



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

Five Point Action Plan to Address Refinery Emissions

Stationary Source Committee Meeting
May 27, 2015

Eric Stevenson
Director of Meteorology, Measurement and Rules

Overview

- Progress to date
- Five Part Action Plan
- Comprehensive Greenhouse Gas (GHG) program
- Comments and responses
- Precedent setting actions
- Next steps



Progress to Date

- Regulatory Concept paper **(2012)**
- Industrial Facility Accidental Releases Work Plan **(2012)**
- Reg 12, Rule 15 development **(2013 to the present)**
- Reg 12, Rule 16 development **(Oct. 2014 to present)**
- Resolution Addressing Emissions from Bay Area Refineries **(Oct. 2014)**
- Refinery Emission Reduction Strategy **(Dec. 2014)**
- Workshops for 12-15 and 12-16 **(Mar. 2015)**



Goals of the Five Part Action Plan

- Address refinery operations/impacts on communities
- Set cap on Toxic Air Contaminants (TACs) and criteria pollutants
- Refinery operation changes will not increase health burden
- Reduce refinery criteria pollutant emissions and health risks by 20%



Five Part Action Plan Elements

- Regulation 12, Rule 15 (12-15)
- Regulation 12, Rule 16 (12-16)
- Permit review for crude oil changes
- Refinery Emission Reduction Strategy Rulemaking
- Refinery Methane Rulemaking



Regulation 12, Rule 15 Elements

- Annual emissions inventories
- Crude oil composition characteristics
- Fence line and community monitoring systems
- Health Risk Assessments (HRAs)
- Total climate change footprint



Regulation 12, Rule 15 Elements (new)

- Additional crude oil composition characteristics
- Energy efficiency audit
- Next draft by July



Regulation 12, Rule 16 New Elements

- Risk limit - 25 in 1 million using HRA required in 12-15
 - Future changes will likely incorporate this limit for all Bay Area facilities
- Implement criteria pollutant cap
- Next draft by July



Permit Review for Crude Oil Changes

- Crude slate modifications trigger permitting review
 - Engineering review of criteria pollutants, GHG and/or TACs
- Best Available Control Technology (BACT) for criteria pollutants, GHG and/or TACs
 - New Source Review for all affected systems



Refinery Emissions Reduction Strategy Rulemaking

- 20% criteria pollutant reductions by 2020
 - Includes five specific refinery emission reduction regulations
 - Additional rulemaking is being investigated
- 20% reduction in risk by 2020
 - 12-16 sets total risk at 25 in 1 million
 - 12-15 HRA and additional monitoring requirements will identify sources for further reductions





Refinery Strategy Rules

Title	Pollutant(s)	Amount Reduced	Projected Completion
Rule 9-14: Petroleum Coke Calcining	SO ₂	894 tons/year (tpy)	Fall 2015
Rule 6-5: Fluid Catalytic Cracking Units	Ammonia, PM	TBD	Fall 2015
Rule 8-18: Equipment Leaks	VOC, toxics, methane	1,227 tpy	Winter 2015
Rule 9-1: Sulfur Dioxide from Refineries	SO ₂	926 tpy	Winter 2015
Rule 11-10: Cooling Towers	VOC, toxics, methane	514 tpy	Winter 2015

Total Reductions for 2015: **3,561 tons per year or 23%** of total refinery criteria pollutant emissions.

Additional rulemaking for further reductions planned for 2016.

Refinery Methane Rulemaking

- Limit methane emissions from refineries by:

- Reducing equipment leaks
- Reducing cooling tower emissions
- Provides near-term climate benefits



- Limit emissions of specific sources not subject to Cap and Trade
- Investigate other areas that can provide methane emission reductions

Regulatory Program to Reduce GHG from Stationary Sources

- Incorporate GHG evaluation into permitting program
- Require BACT in New Source Review to limit GHG increases
- Develop regulatory proposals to limit short-lived climate pollutants
- Investigate and pursue areas for additional action to reduce GHG



Comments and Responses

- Suggestion to cap GHG
 - Response:
 - Comprehensive Regulatory Program to Reduce GHG from Stationary Sources
- Suggestion to address impacts “looking forward”
 - Response:
 - Changes to crude slate require permit review
 - Increases in criteria pollutant, GHG or TAC emissions trigger BACT



Comments and Responses (Continued)

- Suggestion to remove exemption for increased throughput
 - Response:
 - Exemption removed
- Cap criteria pollutant emissions
 - Response:
 - Required in 12-16



Precedent Setting Actions

- Fence-line and community monitoring required
- Updated HRA using latest methods
- Caps and reduces criteria pollutants
- Caps overall risk
- Identifies energy efficiency improvement opportunities
- Requires New Source Review for crude slate changes
- Reduces methane emissions from refineries
- Addresses GHG in permit review





Next Steps

- Finalize and bring 12-15 and 12-16 to the Board for consideration as soon as possible
- Finalize and bring new and modified regulations in the Refinery Strategy to the Board for consideration before the end of 2015
- Further develop and enact additional items in the five part action plan



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

Candlestick Park Demolition Update

Stationary Source Committee Meeting
May 27, 2015

Wayne Kino, Director
Compliance and Enforcement





Overview

- Project Description
- Project Timeline
- Multi-Agency Involvement
- Bay Area Air Quality Management District (BAAQMD)
Regulatory Requirements
- Community Concerns
- Next Steps



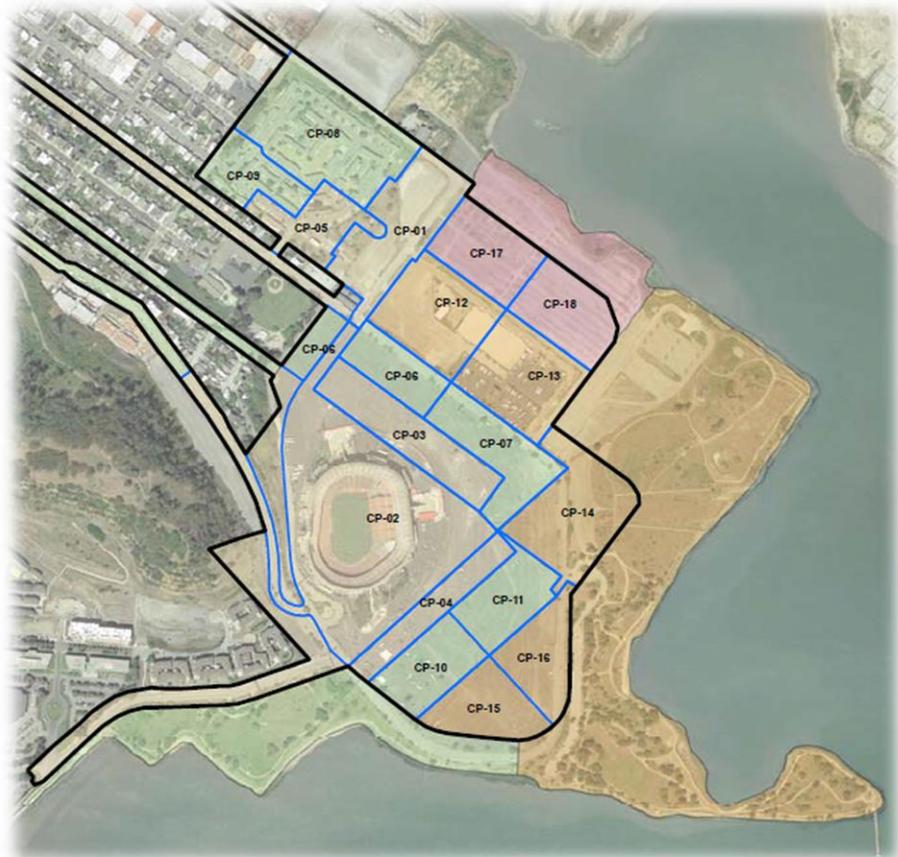
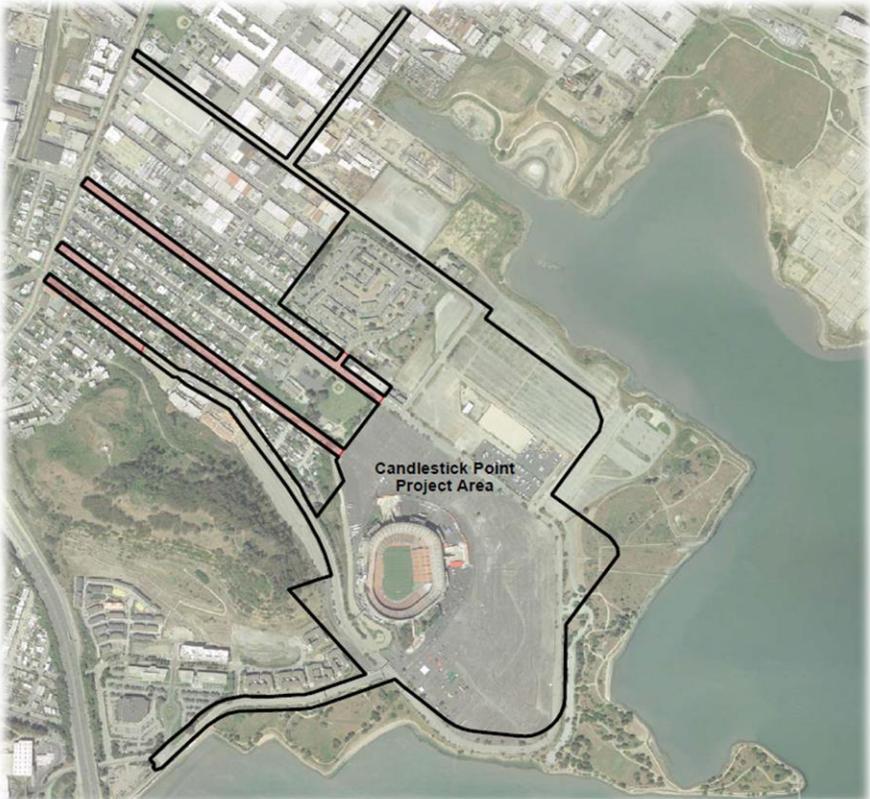
Candlestick Point Redevelopment Project

- Master Developer: Lennar Urban
- Project: new housing, commercial buildings, roads, utilities, etc.
- Project Site: 281 acres and 18 Sub-Phases
- Candlestick Stadium Demo/Development
 - 65 acres
 - 500,000-square-foot mall, houses, hotel, etc.
 - Completion Date: 2020
- Candlestick Point Projected Completion Date: 2029



Project Site Update

Candlestick Point Redevelopment Site Overview



Project Sub-Phases



Project Timeline

April 2014	Asbestos Dust Mitigation Plan (ADMP) approved by the Air District for Candlestick Point Redevelopment Project.
August 2014	Lennar Urban assessment of hazardous materials in the Candlestick stadium structure was completed.
October 2014	Lennar Urban had previously been pursuing a permit from the Department of Building Inspection (DBI) to demolish Candlestick Stadium through implosion, and has since withdrawn that request.
January 2015	Lennar Urban hazardous materials abatement work of Candlestick stadium structure was completed.
January 13, 2015	SF DBI issued Lennar Urban a permit to demolish Candlestick Stadium through mechanical, or conventional, methods.
February 2015	Lennar Urban began demolishing Candlestick Stadium through mechanical, or conventional, demolition means.
May 2015	ADMP submitted and under review by the Air District for Candlestick Stadium sub-phase blocks (CP-1, CP-2 and CP-3).
Anticipated by June 2015	Mechanical demolition of Candlestick Stadium completion.
December 2029	Completion of the Candlestick Point Redevelopment Project.



Multi-Agency Involvement

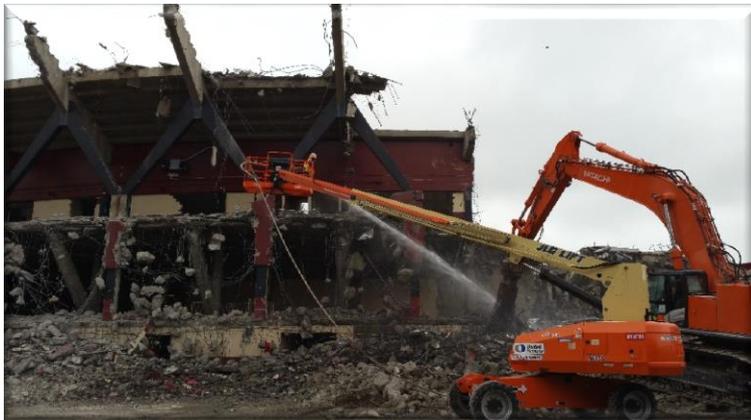
- San Francisco Department of Public Health
 - Requires Dust Control Plan, particulate (PM10) air monitoring
- San Francisco Department of Building Inspections
 - Issues demolition and other building permits
- San Francisco Office of Community Investment and Infrastructure
 - Land use, development and design approval authority



Air District Role

- Air District enforces the state Asbestos Air Toxics Control Measure (ATCM) for Construction and Grading Projects
 - Asbestos Dust Mitigation Plan approval
 - Implementation of dust mitigation measures
 - Asbestos air monitoring
- Regulations for Demolition of Candlestick Park
 - Regulation 11, Rule 2: identification and removal of all regulated asbestos containing material before demolition
 - Regulation 6, Rule 1: Visible Emissions
 - Mobile Source Regulations

Dust Control





Air District Activities

- Daily onsite inspections and surveillance
 - Violation issued for visible emission
- Staff attends weekly construction meetings
- Staff meets with all stakeholders
- Collaboration with Local Agencies to address community concerns



Enhanced Dust Control

Increased dust mitigation measures as result of visible emission violations documented by Air District staff





Next Steps

- Continue to monitor projects to ensure:
 - compliance with all requirements, and
 - use of best management practices to reduce dust emissions
- Continue to collaborate with:
 - local agencies, and
 - community
- Attend meetings associated with Candlestick Point Projects