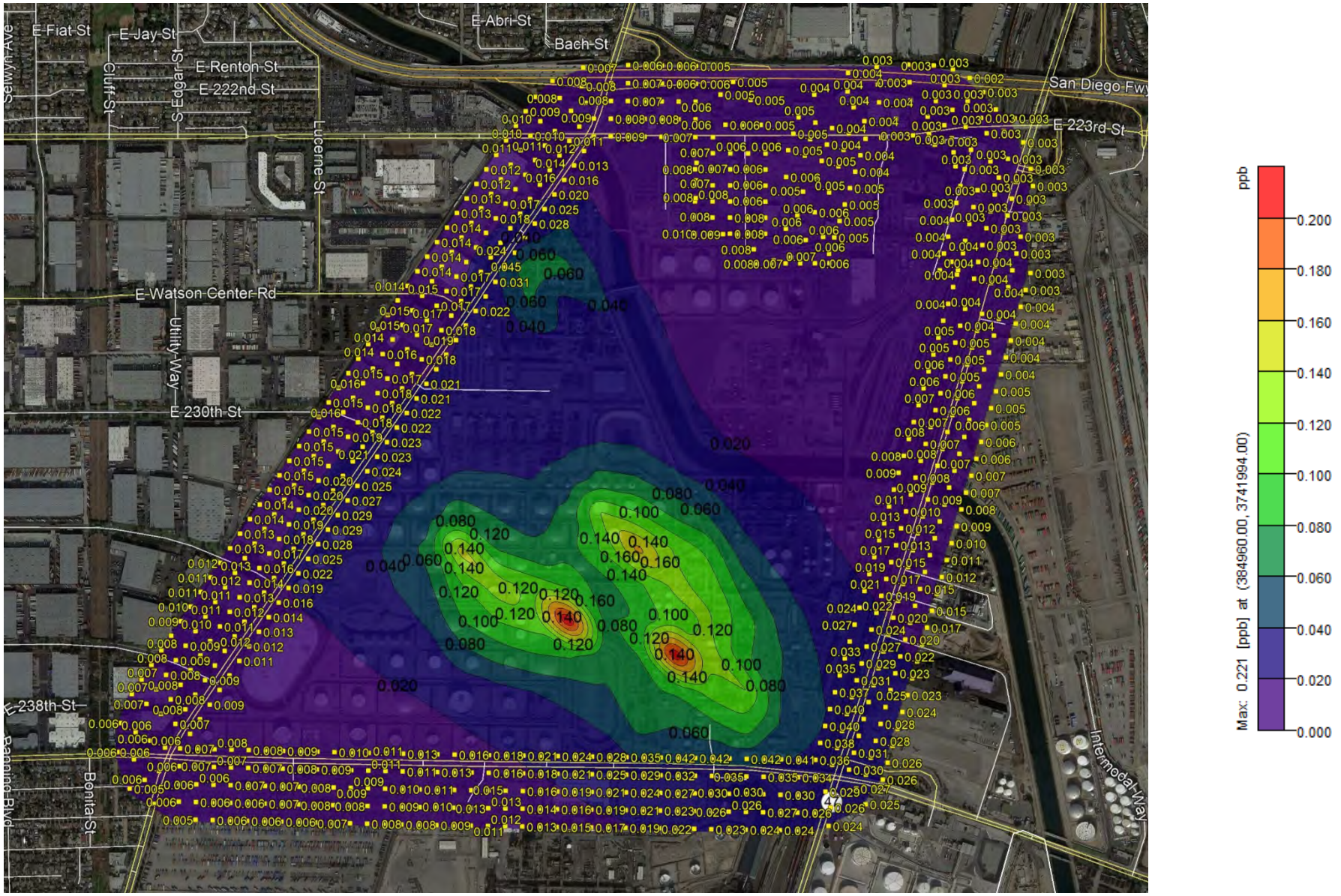
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Carbonyl Sulfide 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



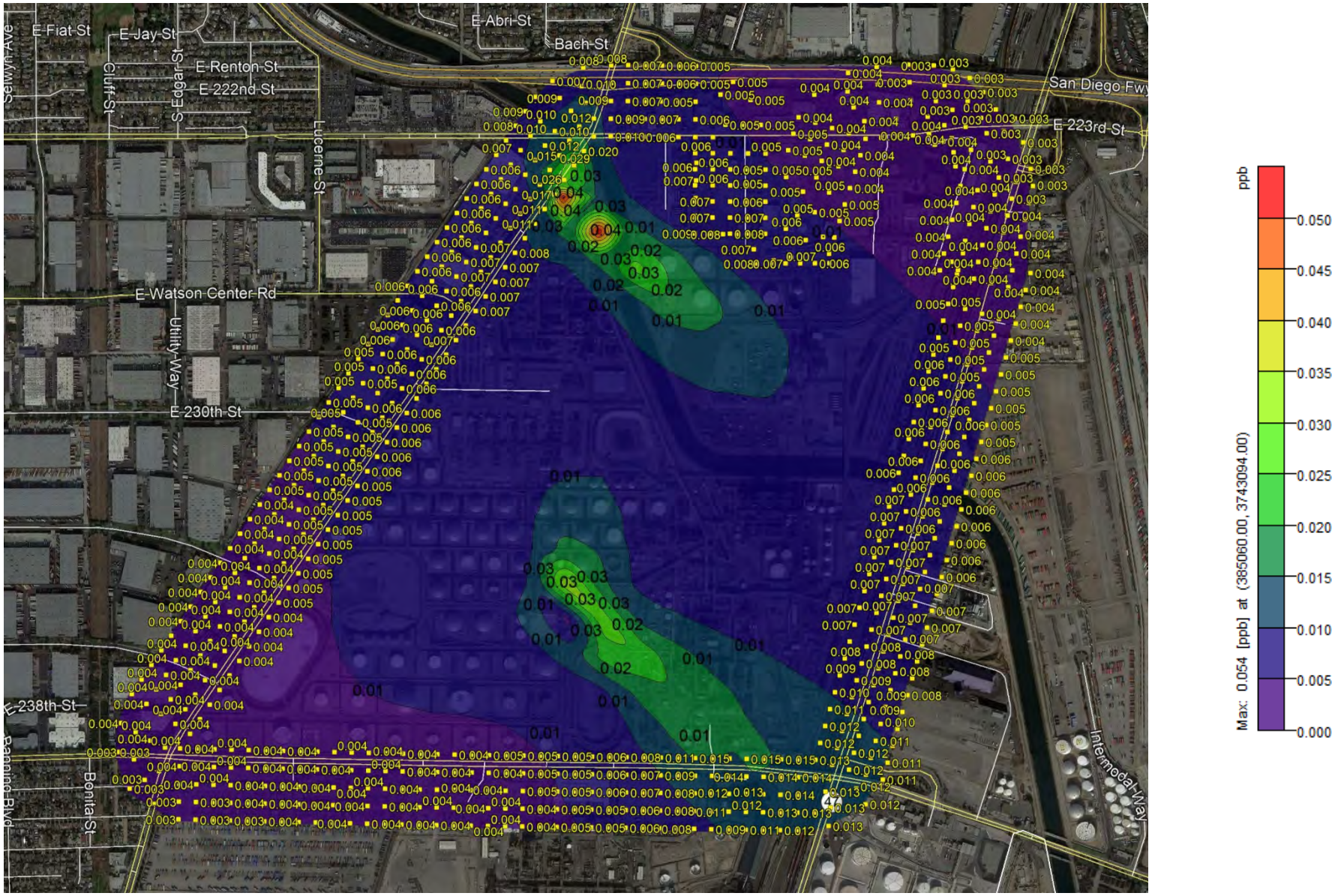
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Ethylbenzene 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



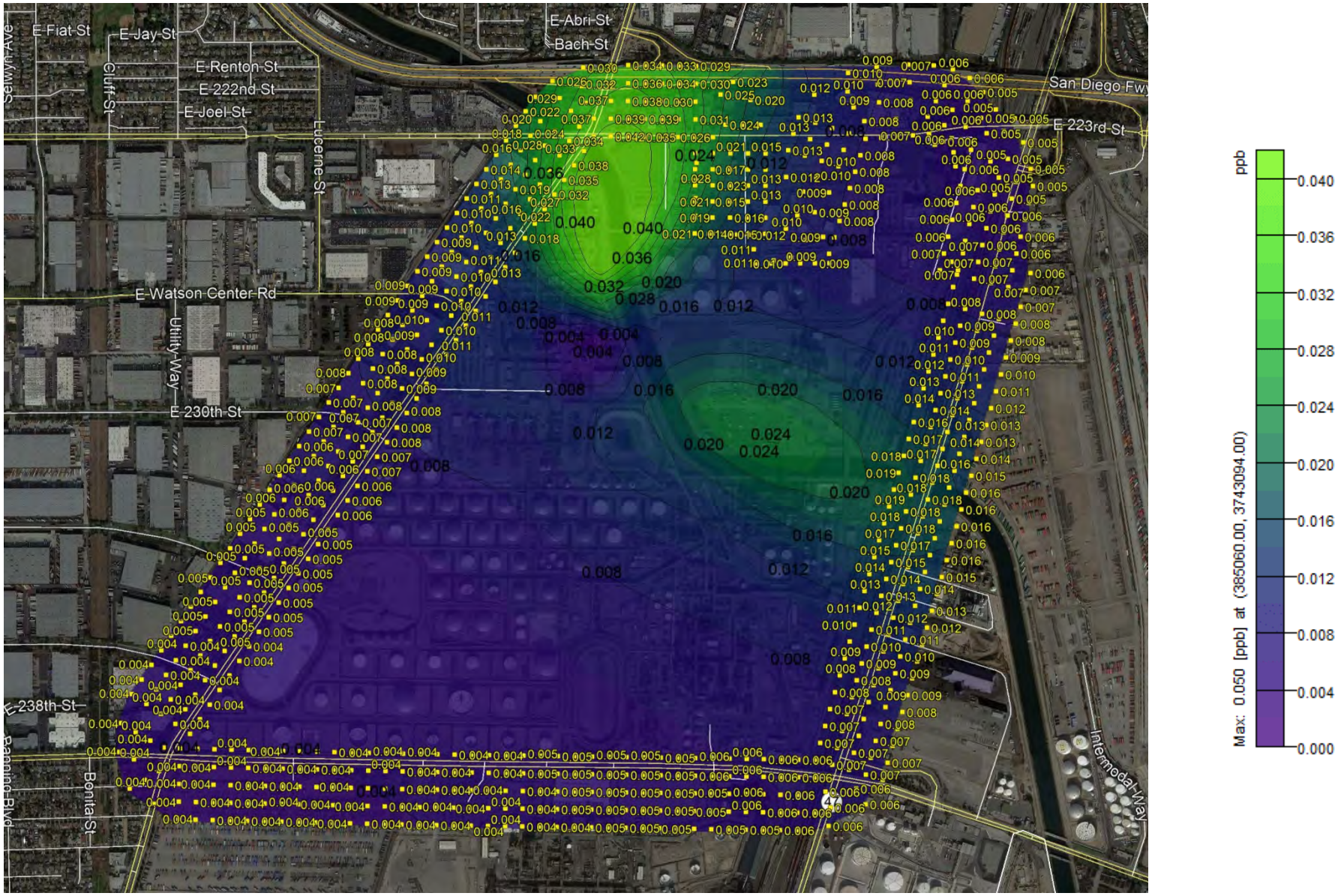
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Formaldehyde 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



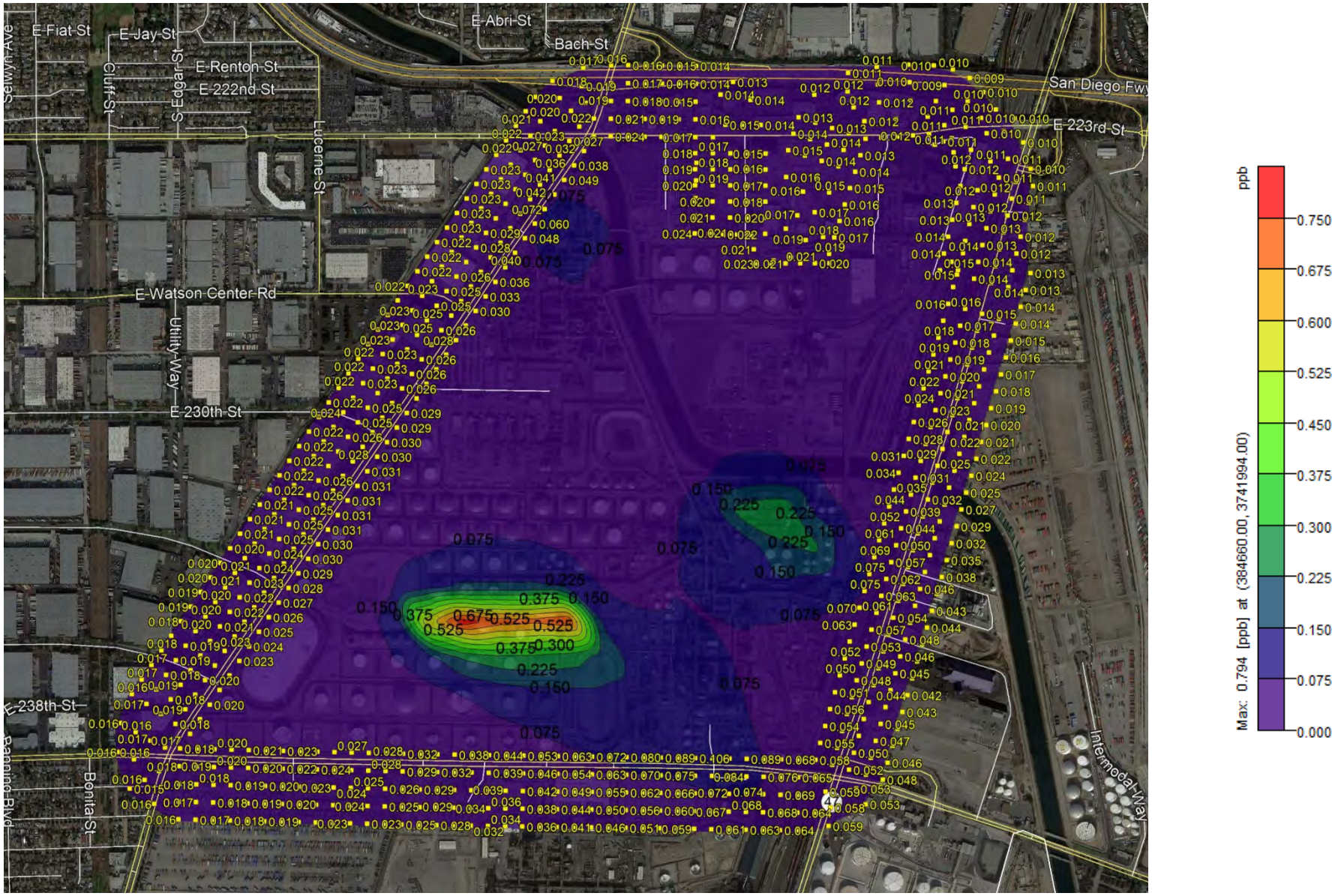
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Hydrogen Cyanide 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



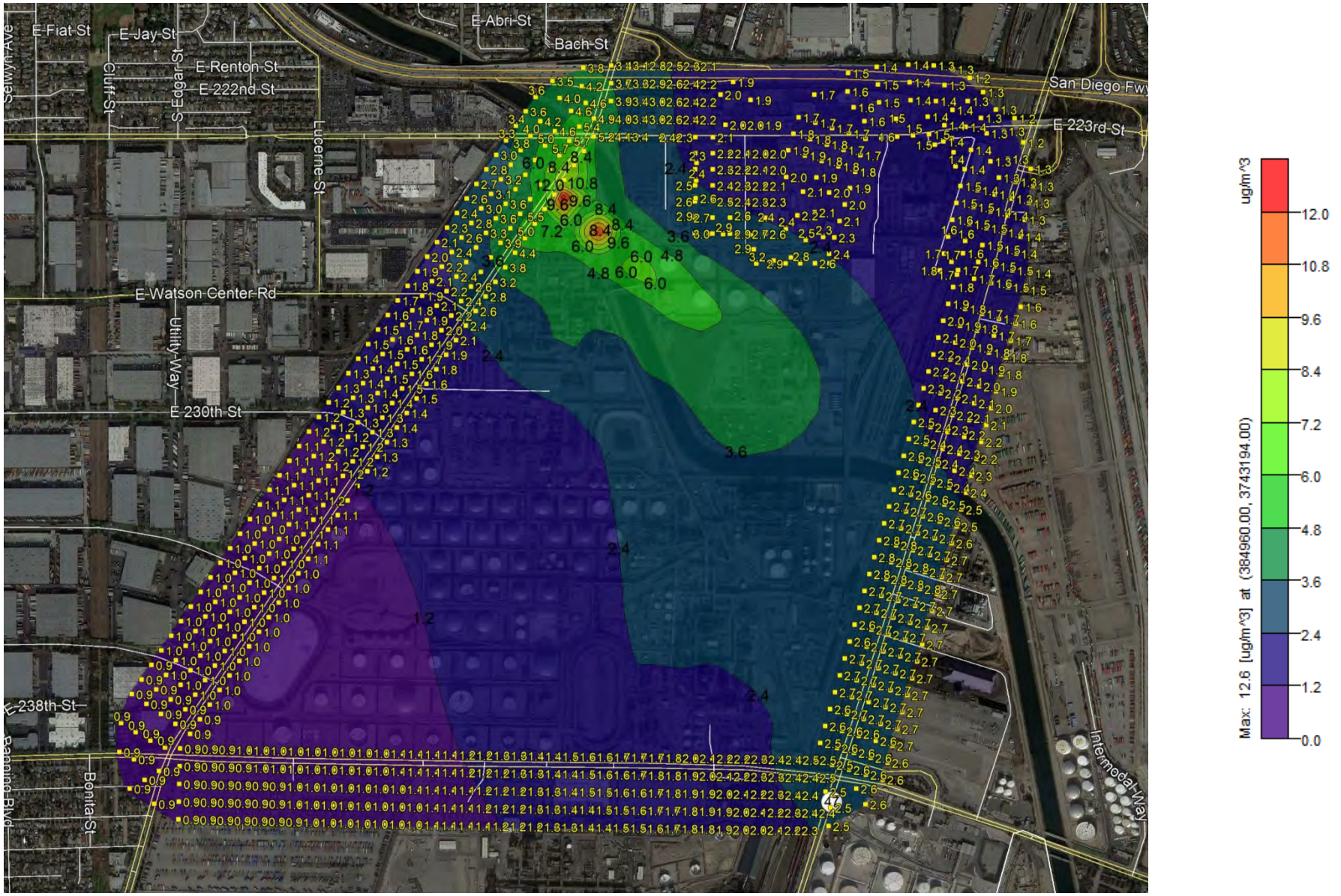
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Hydrogen Sulfide 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



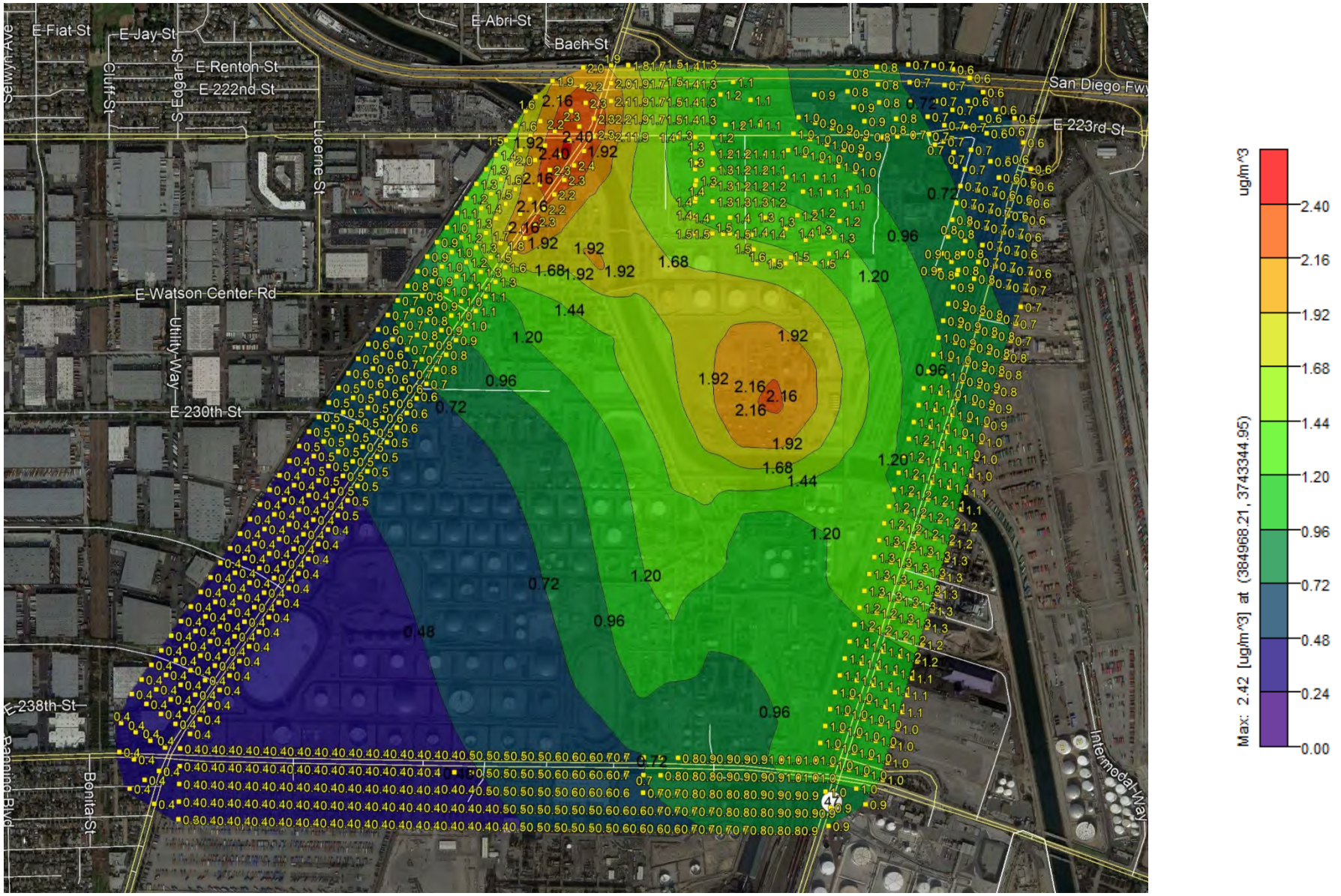
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

NOx 5-Year Average Concentrations (µg/m3), Tesoro Refinery, Carson



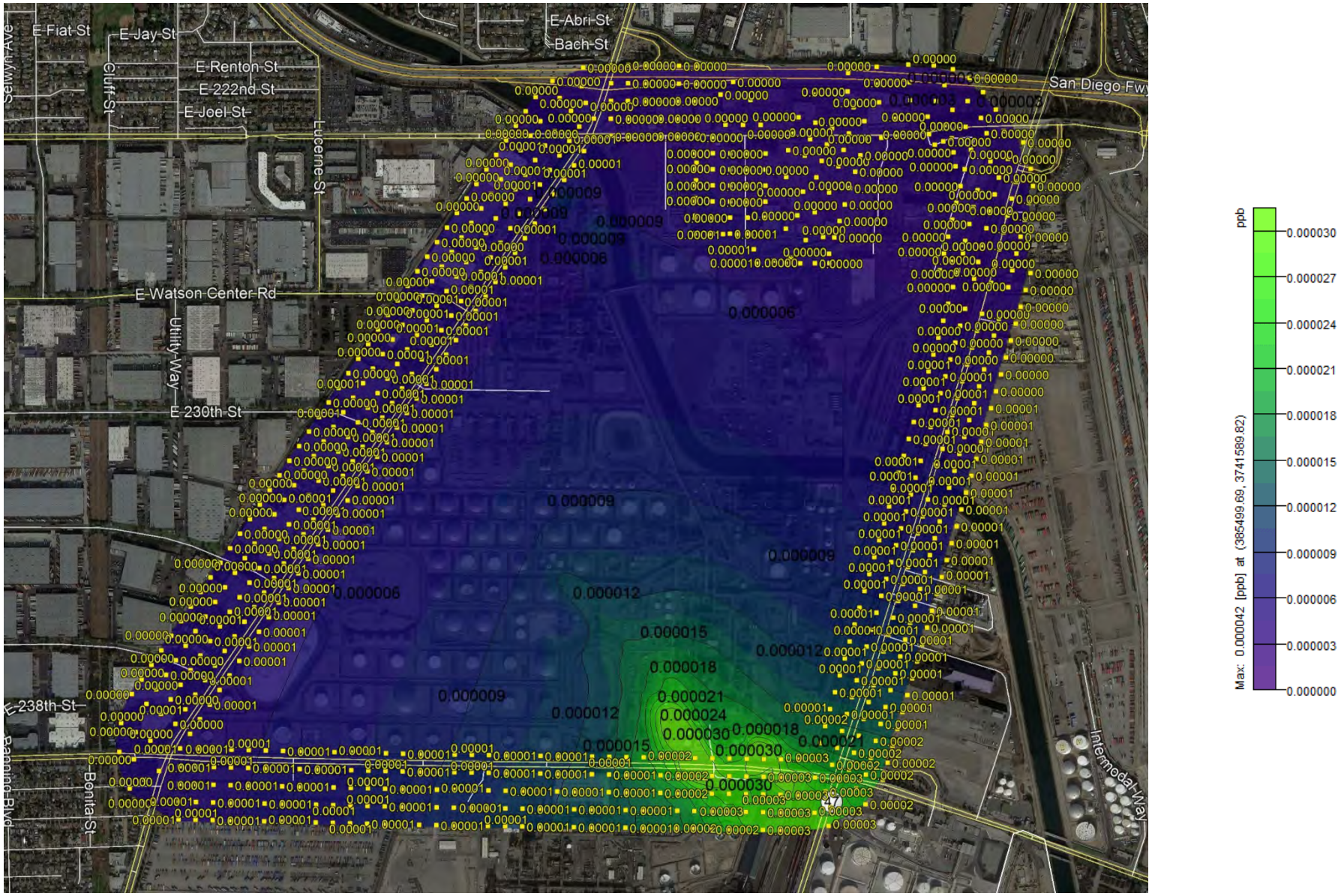
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

SOx 5-Year Average Concentrations (µg/m3), Tesoro Refinery, Carson



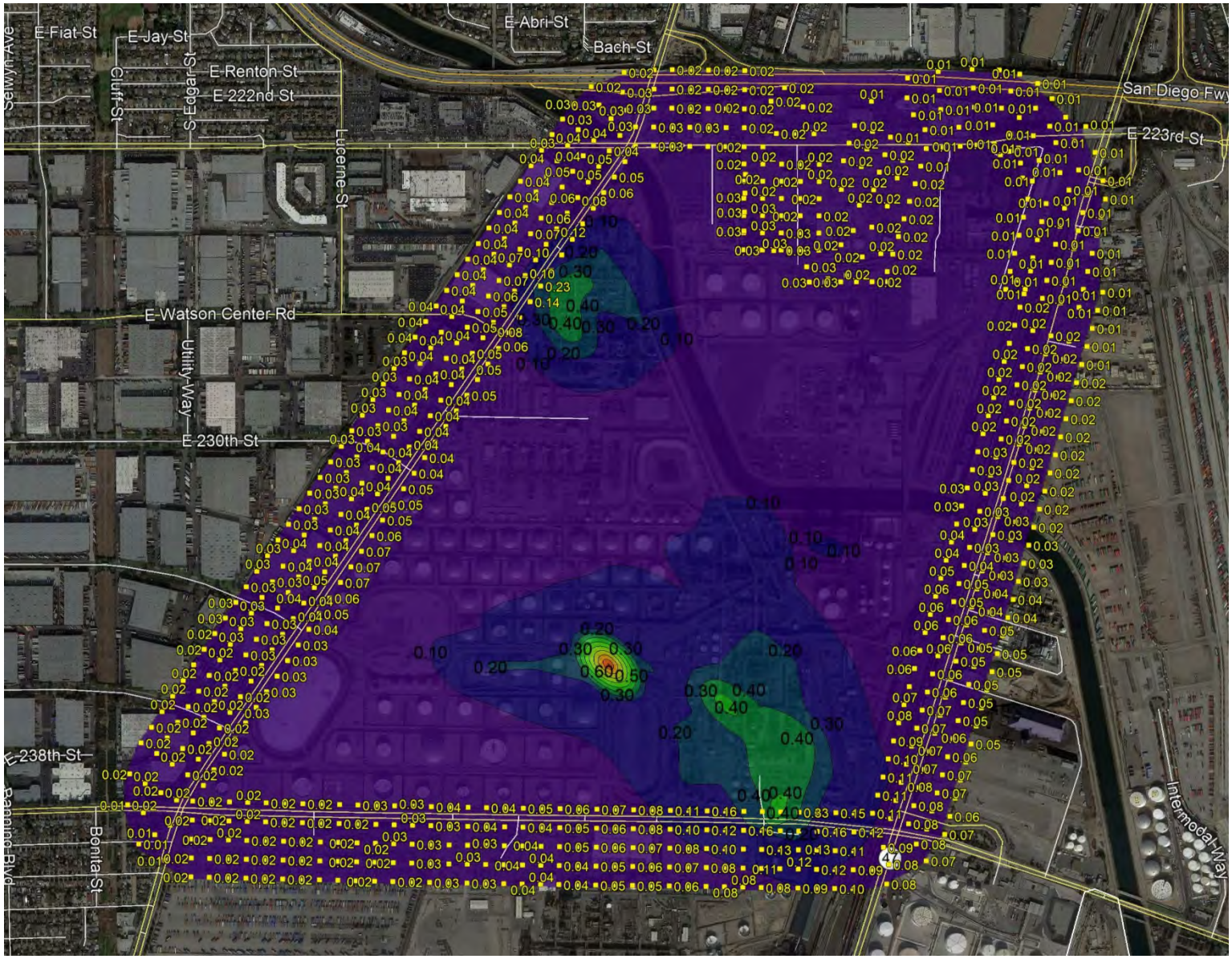
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Styrene 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



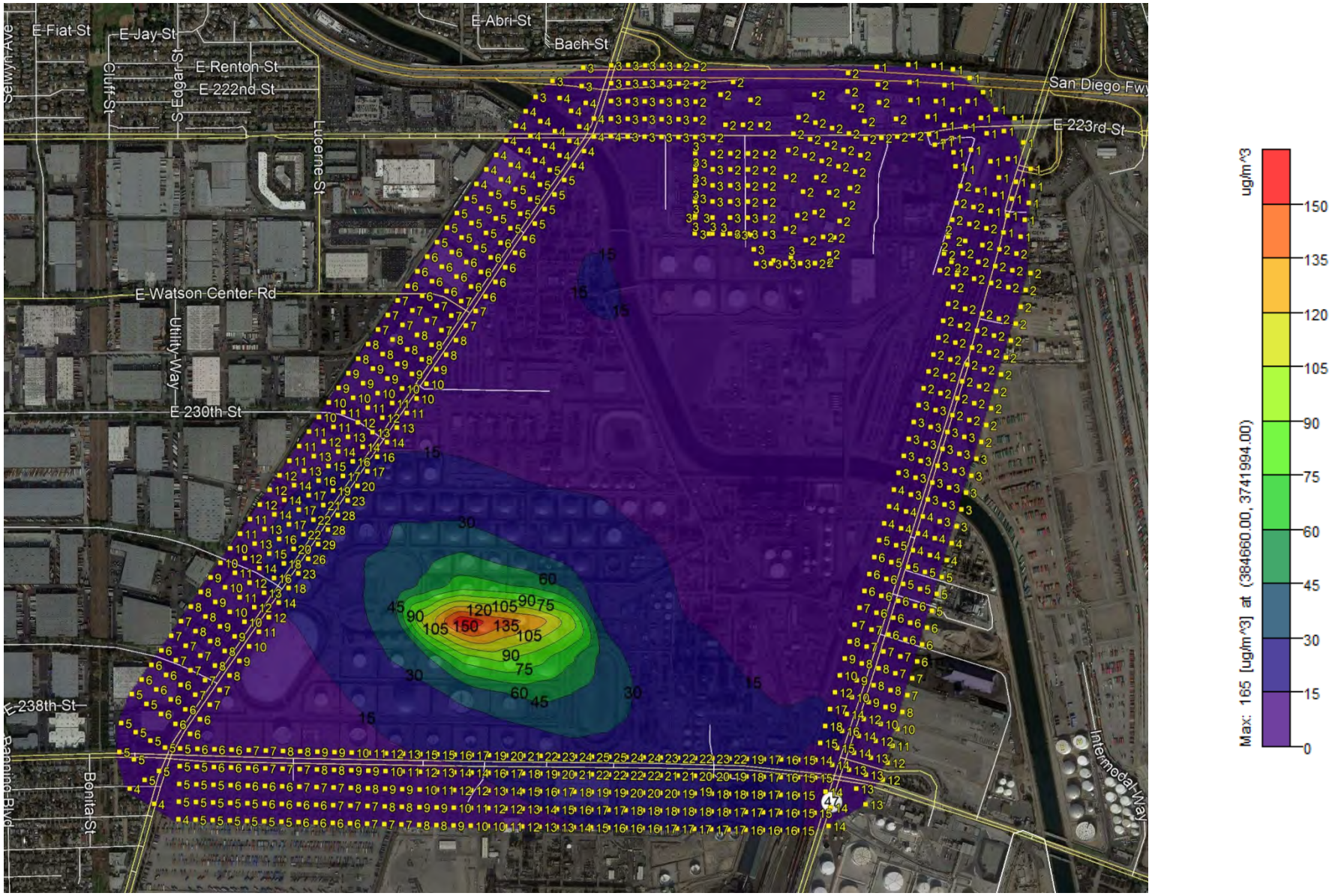
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Toluene 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



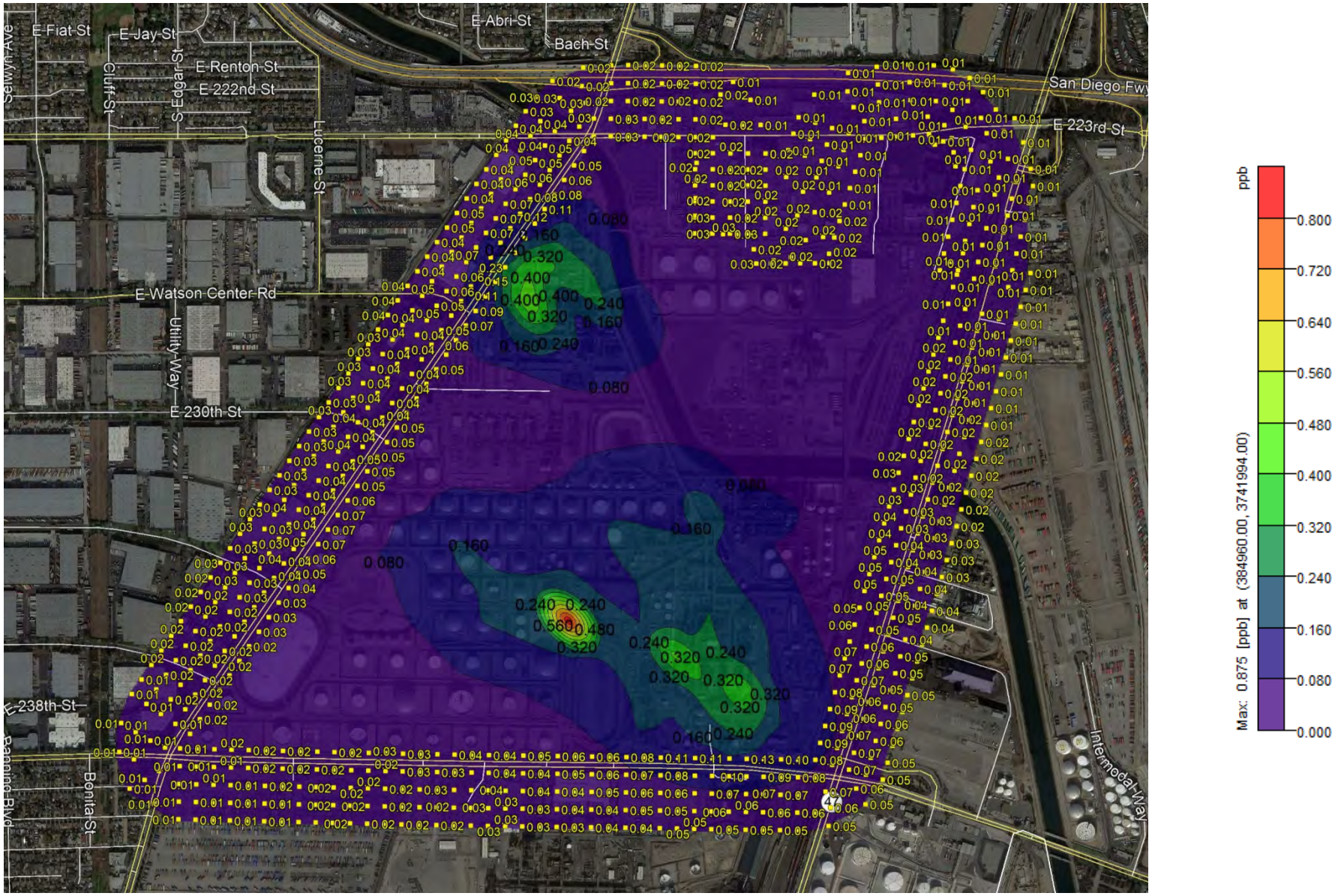
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

VOC 5-Year Average Concentrations (µg/m3), Tesoro Refinery, Carson



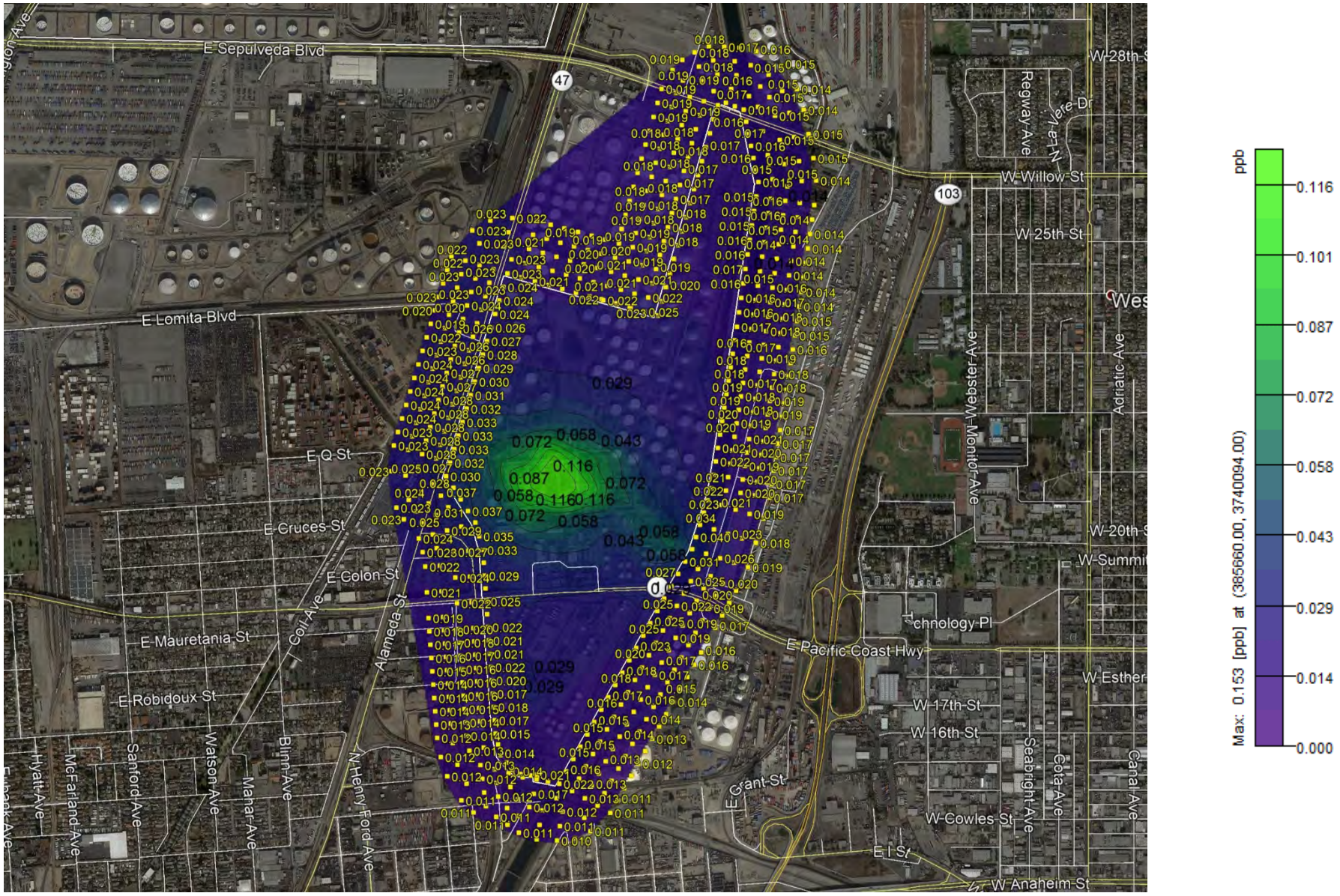
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Xylenes 5-Year Average Concentrations (ppb), Tesoro Refinery, Carson



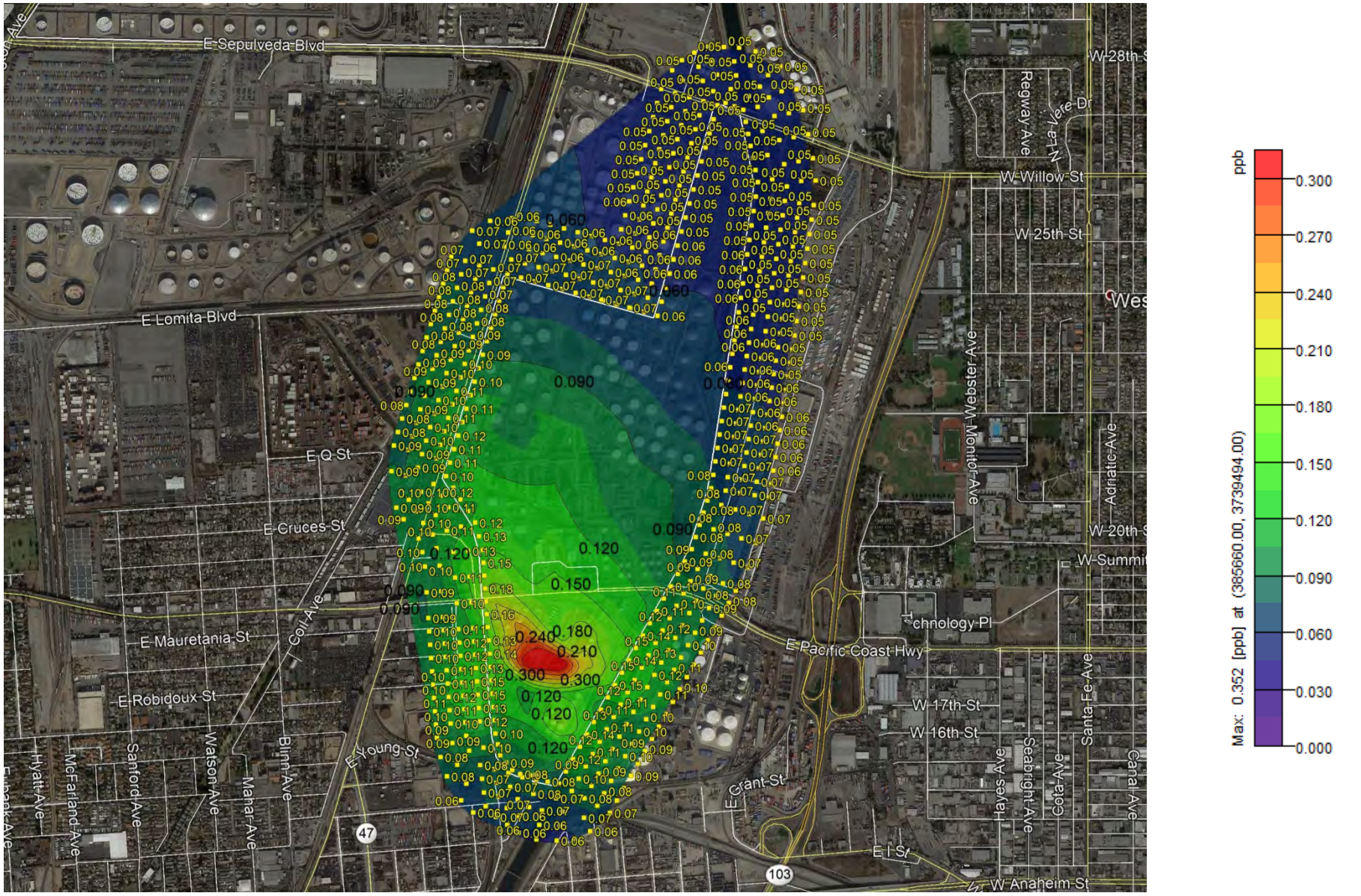
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

1,3-Butadiene Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



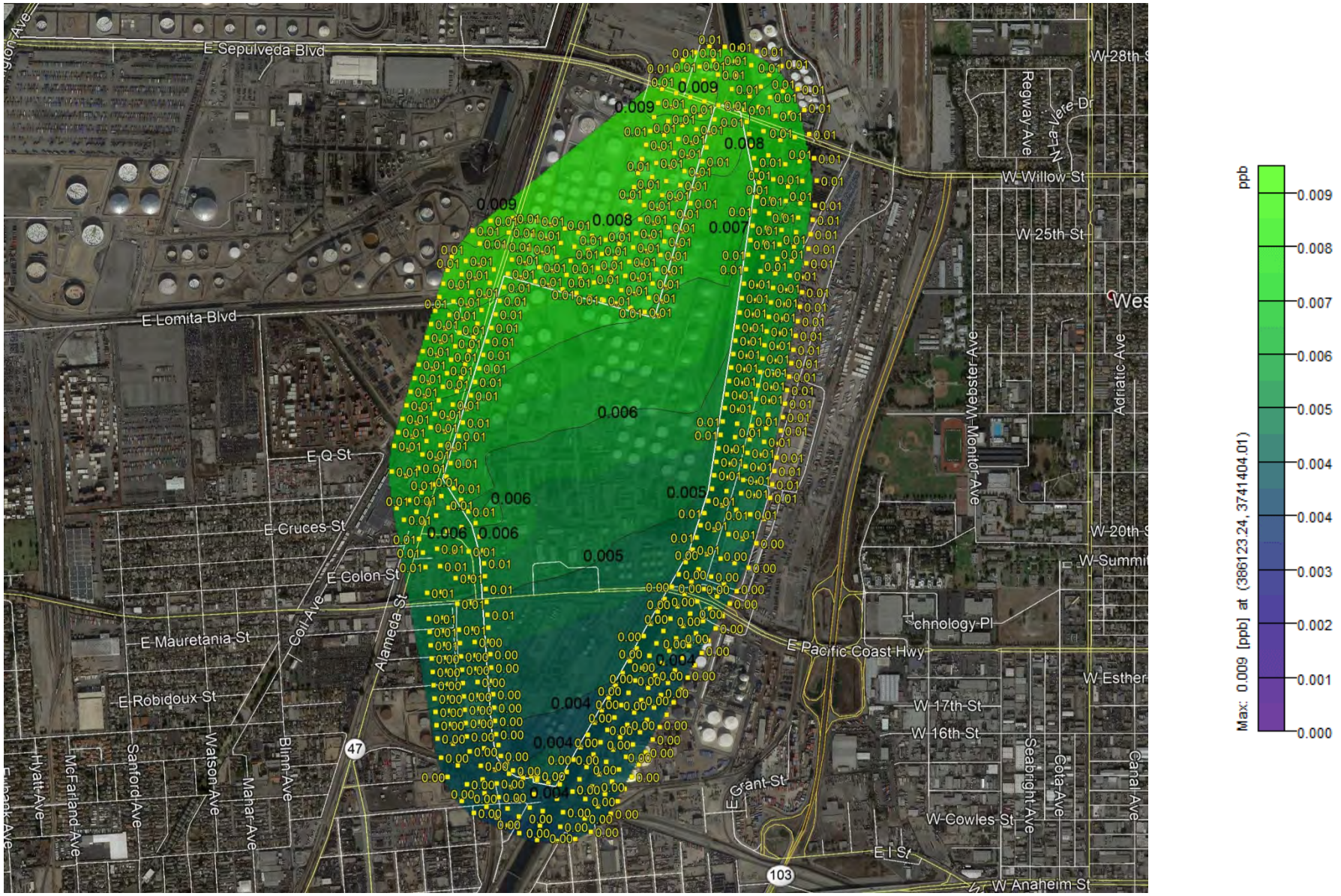
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Acetaldehyde Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



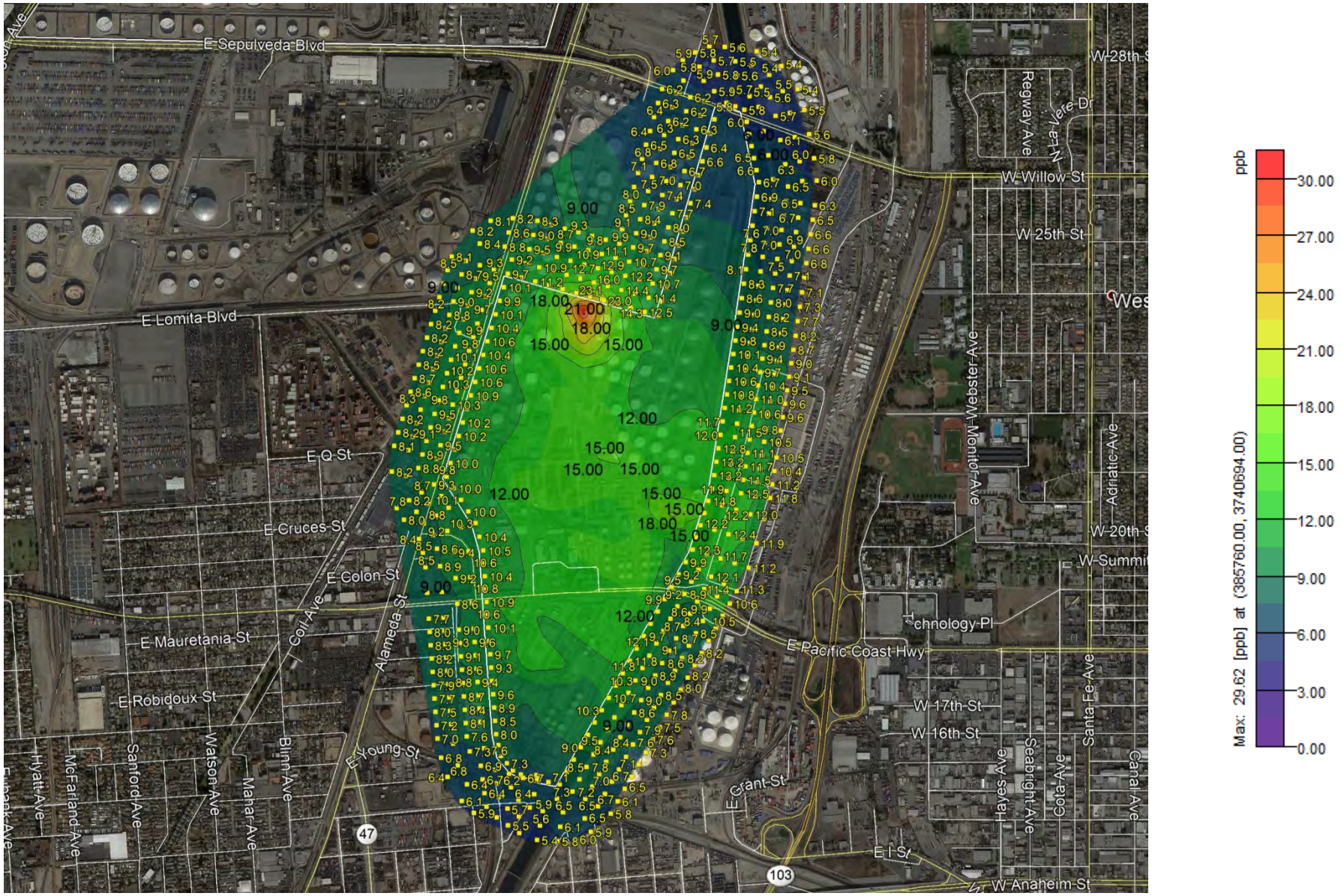
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Acrolein Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



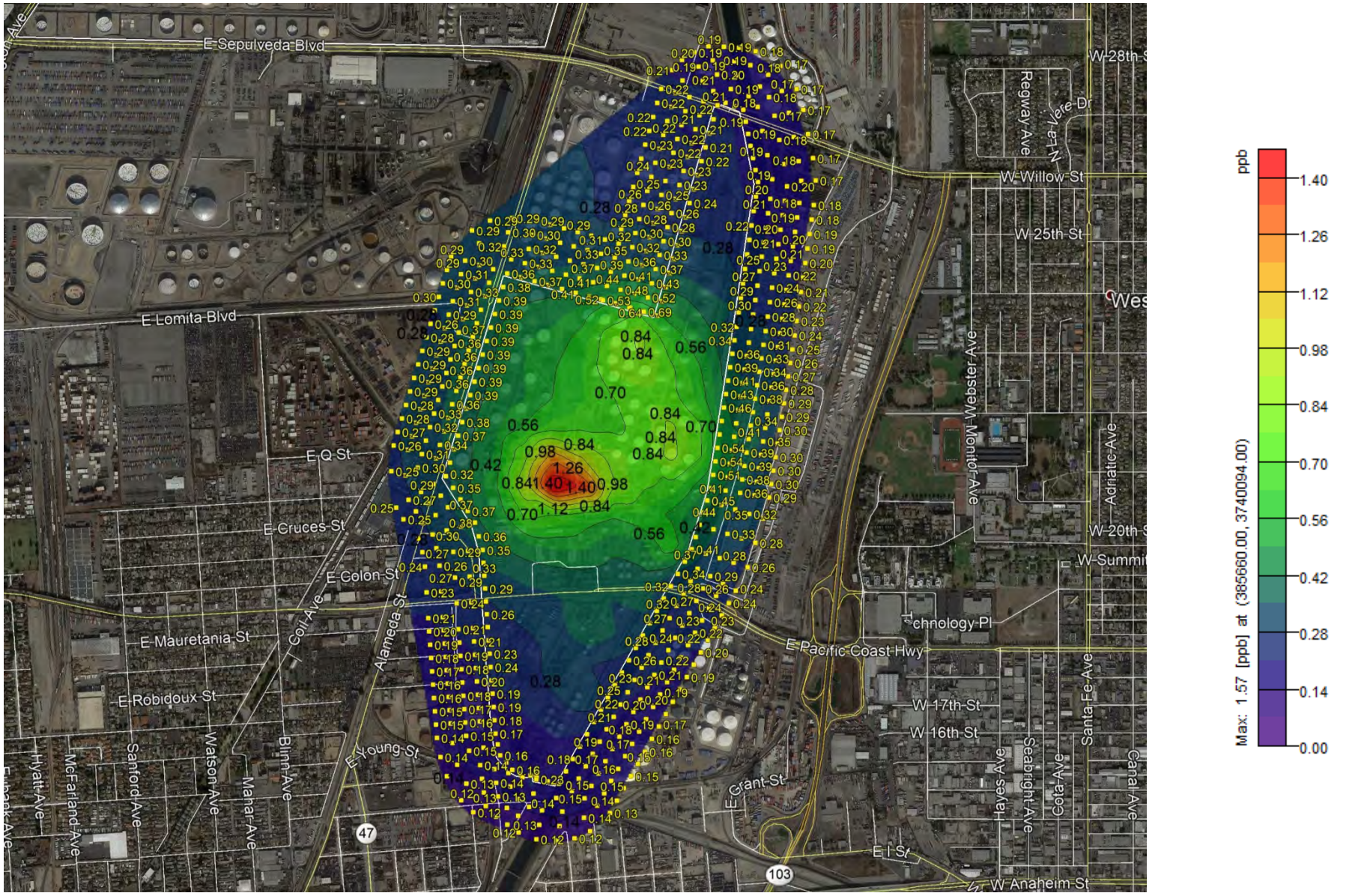
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Ammonia Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



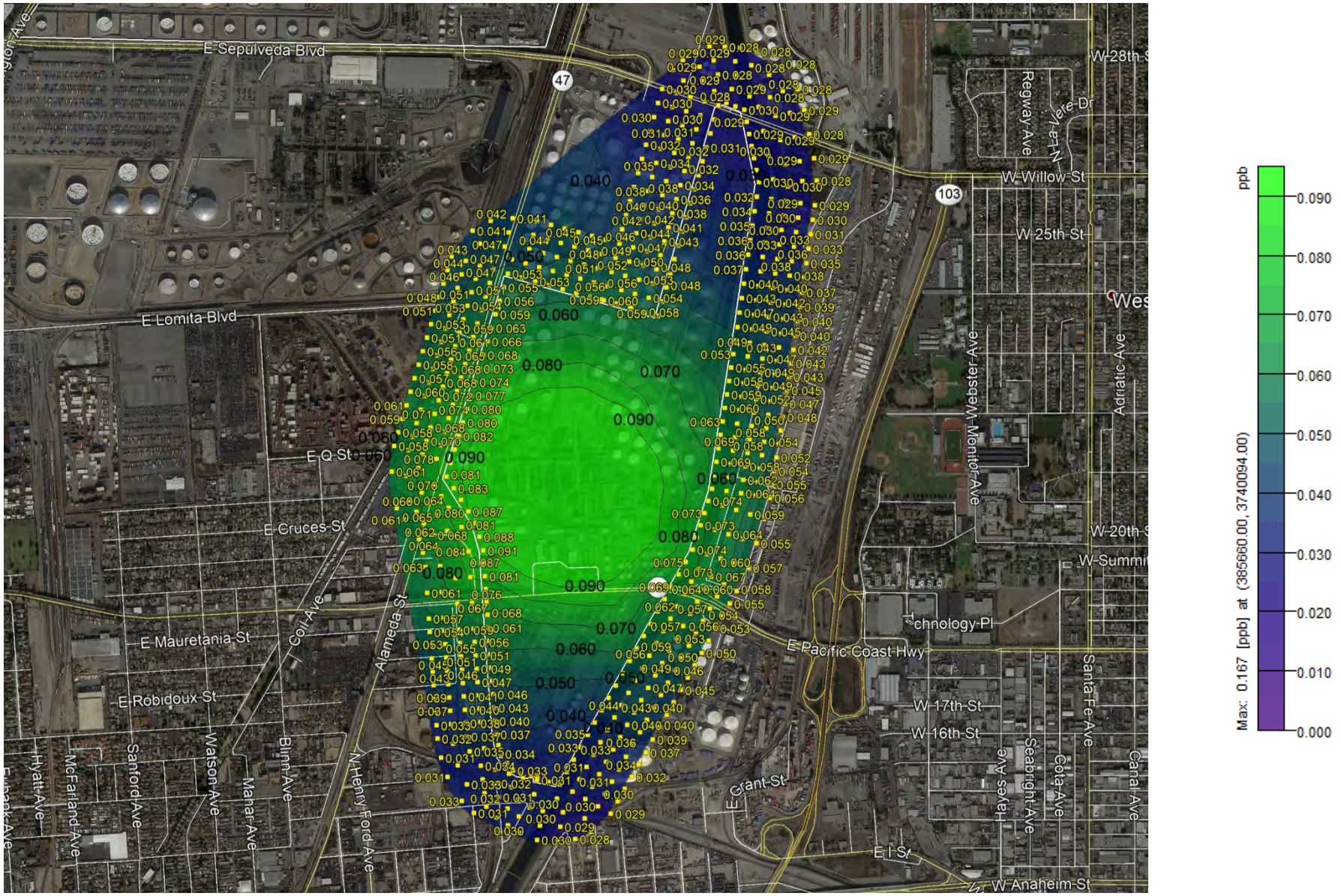
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Benzene Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



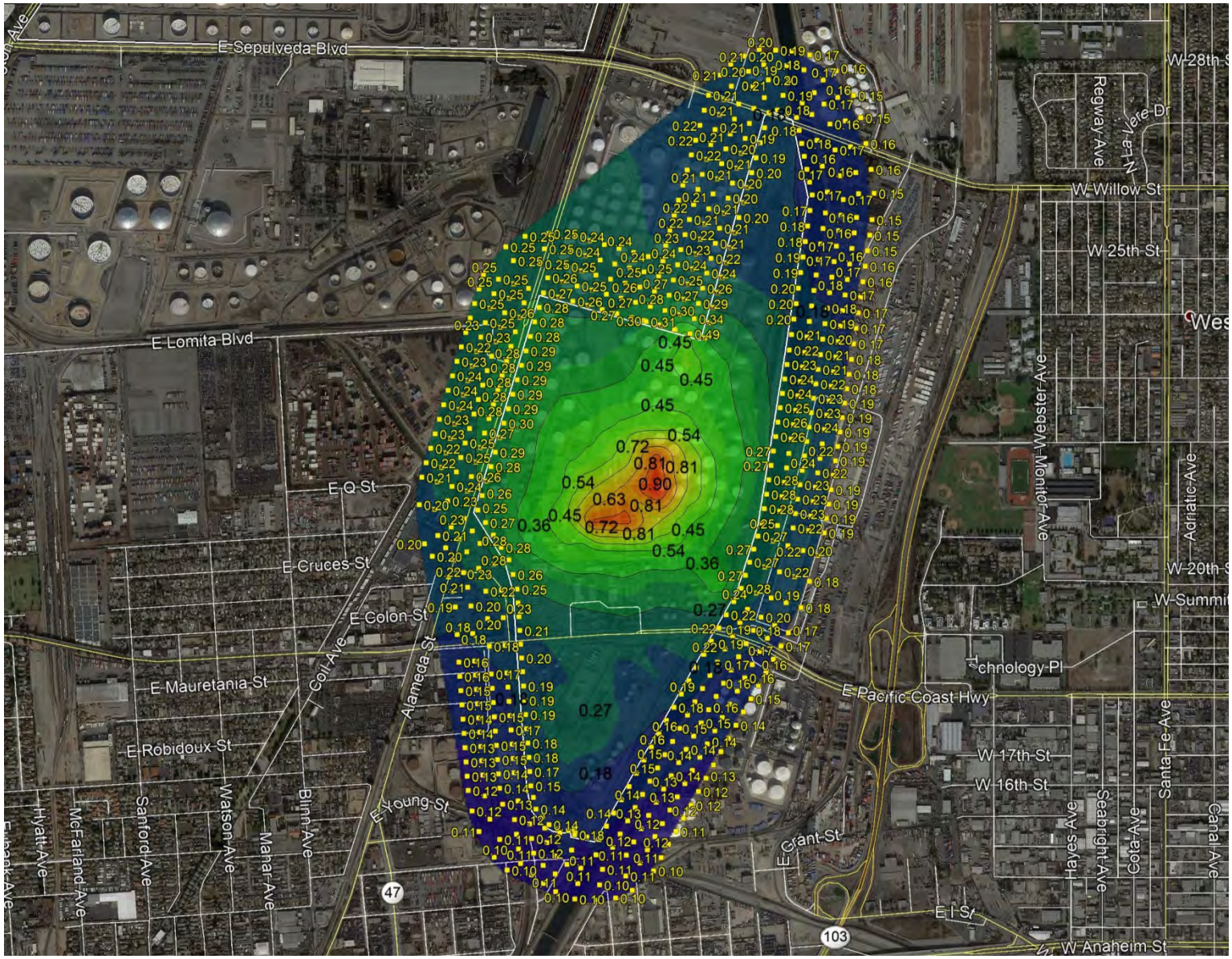
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Carbonyl Sulfide Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



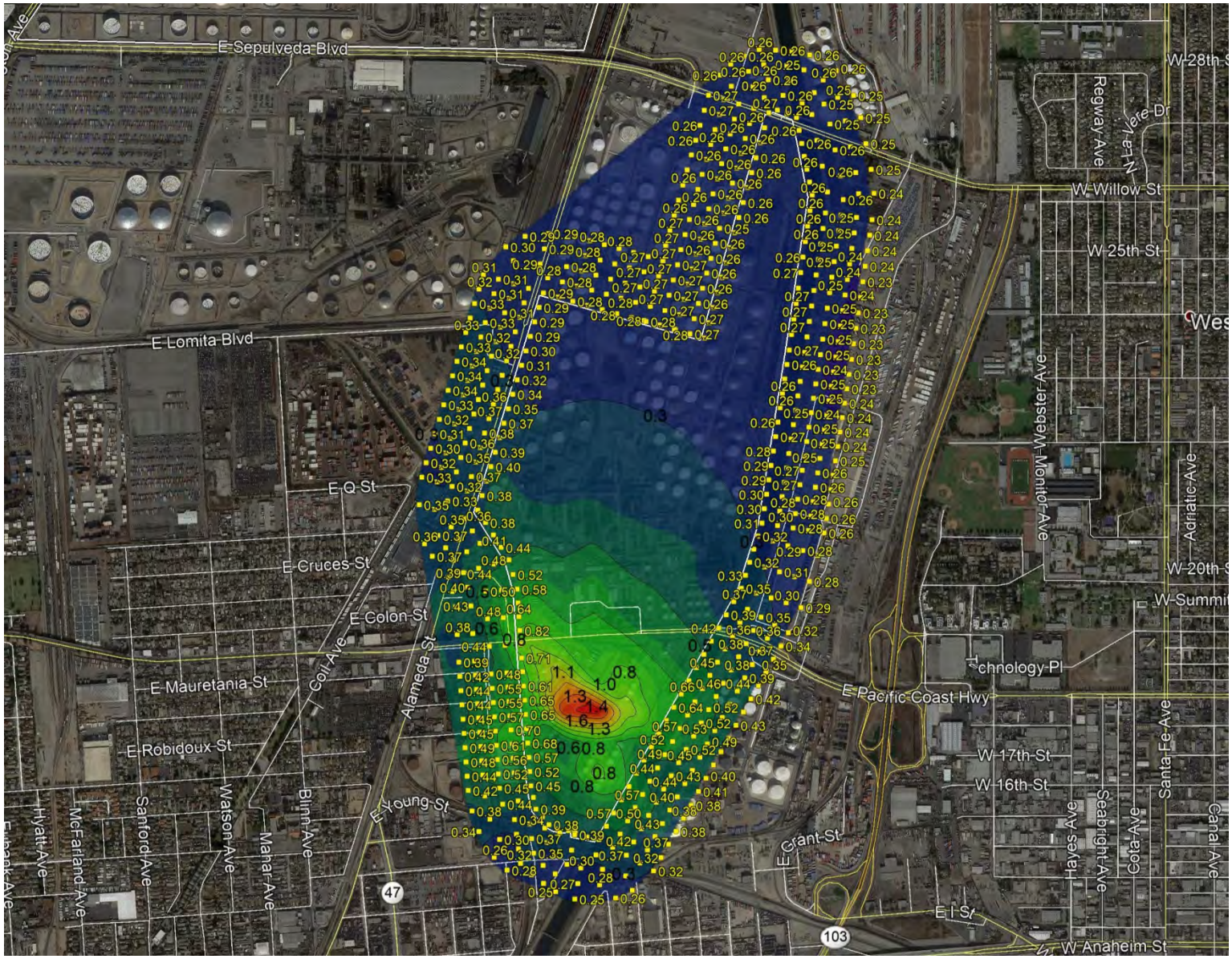
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Ethylbenzene Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



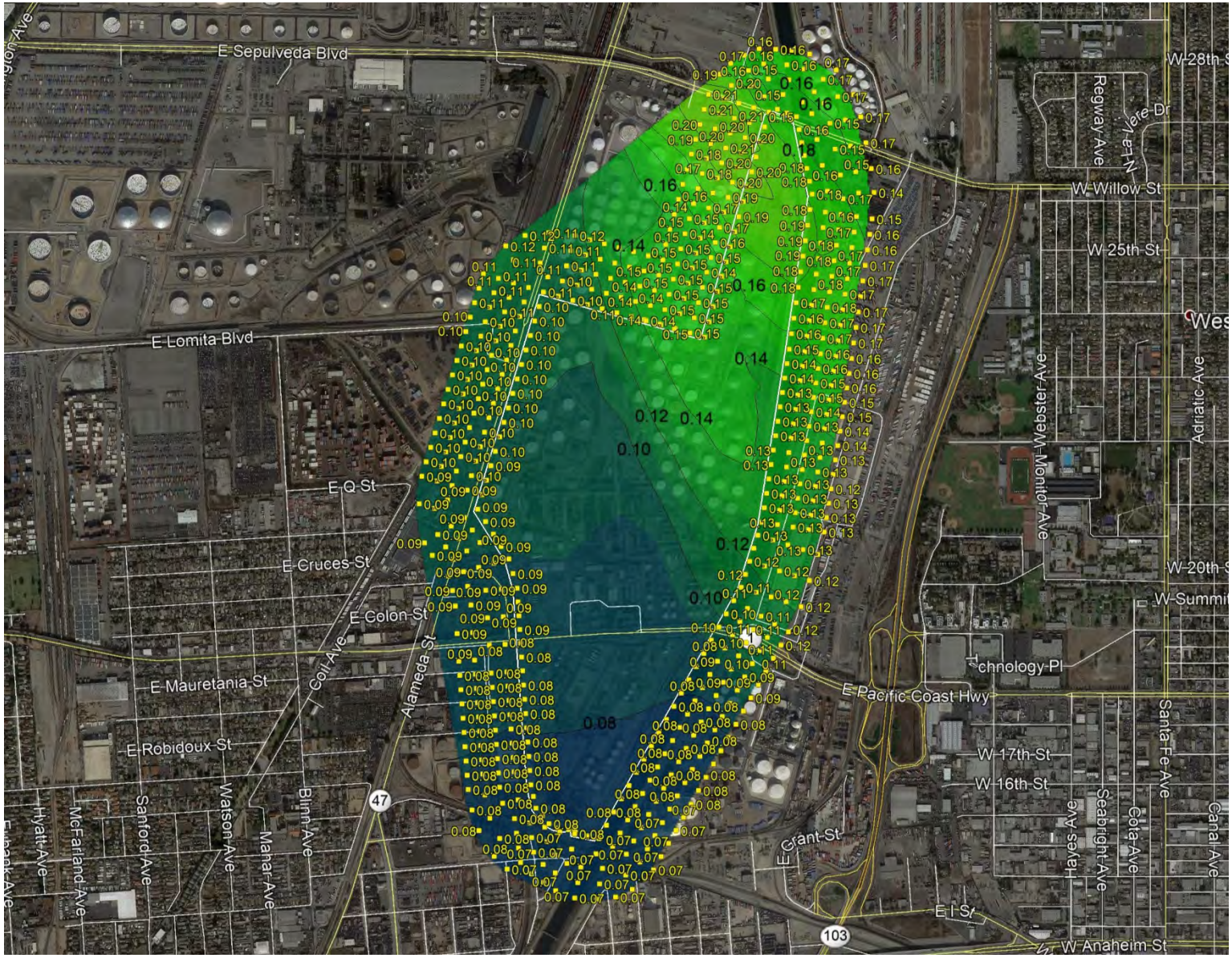
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

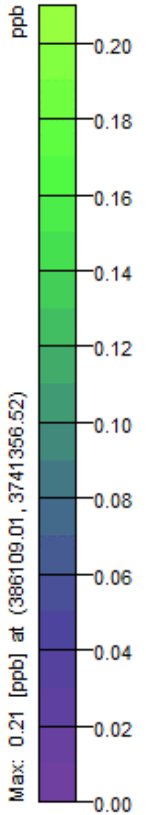
Formaldehyde Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

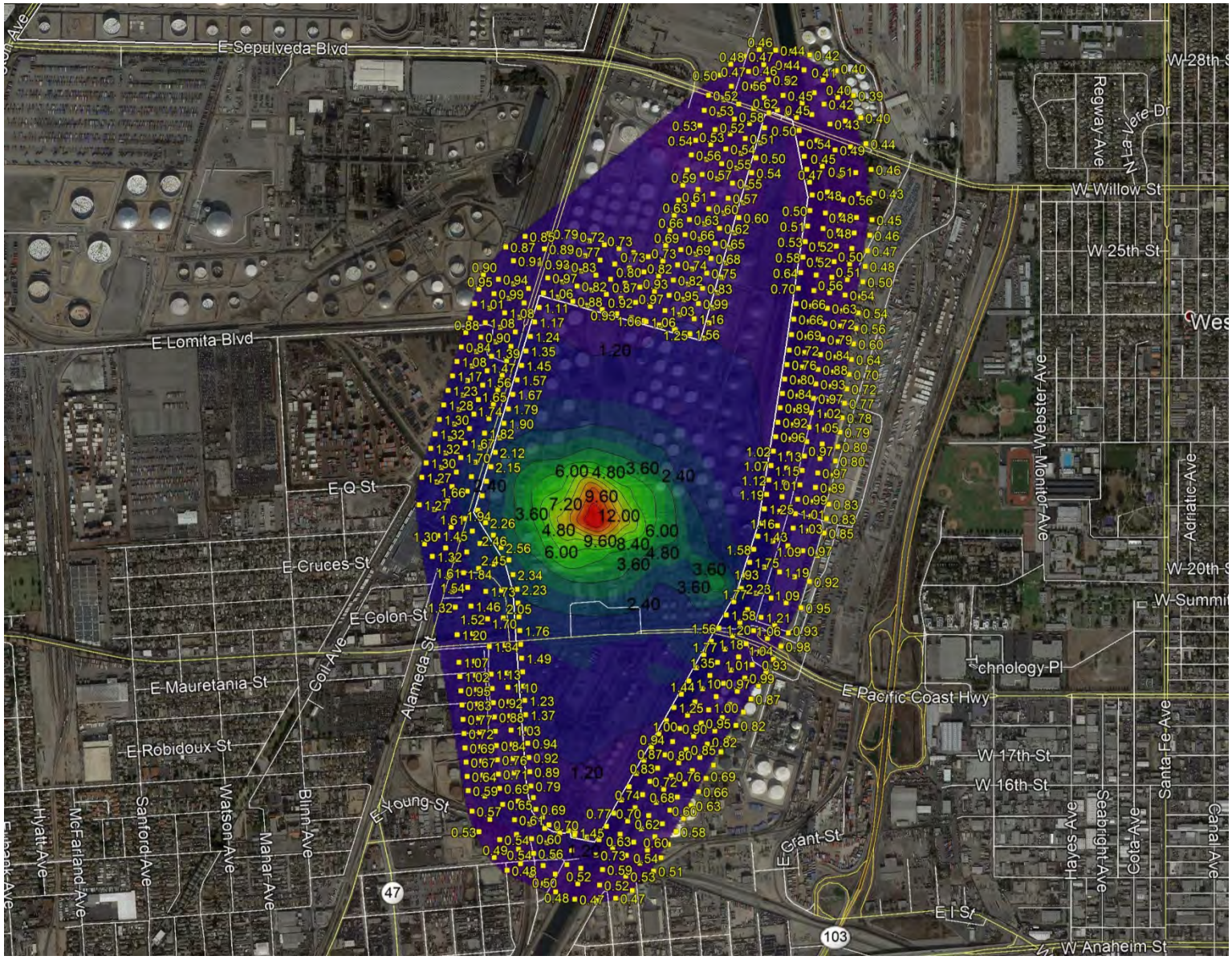
Hydrogen Cyanide Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington





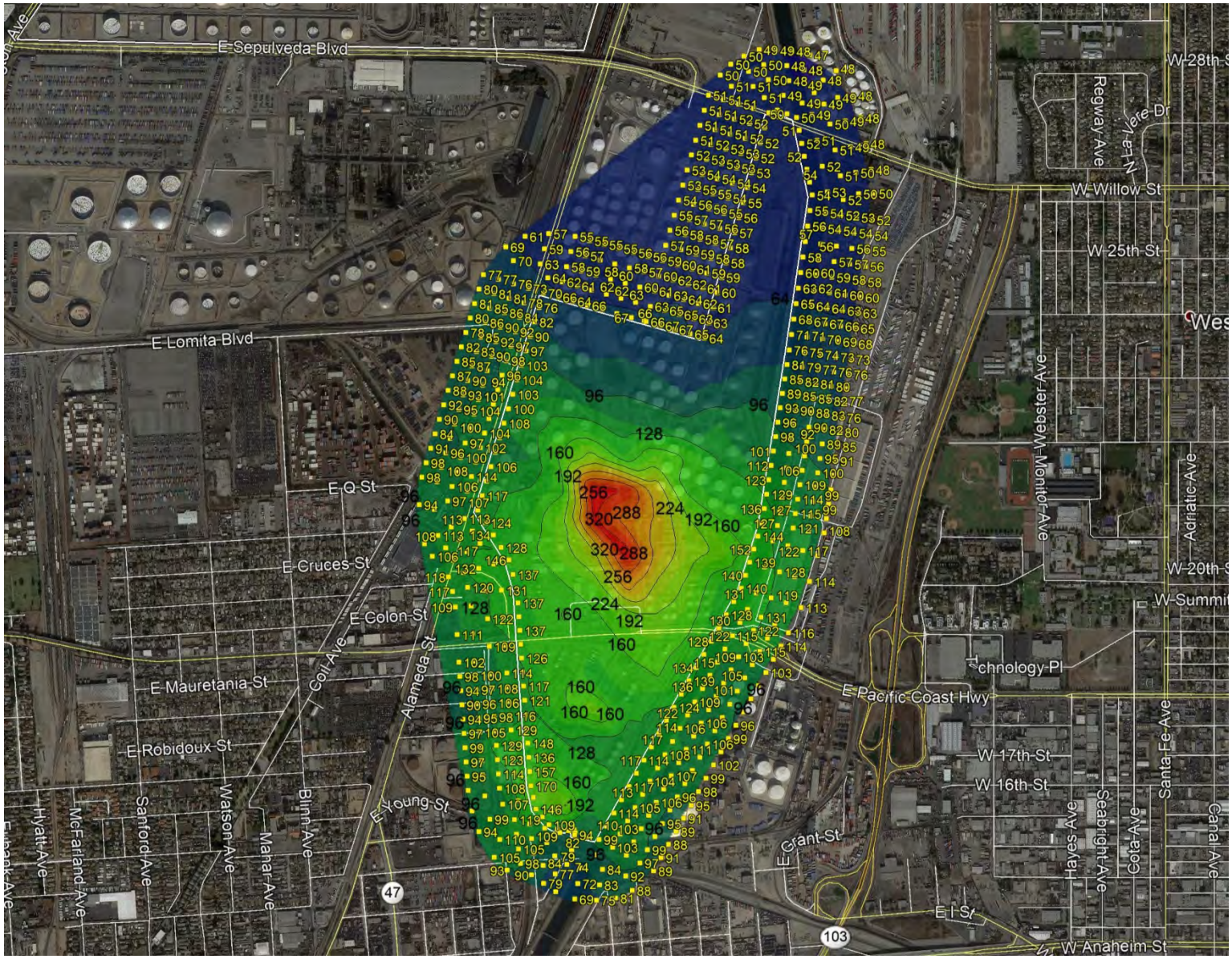
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Hydrogen Sulfide Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



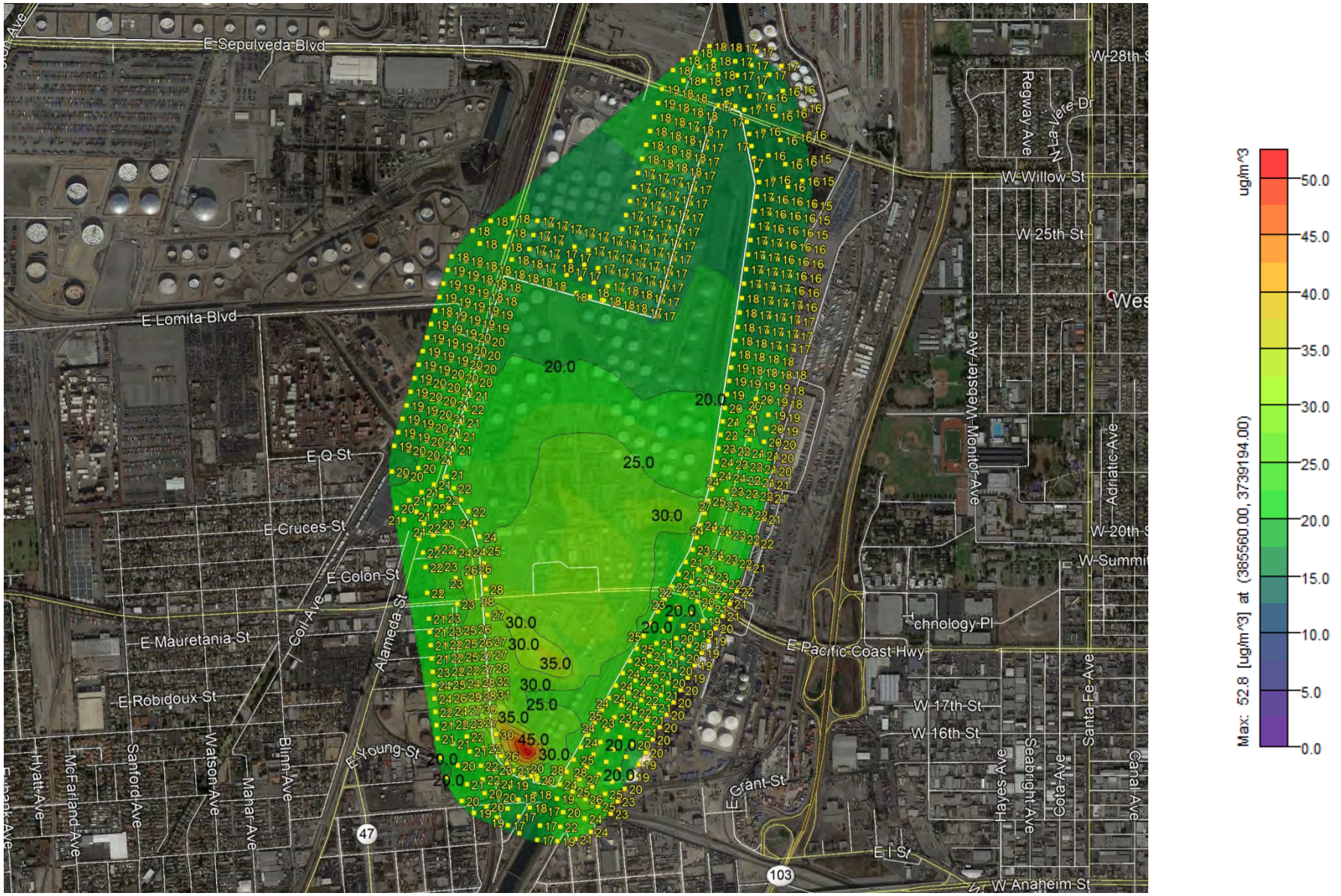
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

NOx Maximum 1-hour Average Concentrations (µg/m3), Tesoro Refinery, Wilmington



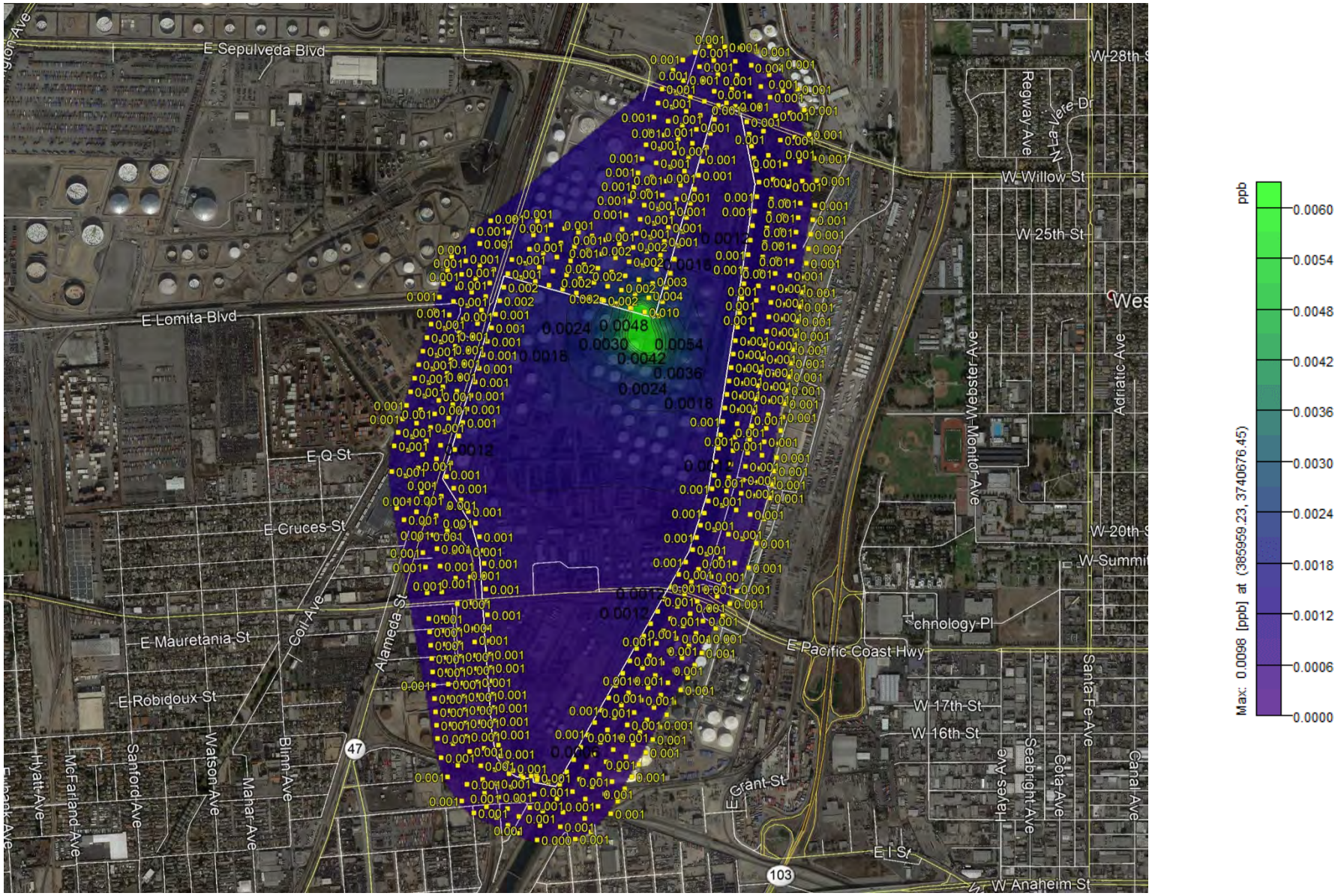
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

SOx Maximum 1-hour Average Concentrations (µg/m3), Tesoro Refinery, Wilmington



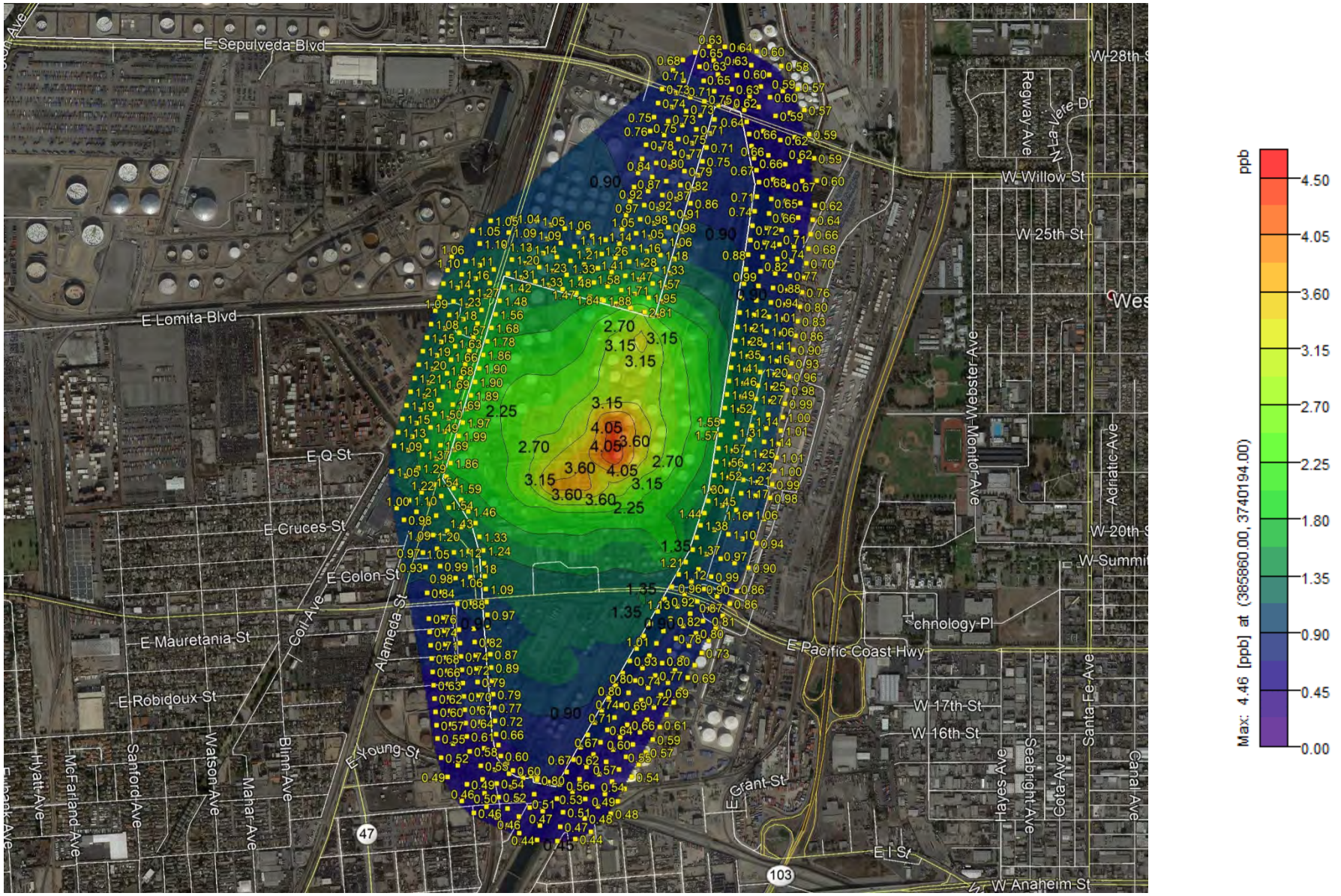
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Styrene Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



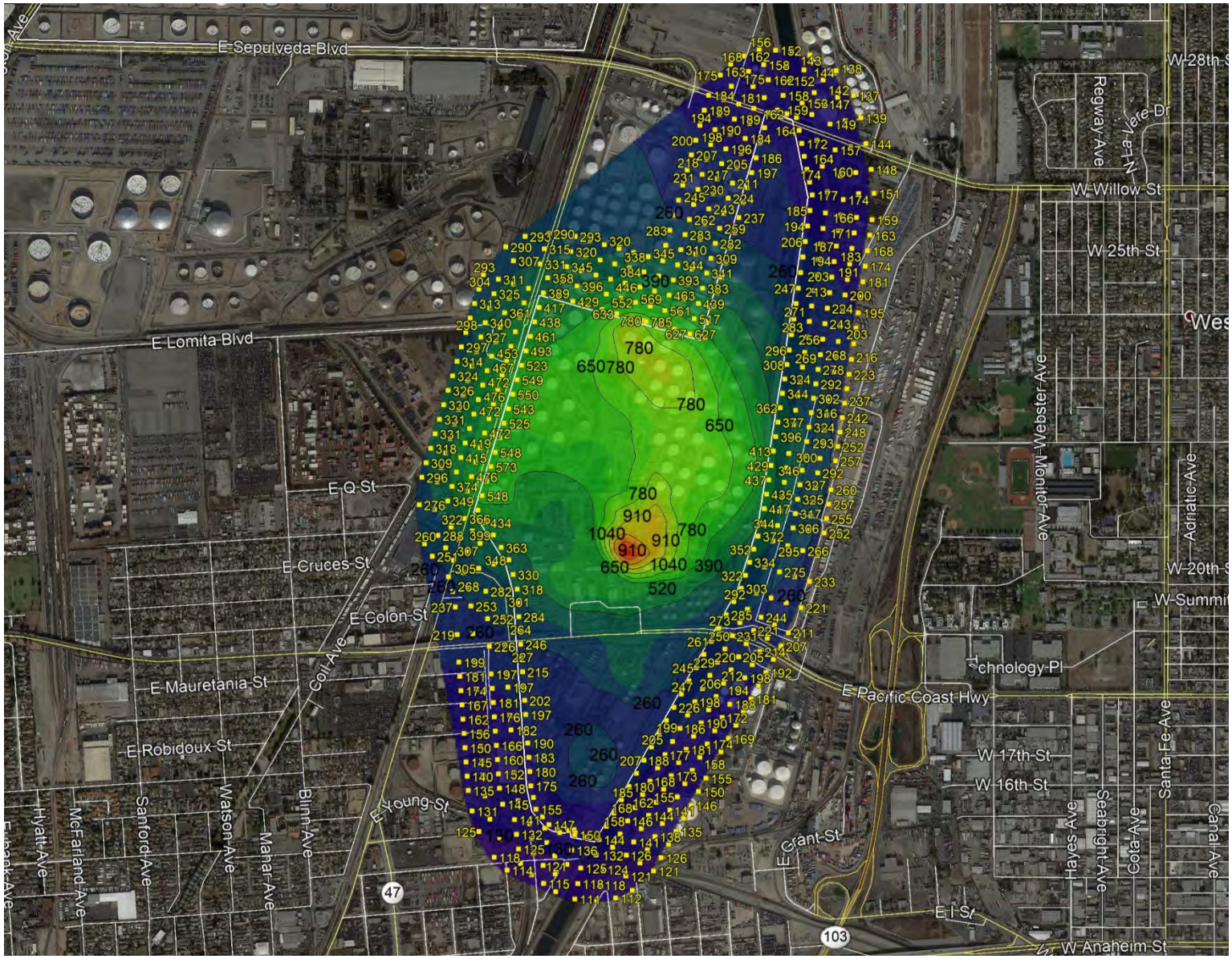
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Toluene Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



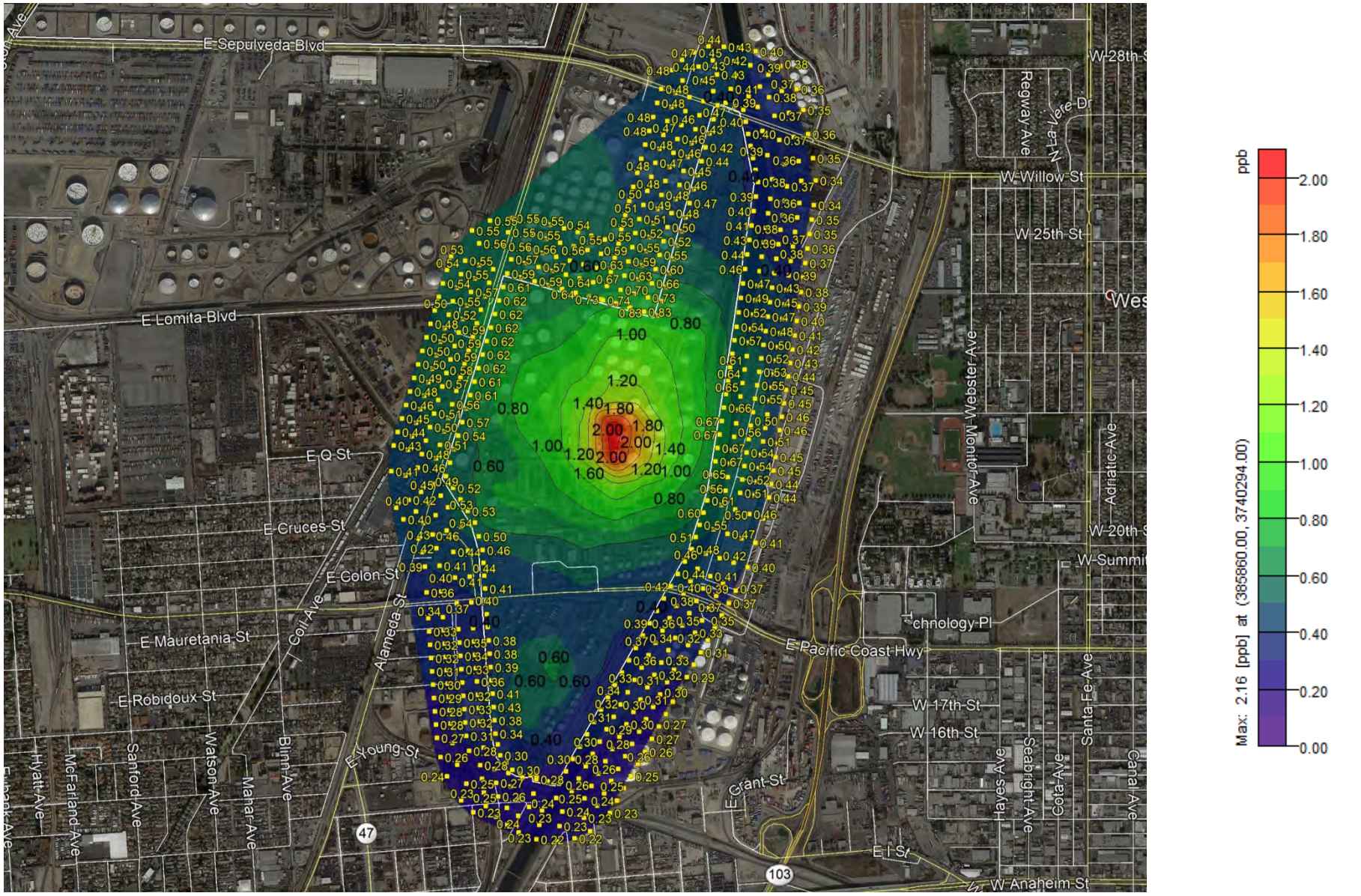
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

VOC Maximum 1-hour Average Concentrations (µg/m3), Tesoro Refinery, Wilmington



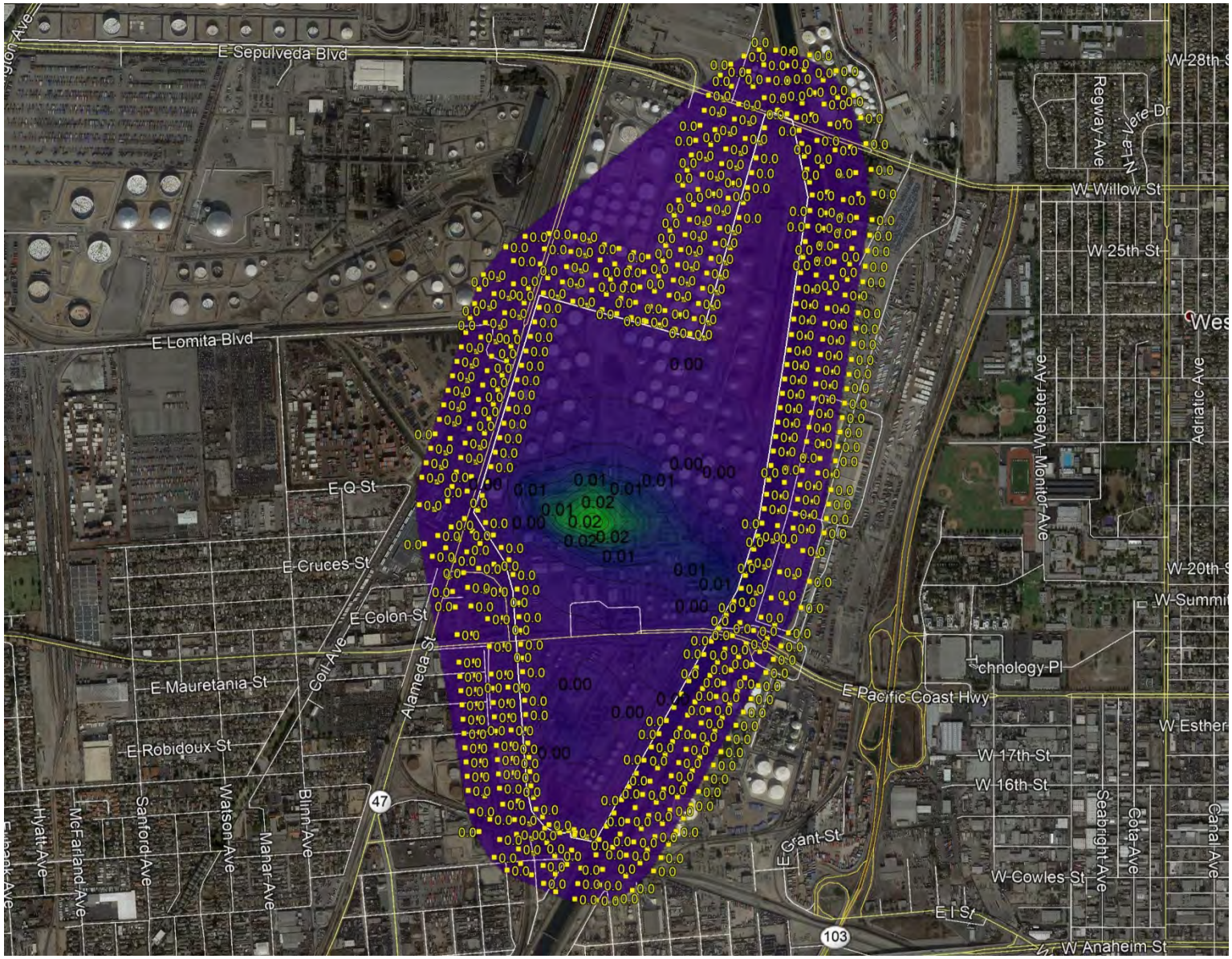
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Xylenes Maximum 1-hour Average Concentrations (ppb), Tesoro Refinery, Wilmington



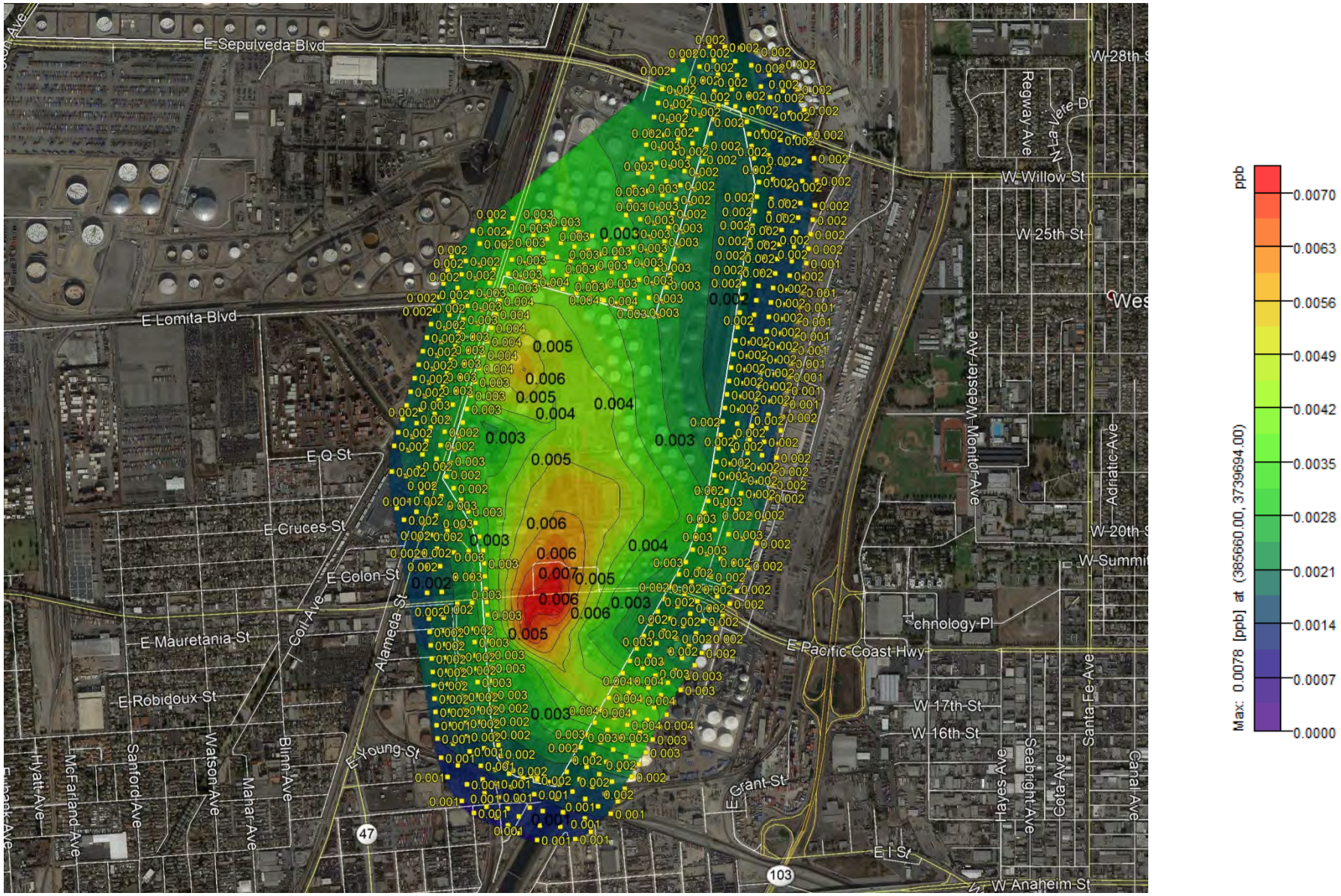
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

1,3-Butadiene 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



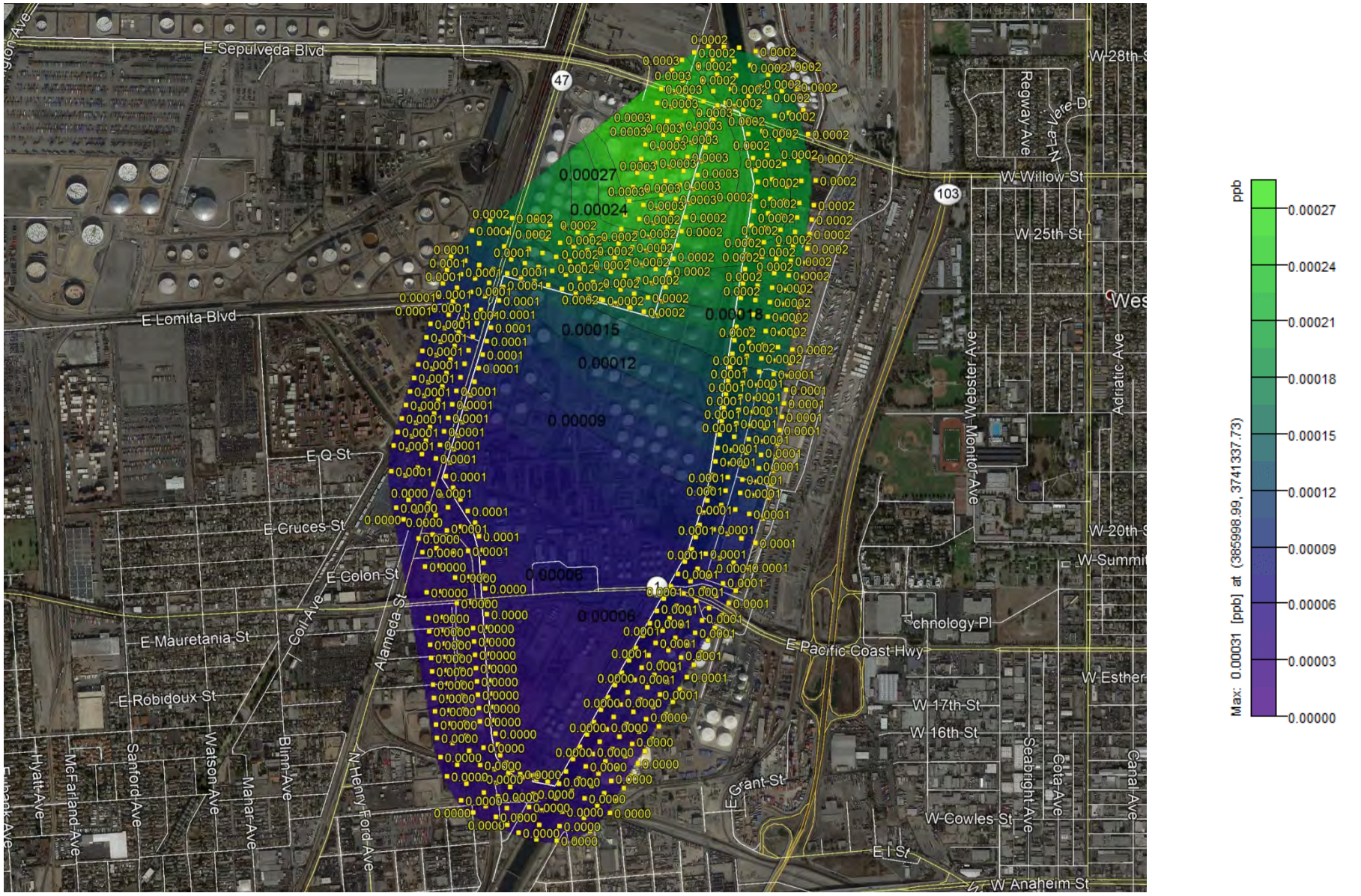
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Acetaldehyde 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



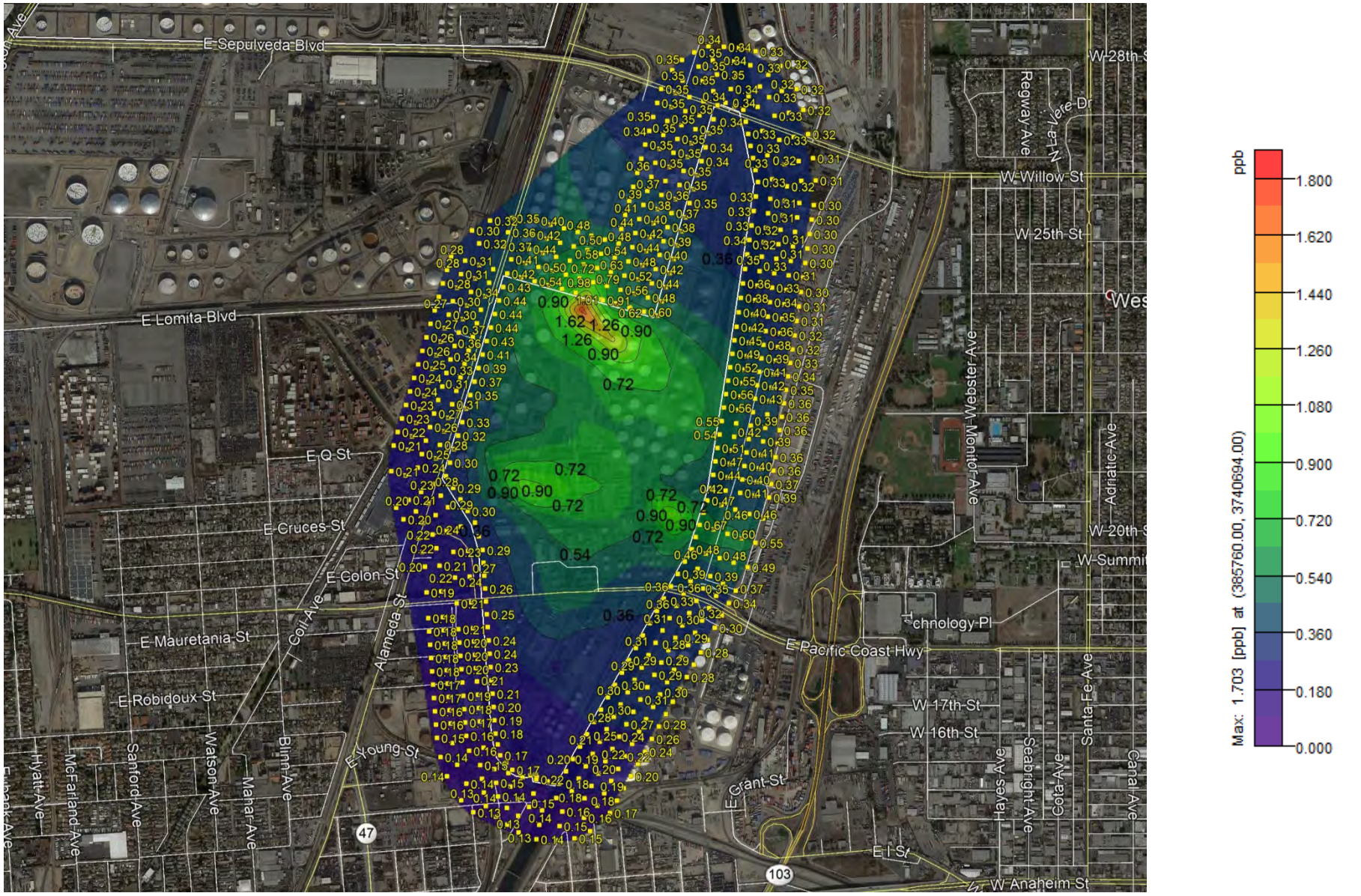
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Acrolein 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



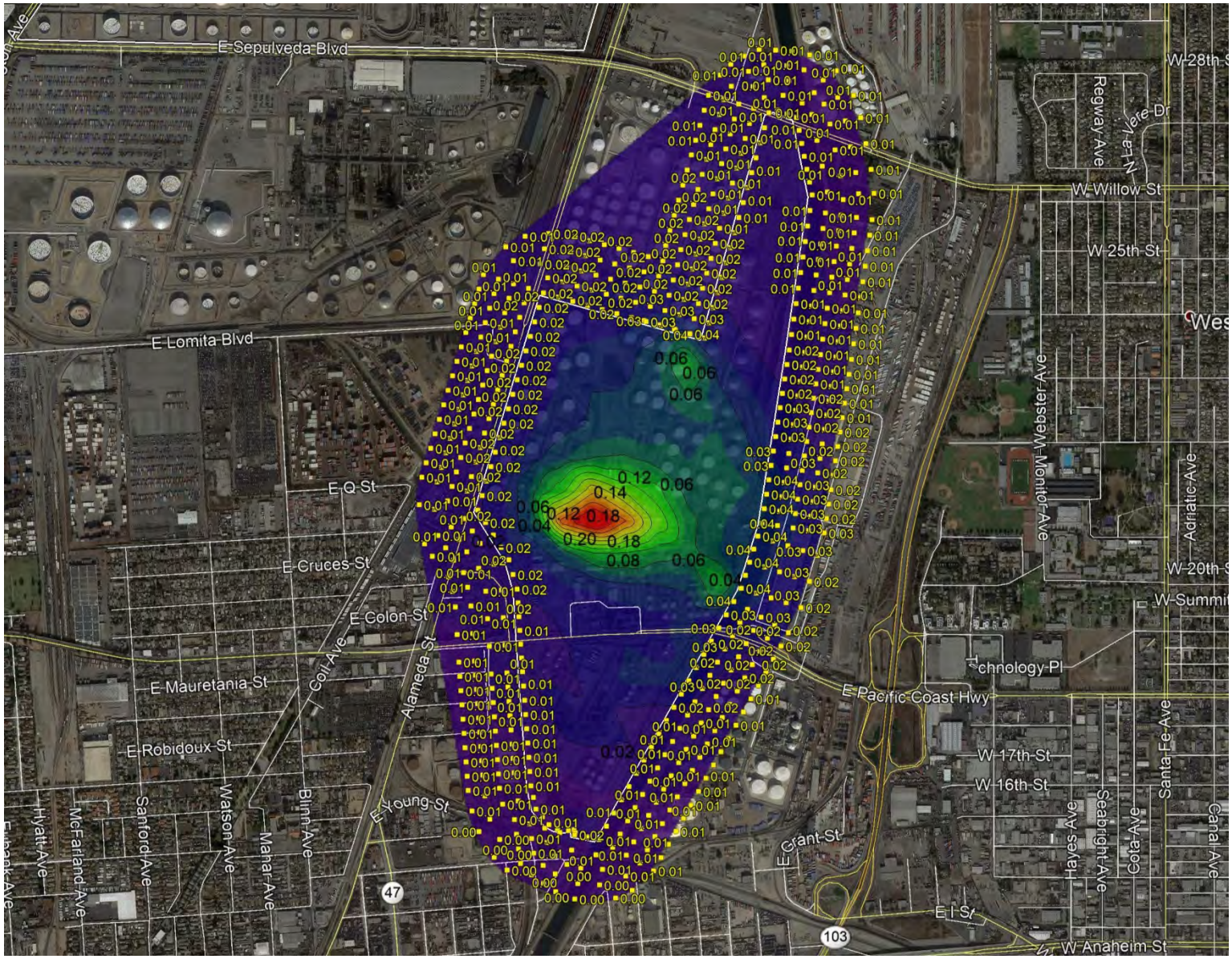
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Ammonia 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



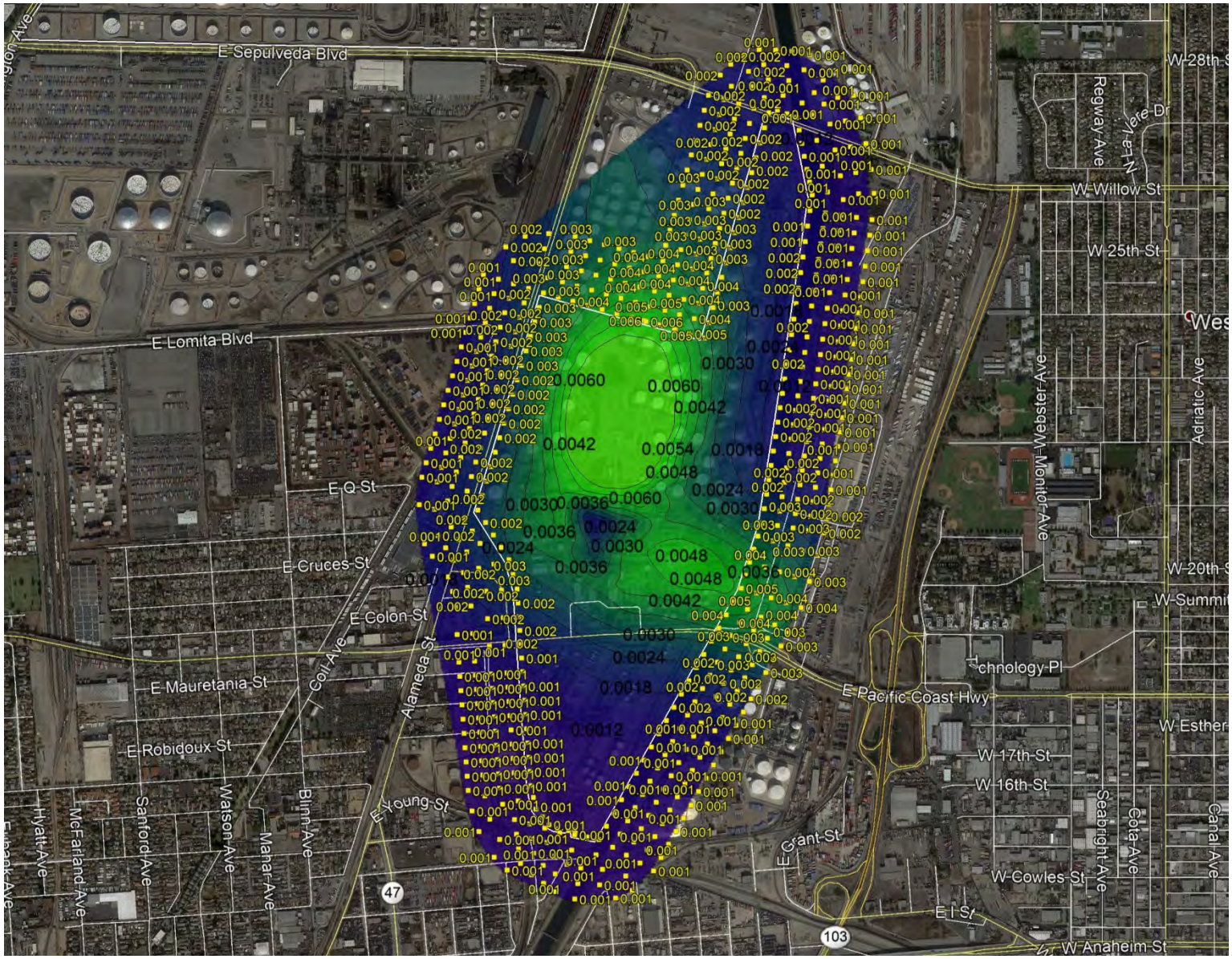
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Benzene 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



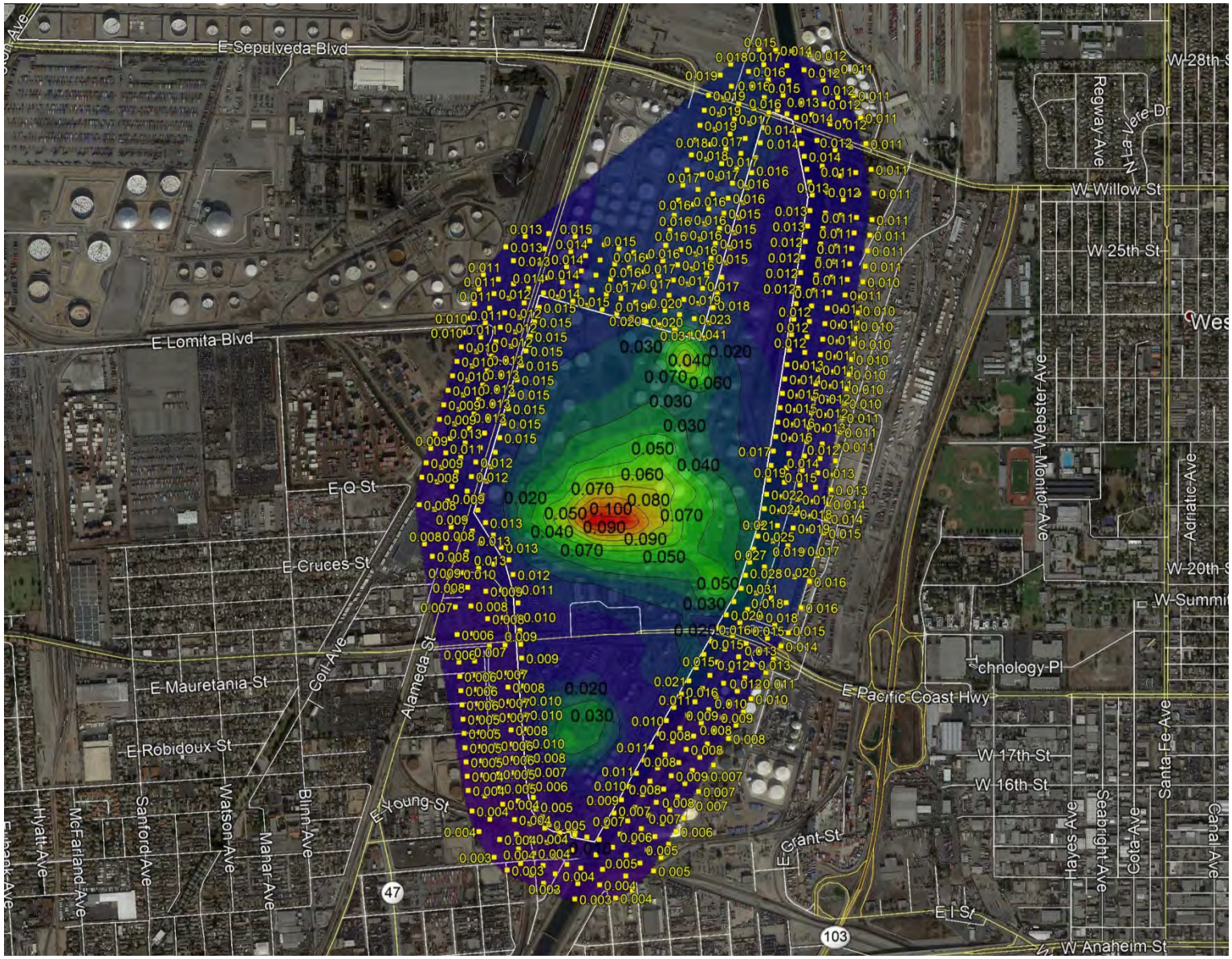
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Carbonyl Sulfide 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



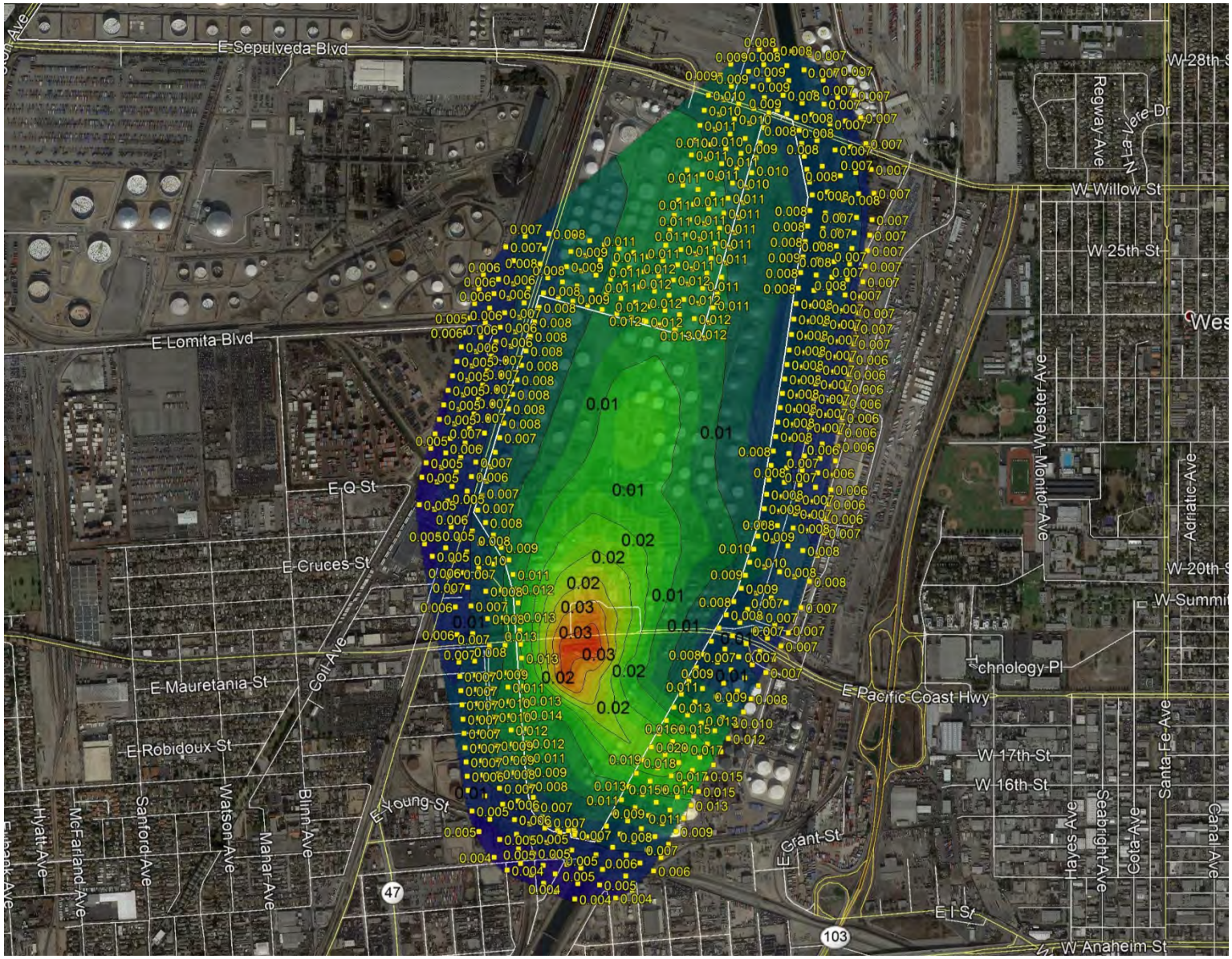
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Ethylbenzene 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



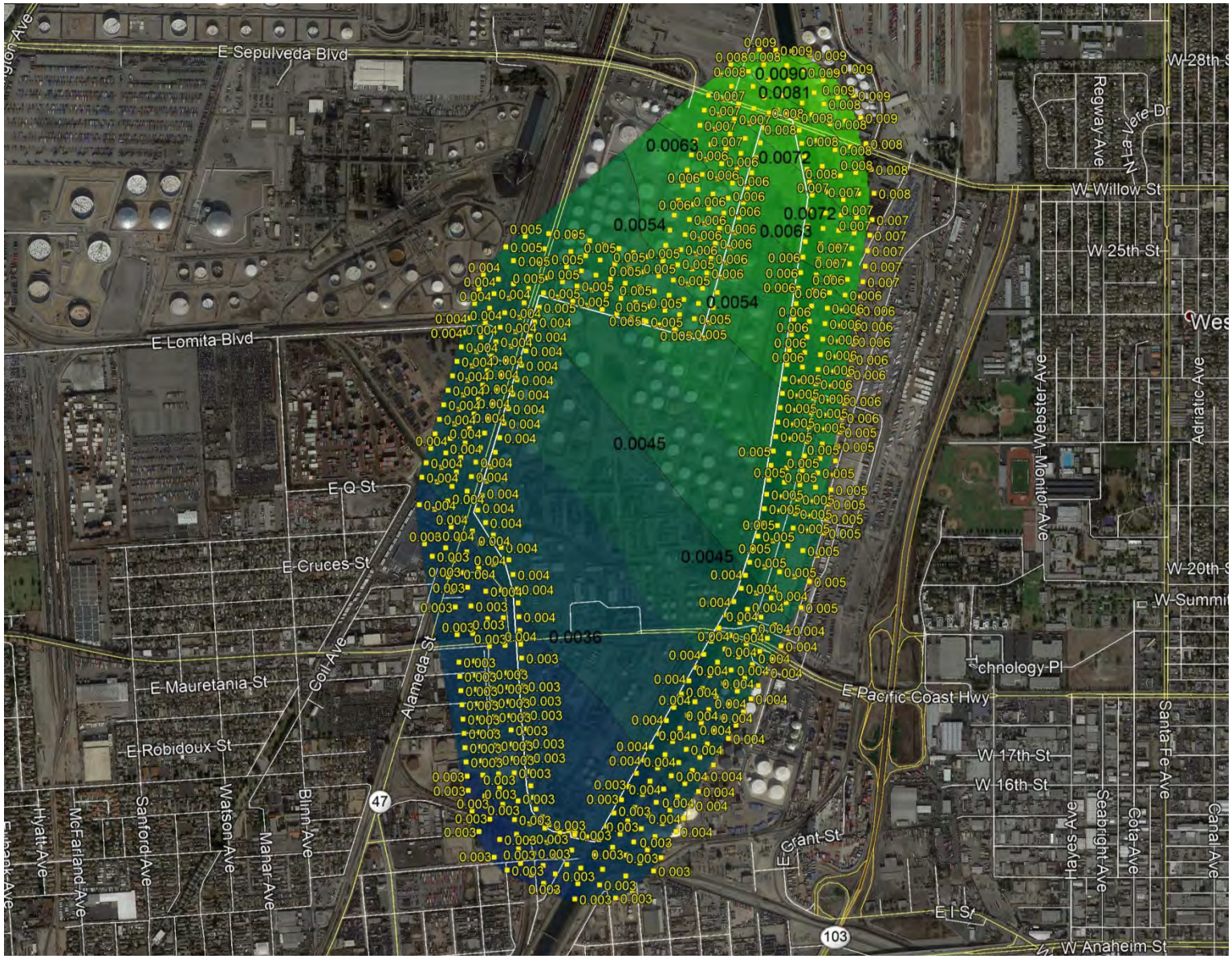
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Formaldehyde 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



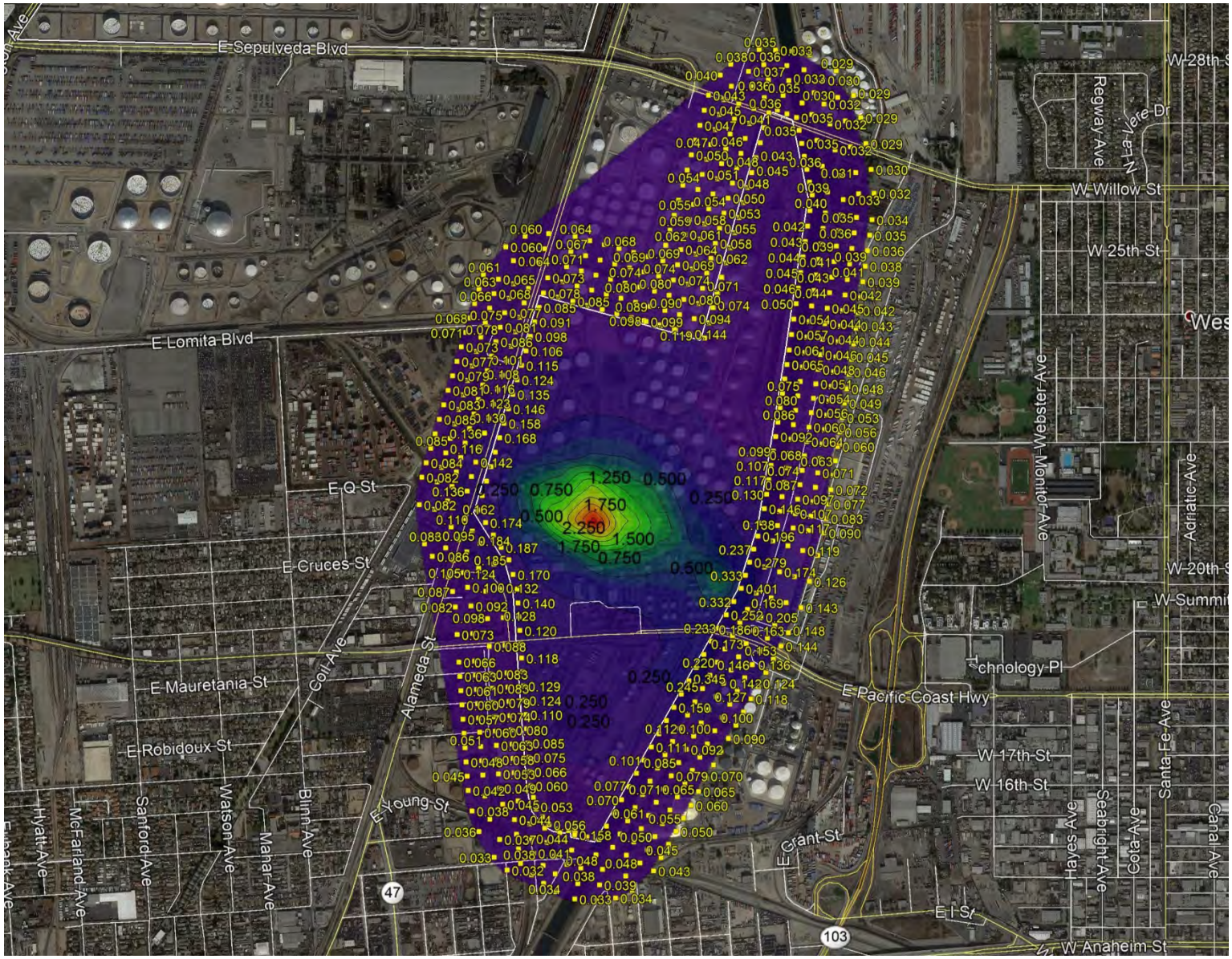
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Hydrogen Cyanide 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



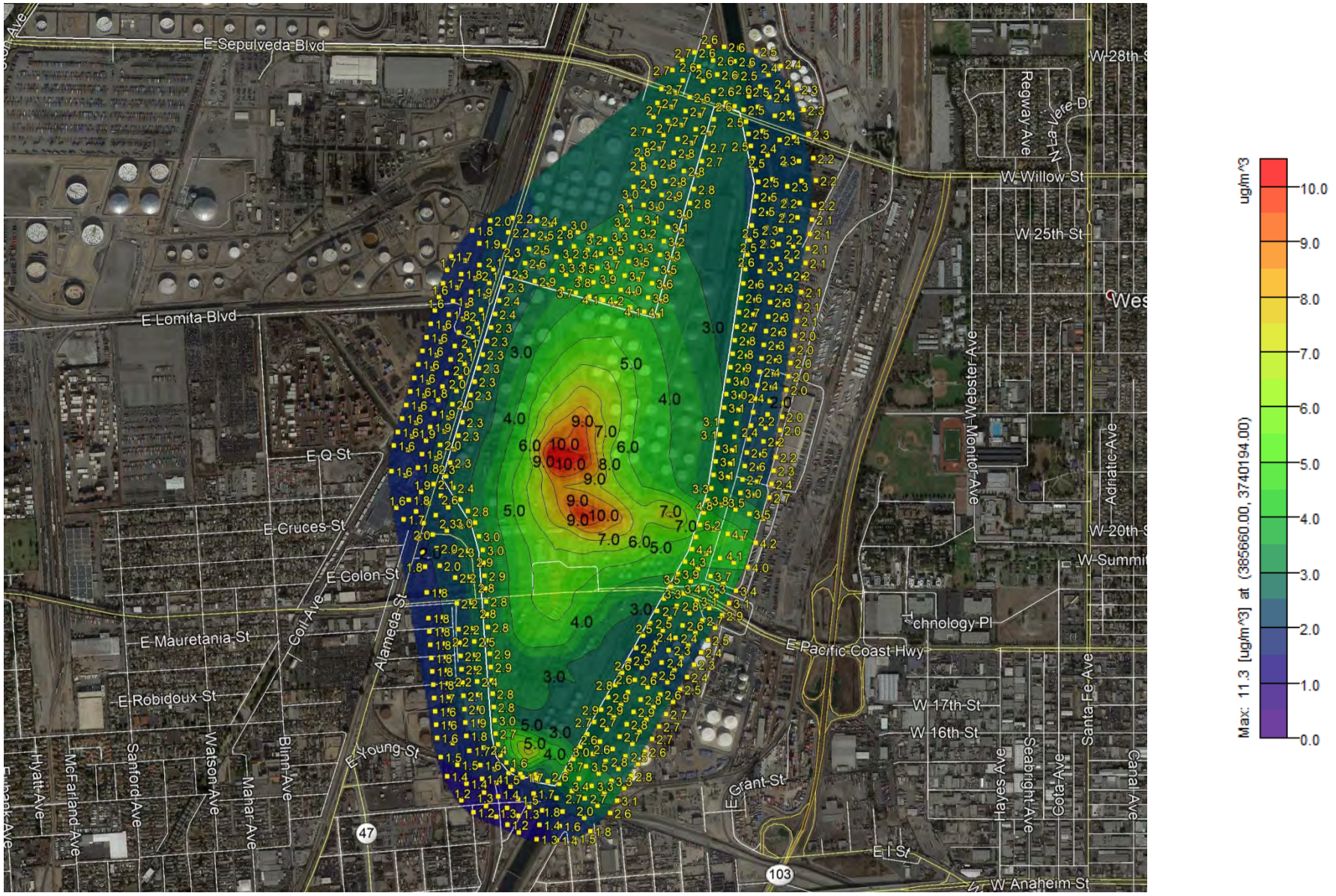
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Hydrogen Sulfide 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



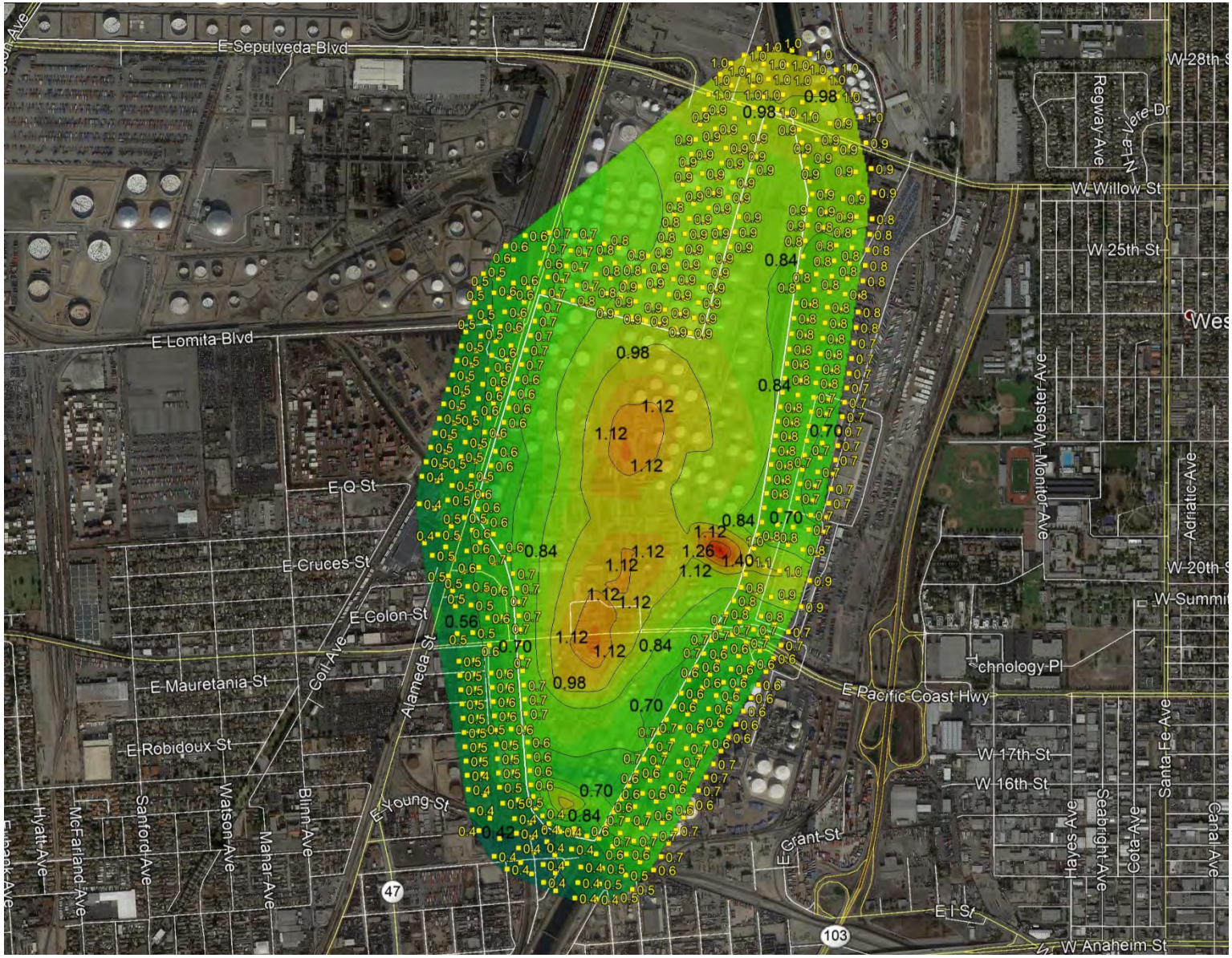
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

NOx 5-Year Average Concentrations (µg/m3), Tesoro Refinery, Wilmington



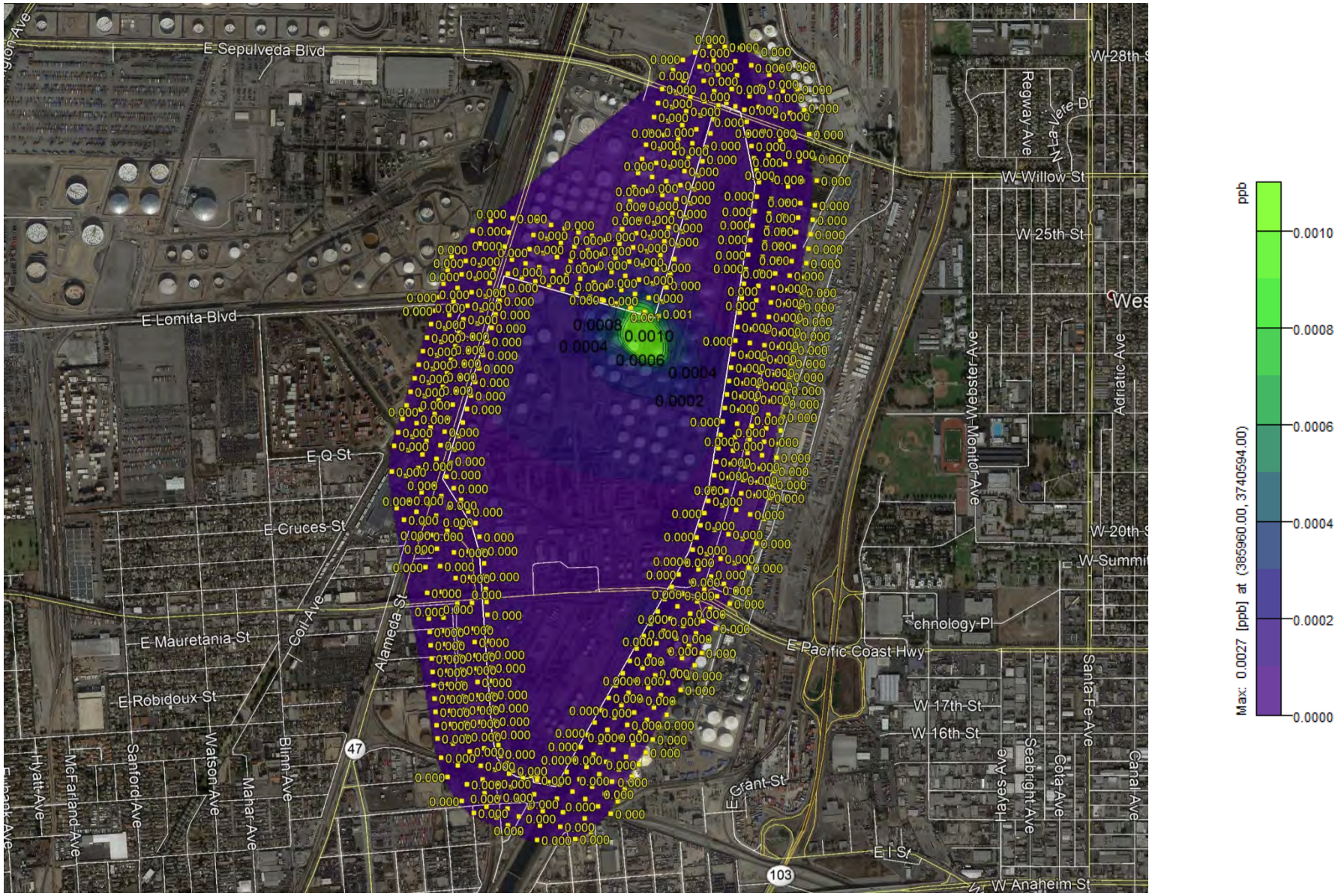
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

SOx 5-Year Average Concentrations (µg/m3), Tesoro Refinery, Wilmington



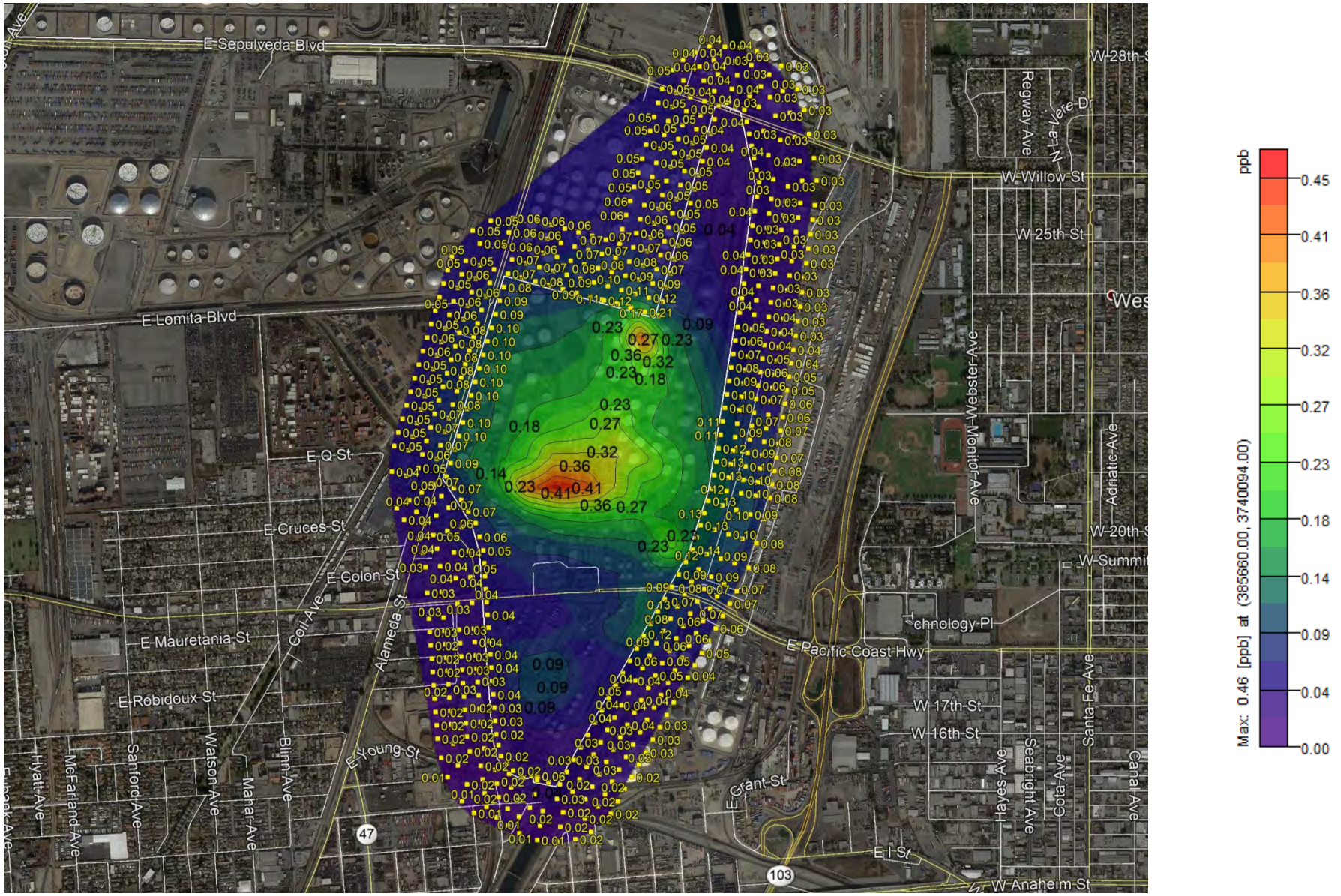
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Styrene 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



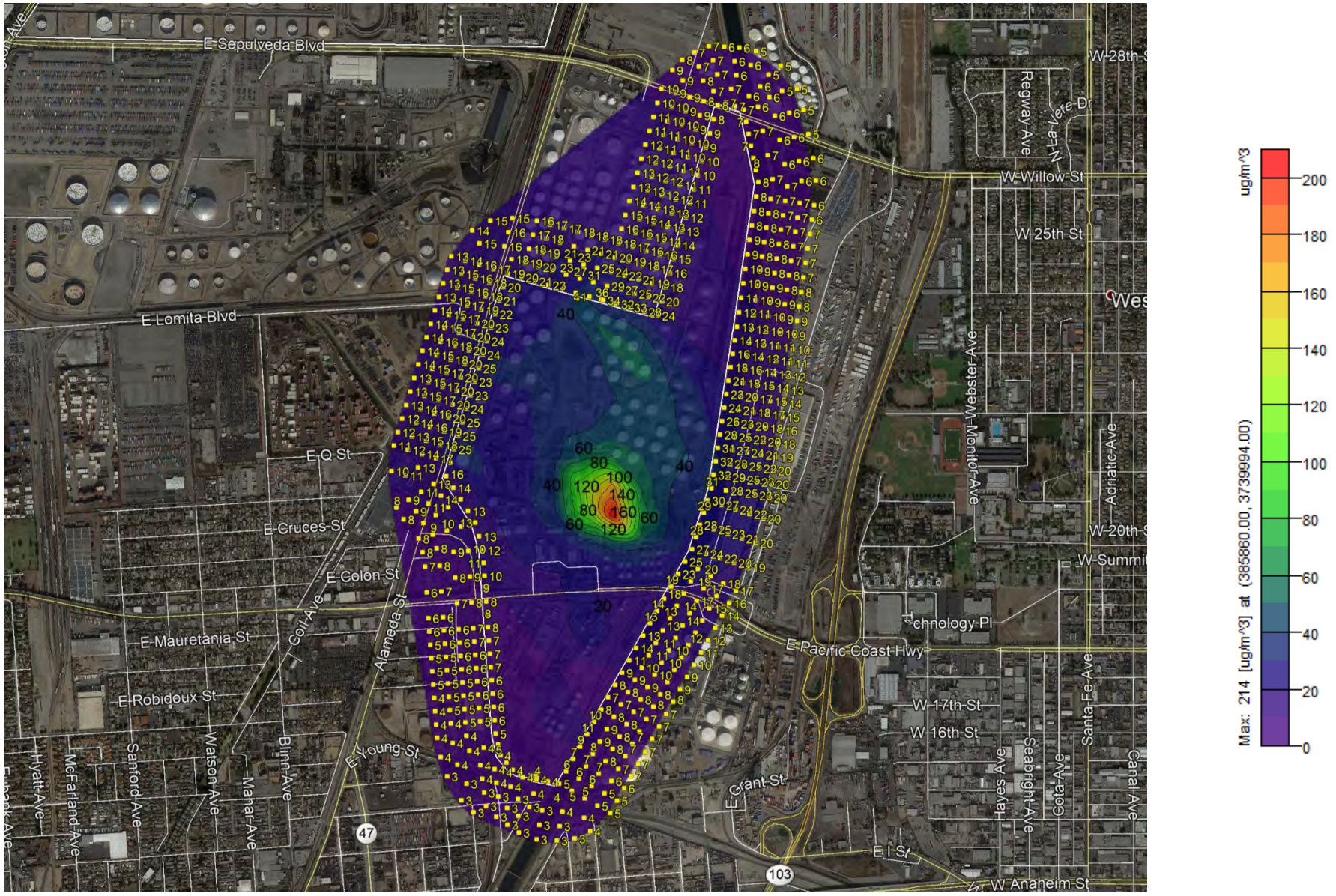
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Toluene 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



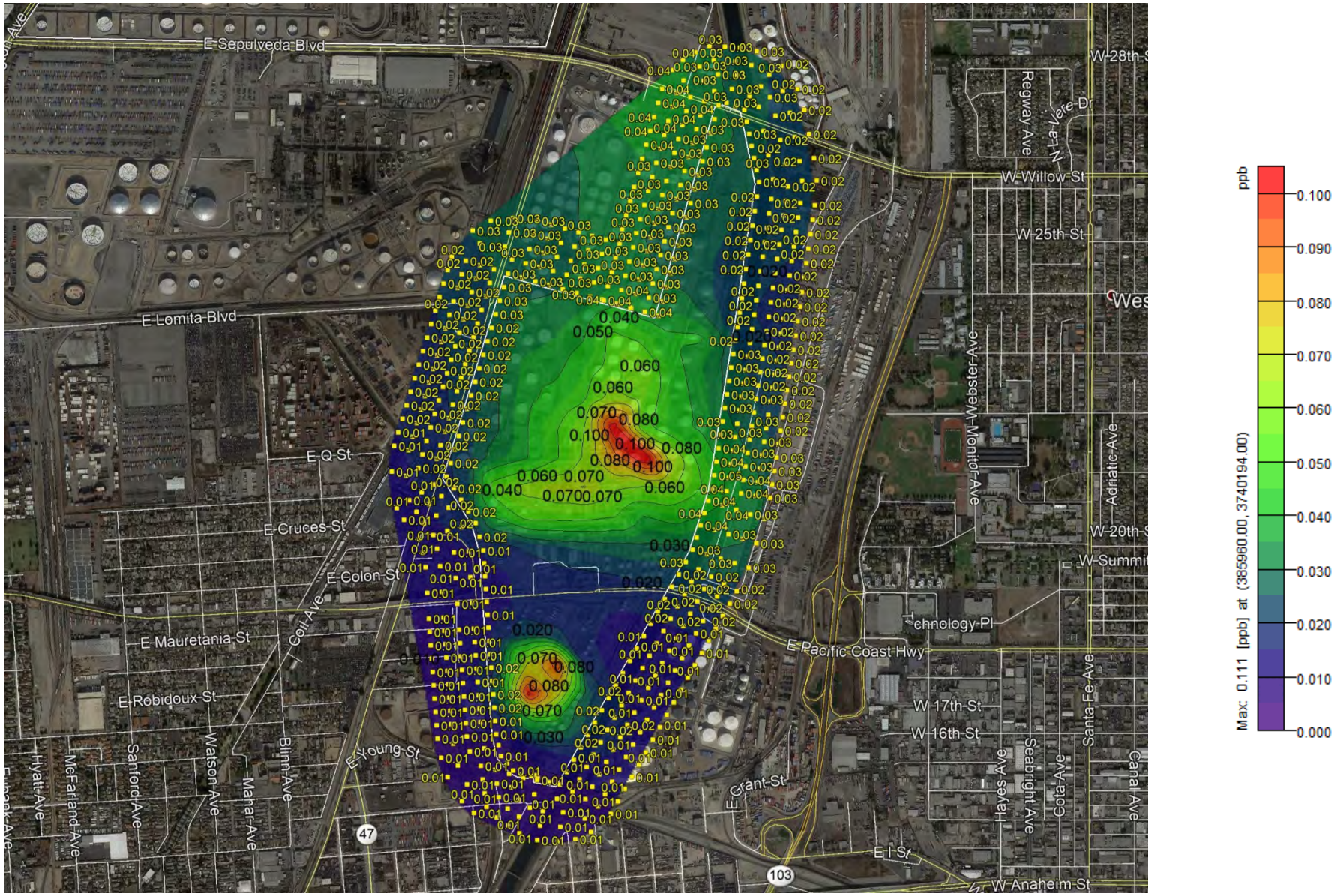
Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

VOC 5-Year Average Concentrations (µg/m3), Tesoro Refinery, Wilmington



Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data

Xylenes 5-Year Average Concentrations (ppb), Tesoro Refinery, Wilmington



Worst-Case Scenario Using 2015 Emissions and 2012-2016 MET Data