## APPENDIX D

Potential Cancer Risk Isopleths by Part and by Category

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## PART-I: PORT OF OAKLAND

# Figure D-1: Diesel PM Potential Cancer Risk Isopleth – All Activities from Port of Oakland (Part-I)

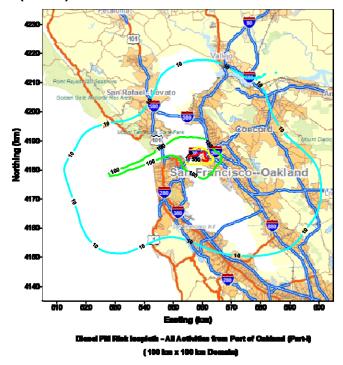
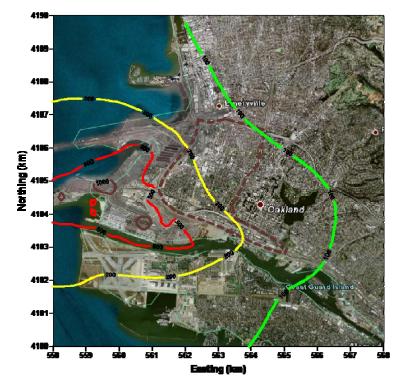


Figure D-2: Diesel PM Potential Cancer Risk Isopleth – All Activities from the Port (Part-I)



Diesel Phi Risk isopieth – All Activities from the Port (Part-I) ( 10 km x 10 km Domain)



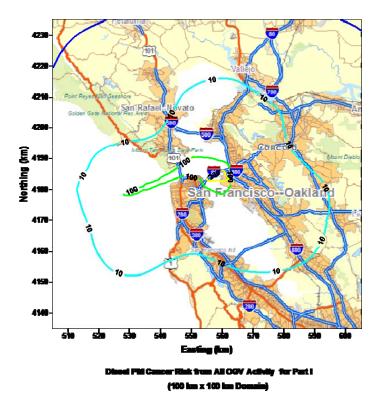
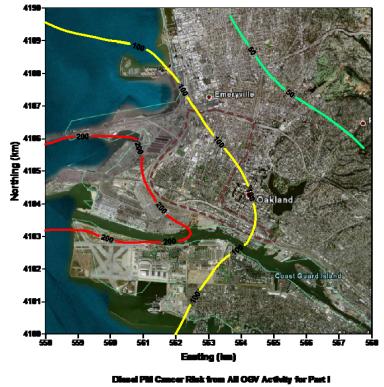


Figure D-4: Diesel PM Potential Cancer Risk for All OGV Activity for Part-I



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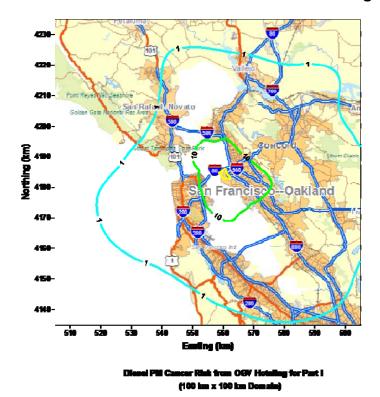
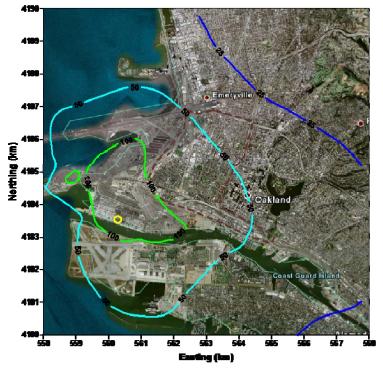


Figure D-5. Diesel PM Potential Cancer Risk from OGV Hotelling for Part-I

Figure D-6: Diesel PM Potential Cancer Risk from OGV Hotelling at the Port for Part-I





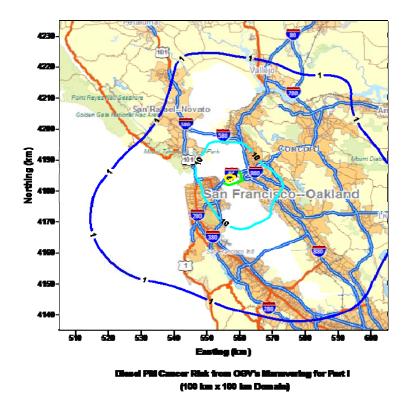
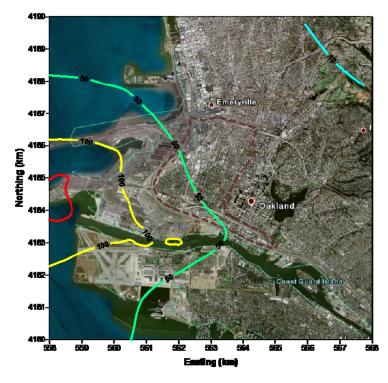


Figure D-7: Diesel PM Potential Cancer Risk from OGV Maneuvering for Part-I

Figure D-8: Diesel PM Potential Cancer Risk from OGV Maneuvering for Part-I



Diesel PH Cancer Risk from OGV Meanvering for Part I (10 km x 10 km Domain)

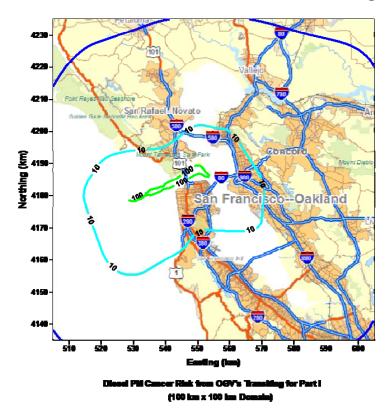
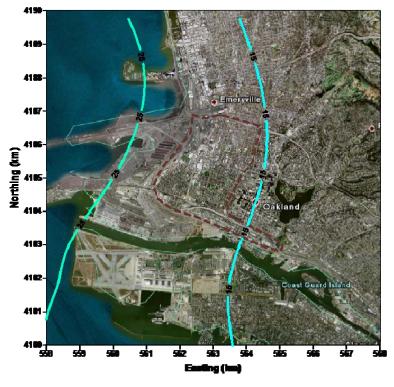


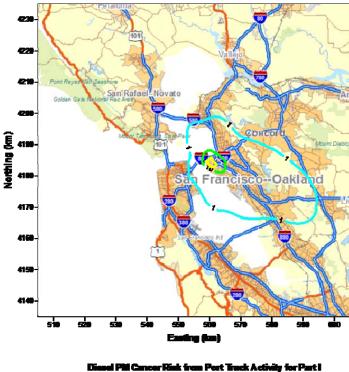
Figure D-9: Diesel PM Potential Cancer Risk for OGV' Transiting for Part-I

Figure D-10: Diesel PM Potential Cancer Risk from OGV Transiting for Part-I



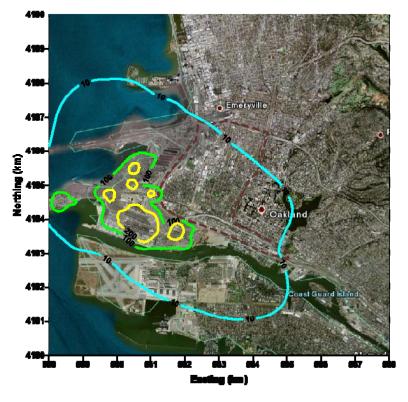
Discel Fill Cancer Filsk from OBV Transiting for Part I (10 km x 10 km Domain)





(100 km x 100 km Deamin)

Figure D-12: Diesel PM Potential Cancer Risk from Port Trucks for Part-I



Diesel Phi Cancer Risk from Port Trucks for Part I (10 km x 10 km Domain)

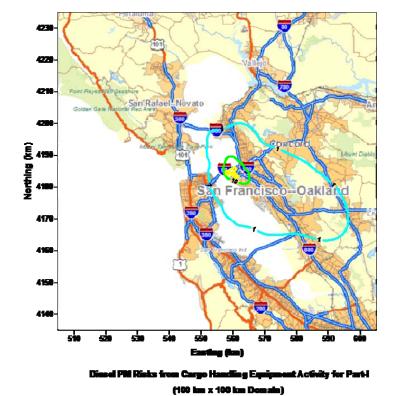
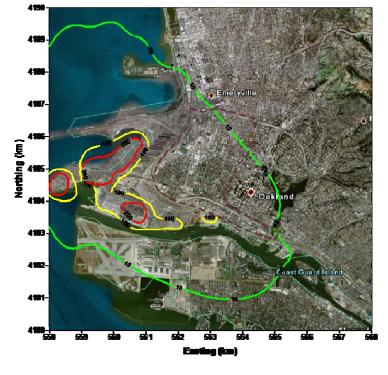


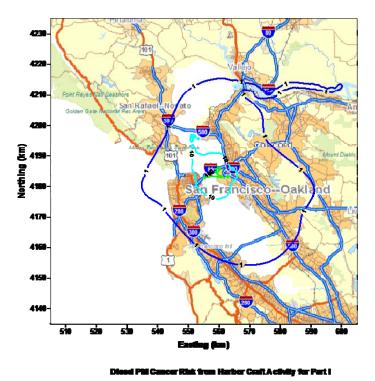
Figure D-13: Diesel PM Potential Cancer Risks from Cargo Handling Equipment Activity for Part-I

Figure D-14: Diesel PM Potential Cancer Risk from Cargo Handling Equipment Activity for Part-I

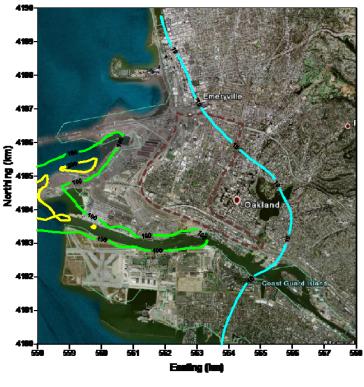


ood Phi Cancer Rink from Cargo handling Equipment A cilvity for Part-I (10 km x 10 km Domain)

Figure D-15: Diesel PM Potential Cancer Risk from Commercial Harbor Craft Harbor Activity for Part-I



(100 to x100 to X00 to



Dissel Phi Cancer Risk from harbor Crait Activity for Part I (10 km x 10 km Domain)

Figure D-17: Diesel PM Potential Cancer Risk Isopleth from Port Locomotive Activity

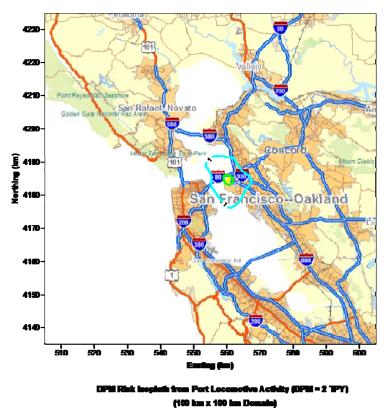
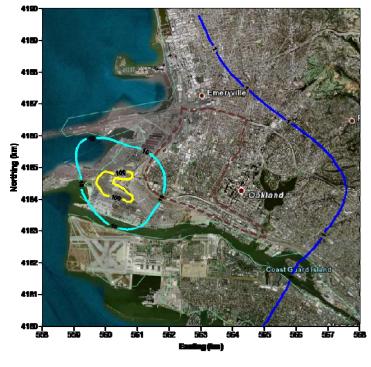


Figure D-18: Diesel PM Potential Cancer Risk Isopleth Around West Oakland Community from Port Locomotive Activity



DPHI Risk logicith around West Caldand Community from Port Locometive Activity (CPH = 2 TPY)

PART-II: UNION PACIFIC RAILYARD -OAKLAND

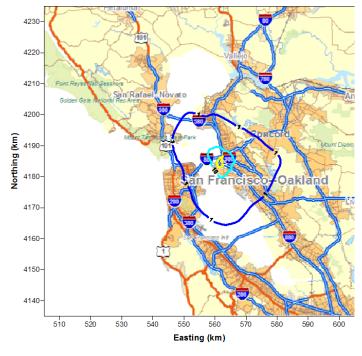
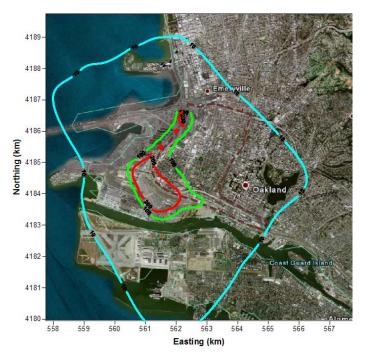


Figure D-19: Diesel PM Potential Cancer Risk from UP Locomotives for Part-II

Diesel PM Cancer Risk from UP Locomotives for Part-II (100 km x 100 km Receptor Domain, DPM = 11 TPY)

Figure D-20: Diesel PM Potential Cancer Risk from UP Railyard (Part-II)



Potential Diesel PM Cancer Risk from UP Railyard (Part-II) (10 km x 10 km Domain, DPM = 11 TPY)

# PART-III: THE COMMUNITY NEAR THE PORT OF OAKLAND

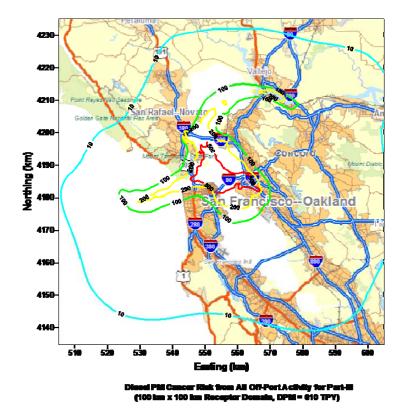
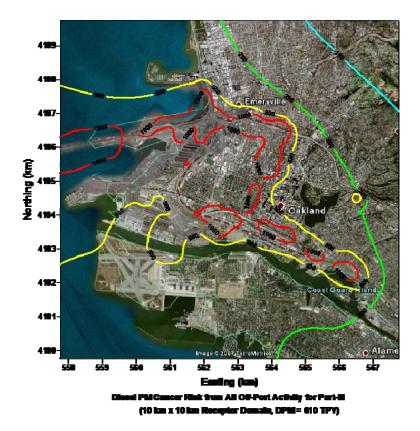


Figure D-21: Diesel PM Potential Cancer Risk from All Off-Port Activity for Part-II

Figure D-22: Diesel PM Potential Cancer Risk from All Off-Port Activity for Part-II



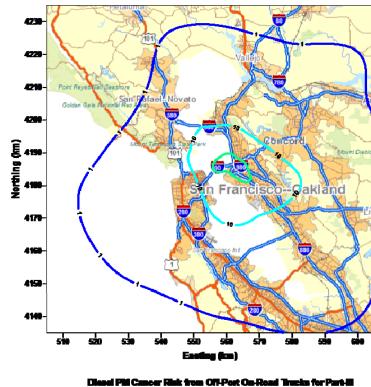
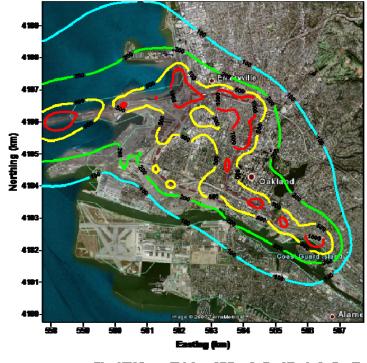


Figure D-23: Diesel PM Potential Cancer Risk from Off-Port On-Road Trucks for Part-III

Diesel Phi Cancer Rink from Off-Port On-Read Tracks for Part-II (100 km x 100 km Raceptor Domain, DPM = 91.5 TPY)

Figure D-24: Diesel PM Potential Cancer Risk from Off-Port Trucks for Part-III



Discel PM Cancer Risk from Off-Port On-Read Trucks for Part-II (10 km x 10 km Receptor Domain, DPM = \$1.5 TPY)



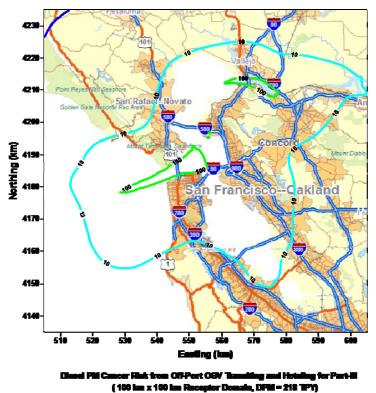
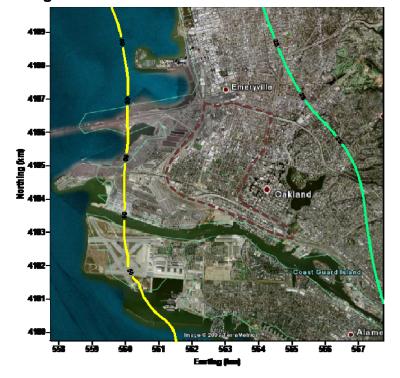


Figure D-26: Diesel PM Potential Cancer Risk from Off-Port OGV Transiting and Hotelling for Part-III





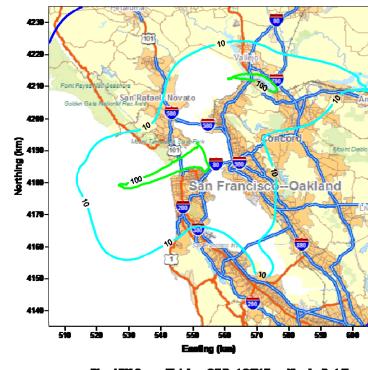
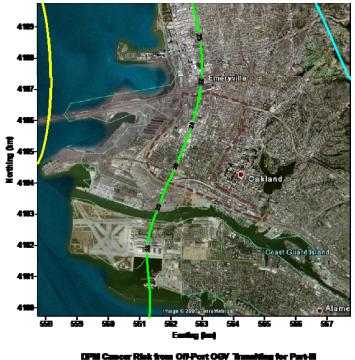


Figure D-27: Diesel PM Potential Cancer Risk from Off-Port OGV Transiting for Part-III

Diesel Ptil Cancer Risk from Off-Port OGV Transiting for Part-II ( 100 km x 100 km Receptor Domain, DPtil = 178.5 TPY)





(100 km x 100 km Receptor Domain, DPH = 178.5 TPY)

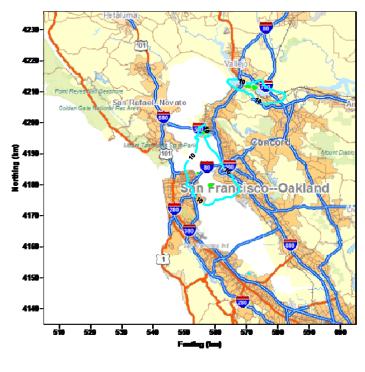
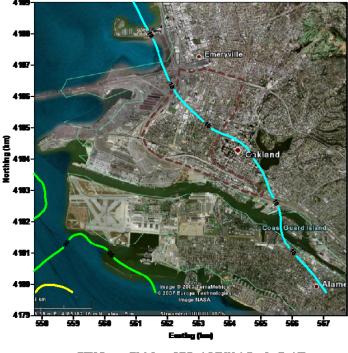


Figure D-29: Diesel PM Potential Cancer Risk Isopleth from Off-Port OGV Hotelling and Anchoring

DPH Risk leopisth from Off-Port OGV Hotsling and Anchoring (100 km x 100 km Receptor Damain, DPH = 40 TPY)

Figure D-30: Diesel PM Potential Cancer Risk from Off-Port OGV Hotelling for Part-III



DPNI Cancer Rink Irum Off-Part OGV Hoteling for Part-II (10 km x 10 km Receptor Damain, DPNI – 40 TPY)

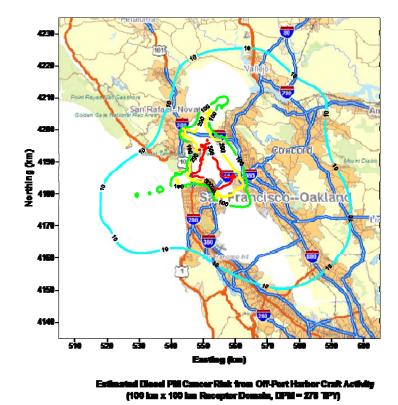
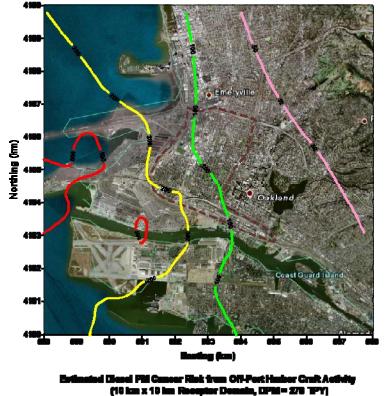


Figure D-31: Diesel PM Potential Cancer Risk from Off-Port Commercial Harbor Craft Activity





D-24



Figure D-33: Diesel PM Potential Cancer Risks from Amtrak Activity for Part-III

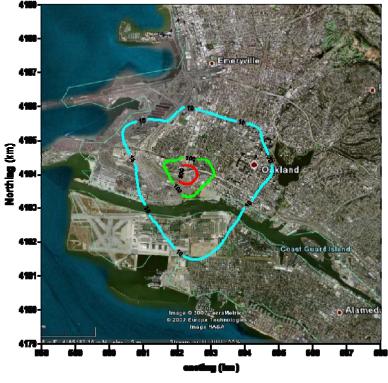
Diesel Phi Cancer Rinks from Amtrak Activity for Part-H (100 km x 100 km Receptor Domain, DPH = 3.4 TPY)

còs

Figure D-34: Diesel PM Potential Cancer Risk from Amtrak Activity for Part-III

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Diesel Phi Cancer Risk from Amtink Activity for Part-I (10 km x 10 km Receptor Domain, LIPH = 3.4 TPY)



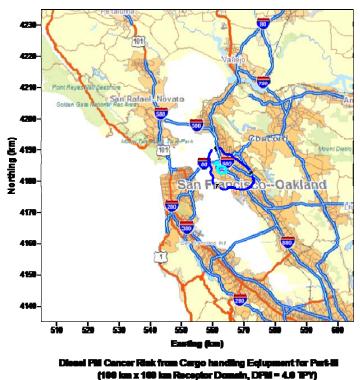
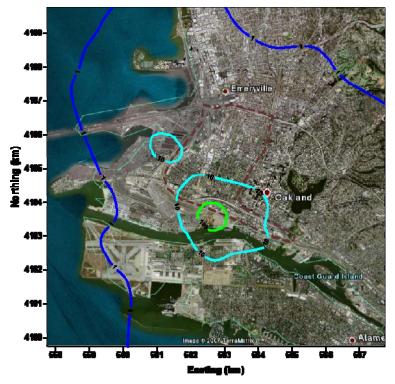


Figure D-36: Diesel PM Potential Cancer Risk from Cargo Handling Equipment for Part-III



Dissel PM Cancer Risk ison Cargo handing Equament for Part-1 (10 km x 10 km Receptor Danain, DPM = 4.0 TPY)



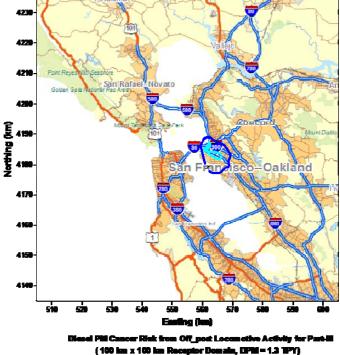
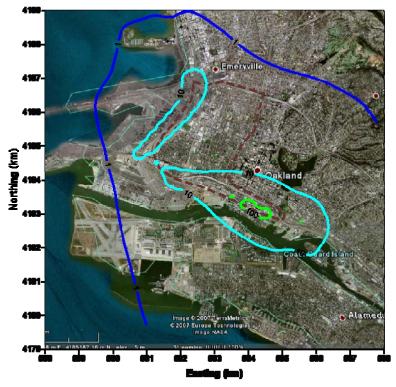


Figure D-38: Diesel PM Potential Cancer Risk from Off-Port Locomotive Activity for Part-III



lissei PM Cancer Rink from Off-Pert Lossen sites Astivity for Part-II (10 km x 10 km Receptor Demain, DPM = 1.3 TPY)

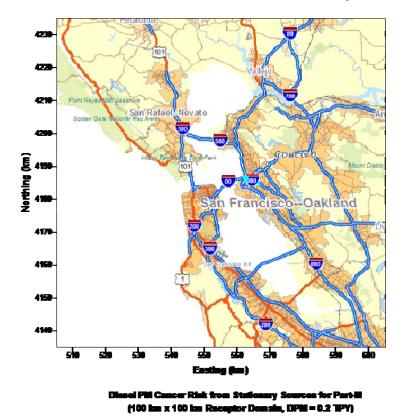
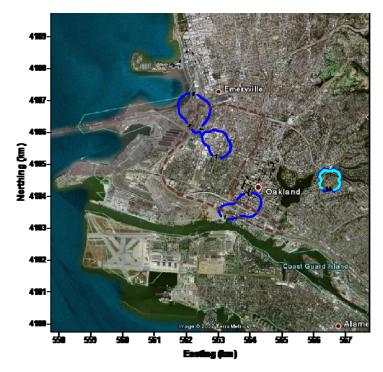


Figure D-39: Diesel PM Potential Cancer Risk from Stationary Sources Part-III

Figure D-40: Diesel PM Potential Cancer Risk from Stationary Sources for Part-III



Disci Phi Cancer Risk from Stationary Sources for Part-II (10 km x 10 km Receptor Domain, DPM = 0.2 TPY)

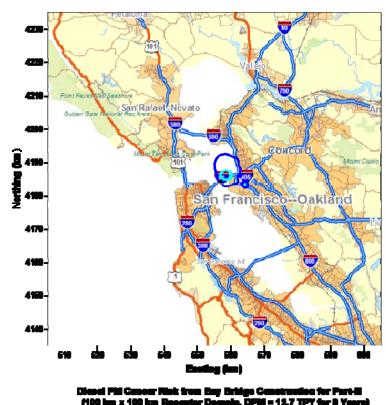


Figure D-41: Diesel PM Potential Cancer Risk from Bay Bridge Construction for Part-III

Figure D-42: Diesel PM Potential Cancer Risk from Bay Bridge Construction for Part-III



Cleased Phi Cancer Risk from Bay Bridge Construction for Part-II (10 km x 10 km Receptor Domain, DPhi = 12.7 TPY for 9 Years)



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er Risk fram Distribution Center Truck Activity for Part-III

(100 km x 100 km Receptor Domain, DPN = 2.0 TPY)

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Activity for Part-III

Dissel Fill Co

Figure D-43: Diesel PM Potential Cancer Risk from Distribution Center Truck Activity for Part-III

Figure D-44: Diesel PM Potential Cancer Risk from Distribution Center Truck

Need Phi Cancer Risk from Distribution Center Truck Activity for Part-II (10 km x 10 km Receptor Domain, DPhi = 2.0 TPY)

## POTENTIAL CANCER RISK ISOPLETH BY COMBINED THREE PARTS OR ALL CATEGORIES

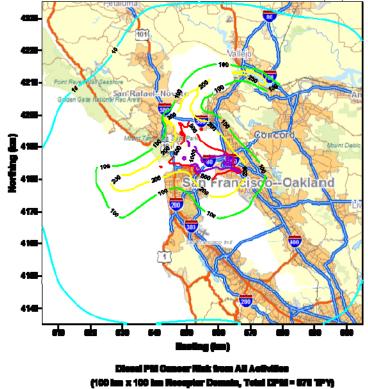
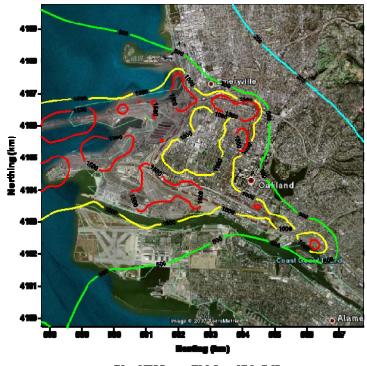


Figure D-45. Diesel PM Potential Cancer Risk from All Part I, II, and III Activities

Figure D-46: Diesel PM Potential Cancer Risk from All Part I, II, and III Activities



Dissel Fill Cancer Risk from All A cityline (10 km x 10 km Receptor Domain, Total DPM = 678 TPY)

## POTENTIAL CANCER RISK ISOPLETH BY CATEGORIES

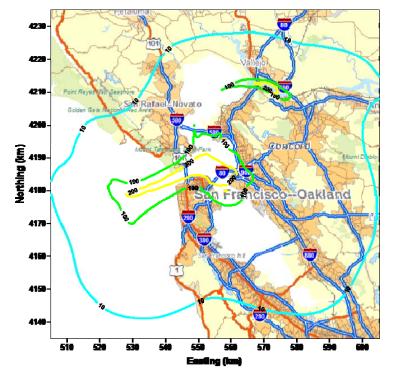
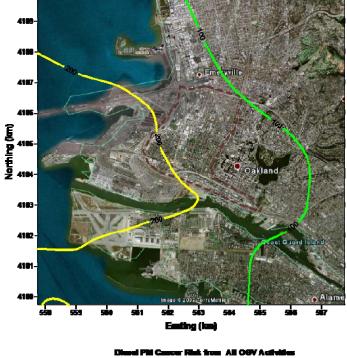


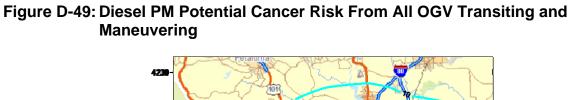
Figure D-47: Diesel PM Potential Cancer Risk from All OGV Activities

Nesel PM Cancer Rink from All OOV Activities (Domain = 100 km x 100 km, DPM = 427 TPY)

Figure D-48: Diesel PM Potential Cancer Risk from All OGV Activities



(Domain = 10 km x 10 km, DPM = 427 TPY)



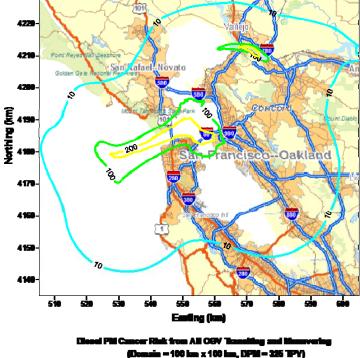
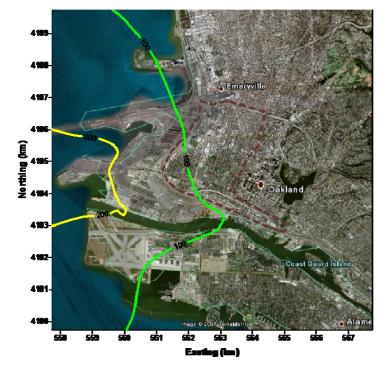


Figure D-50: Diesel PM Potential Cancer Risk from All OGV Maneuvering and Transiting Activities



Dissel PH Cancer Risk from All OGV Menuvering and Transiting Activit (Domain = 10 km x 10 km, DPH = 325 TPY)



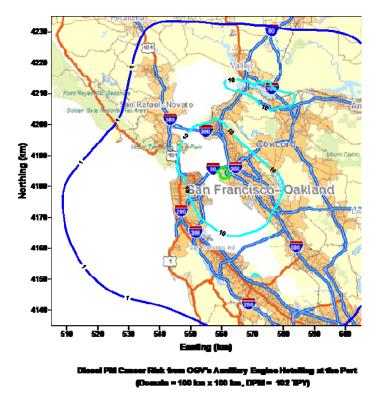
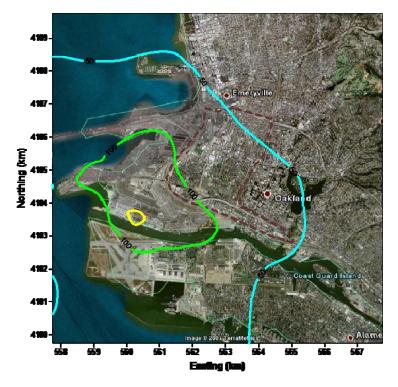


Figure D-52: Diesel PM Potential Cancer Risk from OGV Auxiliary Engine Hotelling



Diesel Phi Cancer Risk from OGV's Auxiliary Engine Hotaling (Domain = 10 km x 10 km, DPH = 102 TPY)

### Figure D-53: Diesel PM Potential Cancer Risk from Commercial Harbor Craft Activity

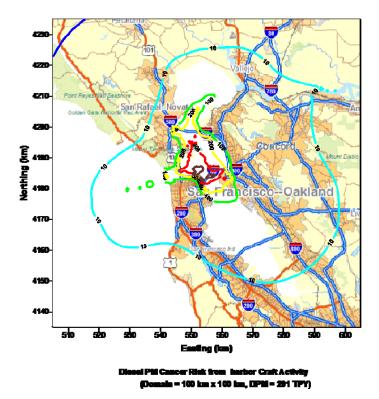
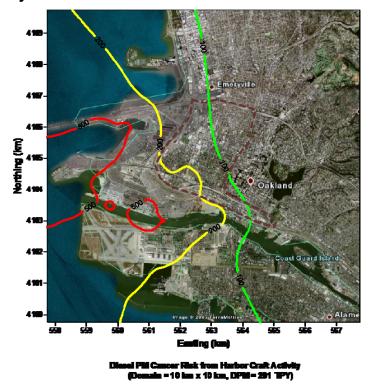


Figure D-54: Diesel PM Potential Cancer Risk from Commercial Harbor Craft Activity



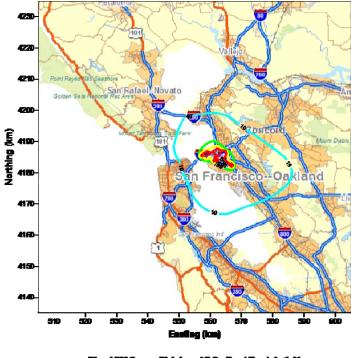
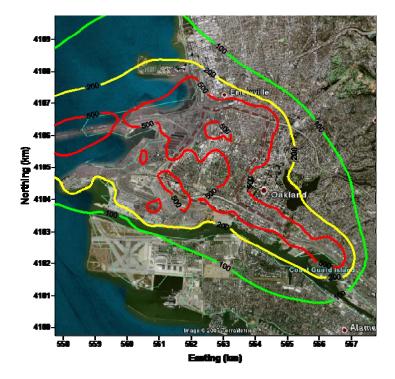


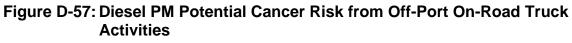
Figure D-55: Diesel PM Potential Cancer Risk from All On-Road Activities

Dincel PM Cancer Rink from All On-Read Track Activities (Domain = 100 km x 100 km, DPM = 110 TPY)

Figure D-56: Diesel PM Potential Cancer Risk from All Truck Activities



Nosel FM Cancer Risk from All Truck Activities (Domain = 10 km x 10 km, DFM = 110 TPY)



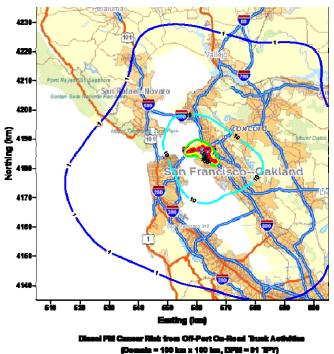
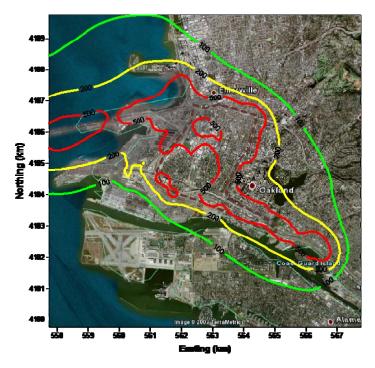


Figure D-58: Diesel PM Potential Cancer Risk from Off-Port's On-Road Truck Activity



Desel PM Cancer Risk from Off-Port's On-Read Truck Activity (Domain = 10 km x 10 km, DPM = 91 TPY)

#### Figure D-59: Diesel PM Potential Cancer Risk from Cargo Handling Equipment Activity

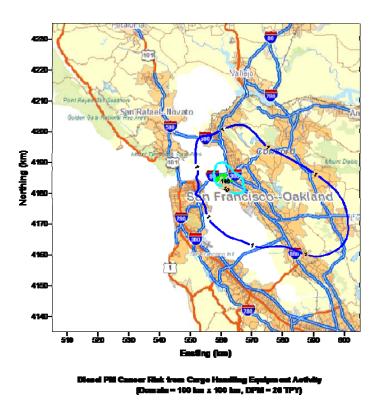
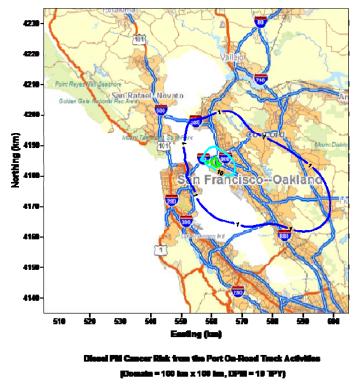


Figure D-60: Diesel PM Potential Cancer Risk from the Port On-Road Truck Activities



D-40

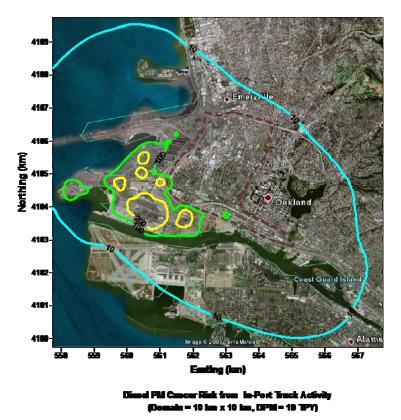
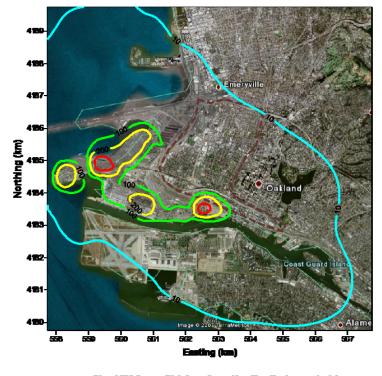


Figure D-61: Diesel PM Potential Cancer Risk from In-Port Activity

Figure D-62: Diesel PM Potential Cancer Risk from Cargo Handling Equipment Activity



iceal Phil Cancer Rink from Cargo Handling Equipment Activit (Domain = 10 km x 10 km, DPhil = 26 TPY)

# Figure D-63: Diesel PM Potential Cancer Risk from Other Activities (Stationary and Construction)

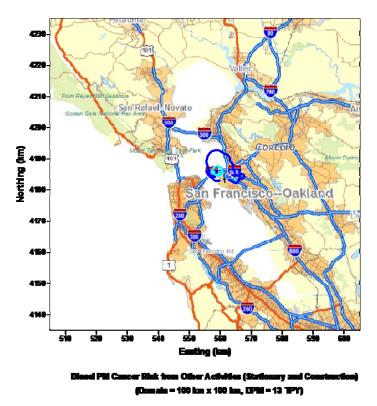
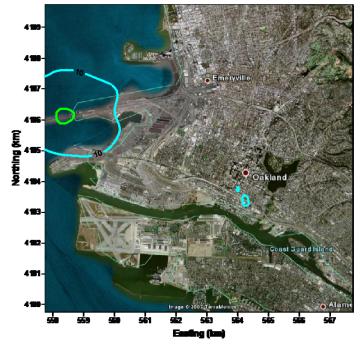


Figure D-64: Diesel PM Potential Cancer Risk from All Other Activities (Stationary and Construction)



Diesel Phi Cancer Rink from All Other Activities (Stationary and Construction) (Domain = 10 km x 10 km, DPhi = 13 TPY)