



# Independent Review Panel Closure Efforts for Exide Technologies

February 10, 2016



Department of Toxic Substances Control



# Introduction

- Overview
  - Barbara Lee, Director
- Closure Process
  - Elise Rothschild, Deputy Director, Hazardous Waste Management Program
- Exide Closure Plan
  - Ann Carroll, Senior Staff Counsel
- Residential Cleanup/Public Outreach
  - Ray Leclerc, Division Chief, Cleanup Program
  - Ana Mascarenas, Assistant Director, Environmental Justice



# Status of Exide Project in Early 2015

- Exide in bankruptcy
- Permit application pending
- Facility planning to resume operations in March 2015
- Community felt a lack of engagement from DTSC's leadership



# Progress: Permit Denial/Closure

- Informed Exide that permit would be denied
- Accelerated payments into Closure Trust Fund
- Structured closure process
- Embodied terms in enforcement order



# Progress: Public Engagement

- Met with residents in April 2015
  - First of six community meetings between community and Director
- Convened Advisory Group with South Coast AQMD
  - State, federal and local agencies
  - Elected officials
  - Academics
  - Advocates
  - Community leaders
  - Local residents
- Technical advisor for community



# Progress: Testing and Residential Cleanup

- 496 residential properties tested
- 193 residential properties cleaned up



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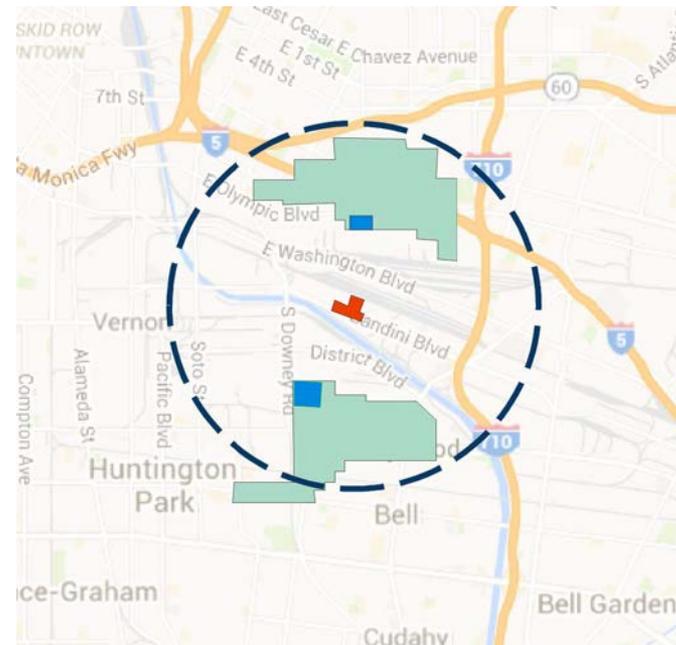
# Administration's Support

- Closure and enforcement orders
- Decision to deny permit



# Progress on Exide: Defining Scope of Contamination

- Additional analysis
  - Emissions from Exide could have contaminated properties 1.7 miles away



# Budget Augmentation

- Governor provided \$7 million in additional funds to:
  - Test up to 1,500 residential properties
  - Continue cleanup on most impacted properties
  - Conduct environmental review



# Accelerated Cleanup

- Additional funds allowed accelerated residential cleanups
- Cleanup proceeding under different regulatory authority
  - Using state funds
  - Allowing for cost recovery from responsible parties
  - Working with Attorney General's Office to develop strong cost recovery case



# Partnership with Other State Agencies

- Attorney General's Office
- California Department of Public Health
- Office of Environmental Health Hazard Assessment
- Air Resources Board
- Regional Water Quality Control Board
- Cal/EPA



# Commitment of Resources

- 22,000 hours dedicated to project in 2015
- Top priority
  - New testing data
  - Comprehensive cleanup plan
  - Work is informing decisions
  - Further testing and cleanup in next fiscal year
  - Hold Exide accountable



# CLOSURE PROCESS

Elise Rothschild,

- Deputy Director,  
Hazardous Waste Management Program

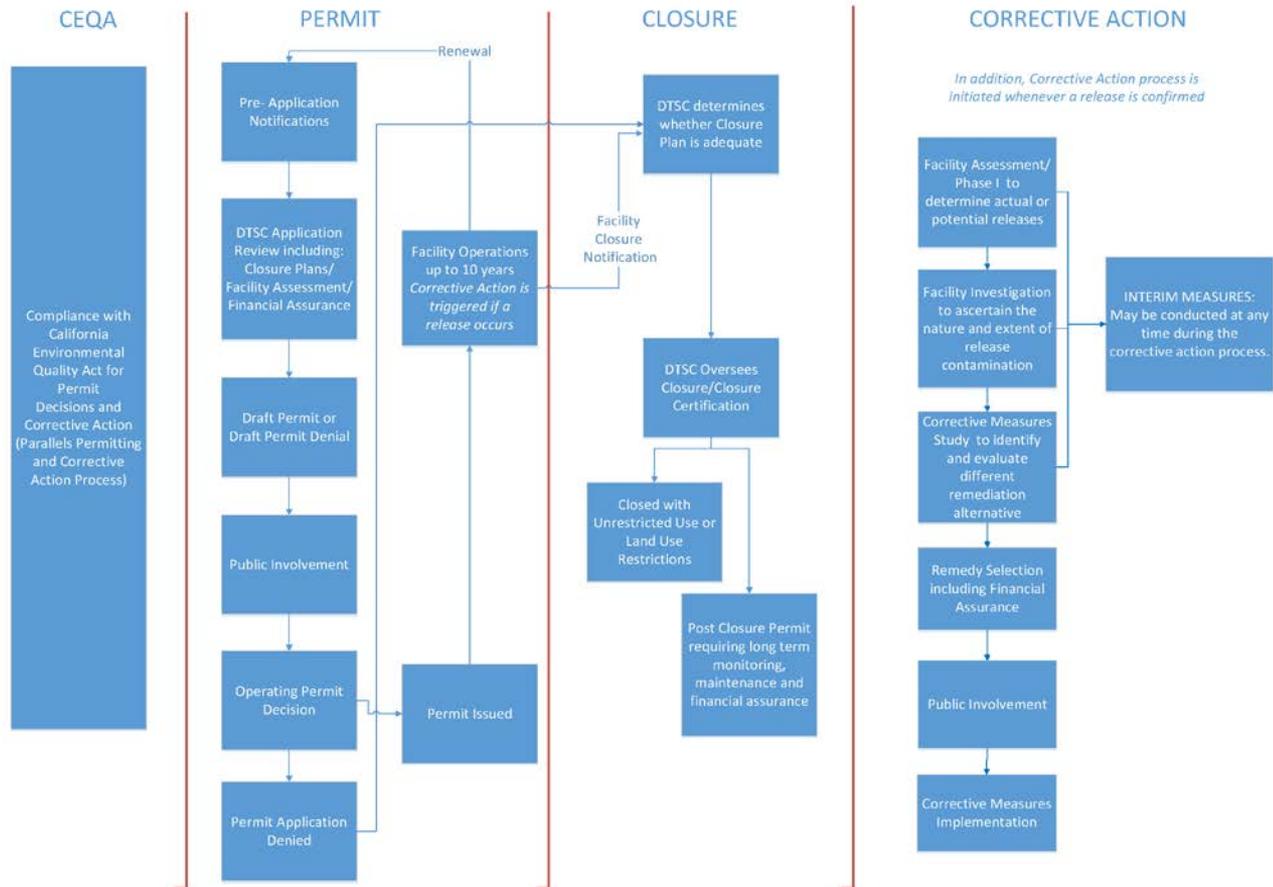
# Regulatory Process for Closure

- Elements of presentation:
  - How DTSC makes a permit decision
  - How Closure Plans provide safety
  - How closure costs are developed
  - How DTSC implements Closure Plan
  - How DTSC ensures effective implementation
    - Types of financial mechanisms



# Regulatory Process for Permits

## RCRA Regulatory Process for Permits, Closures, and Corrective Action



# How DTSC Makes a Permit Decision

- Application prepared by facility/submitted to DTSC
- Application must include description of:
  - Facility's activities
  - Areas of hazardous waste management
  - Types of equipment
  - Specifications
  - Tracking and record keeping systems
  - Response to accidents process
  - Location of sensitive land uses
  - Training
  - How facility will manage HW safely



# Elements of Closure Plan in Application

- Application must contain:
  - Closure Plan
  - Closure cost estimates
  - Mechanism for financial assurance



# Permit Decision Process

- DTSC reviews application for:
  - Technical completeness
  - Compliance with all requirements
- DTSC prepares:
  - Draft permit decision
  - CEQA document
- Public Involvement:
  - Public Notice
  - Documents circulated
  - Public review and comment

# Final Permit Decision

- DTSC considers public comment
- Reconsider draft decision
- Issue final decision
- DTSC then monitors facility operation to ensure compliance



# Corrective Action

- Facility required to clean up past releases
- Permit contains schedules of compliance
- 175 facilities undergoing corrective action
- DTSC's Cleanup Program oversees



# Closure Plans

- Describe steps to safely close the facility
- Must include closure cost estimate
- Are approved as part of permit
- Revisions must be submitted when:
  - Changes in operations occur that may affect the plan
  - Expected year of closure changes
  - Unexpected events require modification



# Contents of Closure Plan

- Description of each hazardous waste unit's closure
- Estimate of maximum hazardous waste inventory
- Methods to remove, decontaminate, transport, treat and dispose
- Activities needed to ensure closure is safely implemented
- Estimate of closure year

# DTSC Oversight of Closure

- Site inspections during closure
- Certification by independent engineer
- Withholding of financial assurance funding until all requirements are met



# History of Closed Facilities

- 329 facilities successfully closed by DTSC
- 12 facilities required public funds
  - DTSC pursues cost recovery



# Financial Assurance Mechanisms

- Trust fund
- Surety bond
- Letter of credit
- Insurance policy
- Financial test/corporate guarantee
- Alternative mechanisms
  - Certificates of deposit
  - Secured savings accounts
  - Time deposit agreements



# DTSC Review of Financial Assurance

- Ensures that mechanism is valid, sound for safe closure
- Mechanisms reviewed regularly



# Closing Exide: Legal Framework

- Exide shut down before permit process completed
- State and federal law require closure plan
- Exide funding closure
- Closure Plan and Financial Assurance structured in Enforcement Order approved by Bankruptcy Court



# Closing Exide: Other Key Features

- SCAQMD air monitoring shows high likelihood of lead dust without careful containment and control
- Close regulatory coordination needed to protect public
- Community involved in decision-making process



# **EXIDE CLOSURE: FINANCIAL ASSURANCE**



Ann Carroll,  
Senior Counsel,  
Office of Legal Affairs

# Overview

- Enforcement Order Requirements
  - Funding Corrective Action & Closure
  - Closure of the Exide Facility
- Exide's Draft Closure Plan & DTSC's Draft Environmental Impact Report



# Enforcement Order

- Issued after Exide entered bankruptcy
- DTSC preserved its rights against Exide for cleanup of contamination released at and from the facility
- Exide's bankruptcy does not protect it from its obligation to pay for cleanup
- [http://www.envirostor.dtsc.ca.gov/public/eerppublicdocs/5610517203/Exide\\_FCI2014\\_StipOrder112114.pdf](http://www.envirostor.dtsc.ca.gov/public/eerppublicdocs/5610517203/Exide_FCI2014_StipOrder112114.pdf)
- [http://www.dtsc.ca.gov/HazardousWaste/Projects/upload/Stipulation\\_and\\_Order\\_Amend.pdf](http://www.dtsc.ca.gov/HazardousWaste/Projects/upload/Stipulation_and_Order_Amend.pdf)



# Corrective Measure Studies

- Order requires Exide to submit 3 corrective measures studies:
  - Residential by May 2019
  - Off-site industrial by November 2019
  - On-site by December 31, 2016
- DTSC will determine and select the appropriate the corrective action measures based upon the studies submitted



# Corrective Action Funding

- The Order requires Exide to fund all corrective action activities selected by DTSC.
- Three separate corrective action trust funds:
  - Residential
  - Off-site Industrial
  - On-site



# Residential Off-Site Corrective Action Trust Fund

- As of May 30, 2015, Exide deposited \$9 million
  - Expended cleaning residential properties in the initial assessment areas
- 3 additional payments totaling \$5 million between November 2018 & March 2020
- Following approval of Residential Corrective Measures Study, Exide will deposit funds annually for up to 10 years



# Industrial Off-site & On-site Corrective Action Trust Funds

- Total value of each fund shall equal the cost estimate for the respective DTSC-selected corrective actions
- Exide will make deposits into each fund annually for up to 10 years



# Closure Costs

- Order requires that Exide:
  - Pay for all closure costs – estimated to be \$38.6 million
  - Establish financial assurance – approximately \$26 Million
    - Surety Bond
    - Closure Financial Assurance Trust Fund



# Closure Financial Assurance Trust Fund

Deposit #	Deposit Amount	Date Paid or Due	Status
1	\$500,000.00	October 31, 2014	Paid
2	\$2,250,000.00	November 21, 2014	Paid
3	\$2,750,000.00	April 30, 2015	Paid
4	\$2,750,000.00	November 1, 2015	Paid
<b>subtotal</b>	<b>\$8,250,000.00</b>		
5	\$3,250,000.00	November 1, 2017	Future Payment
6	\$3,250,000.00	March 31, 2018	Future Payment
<b>Total</b>	<b>\$14,750,000.00</b>		

# **EXIDE CLOSURE: PROCESS**

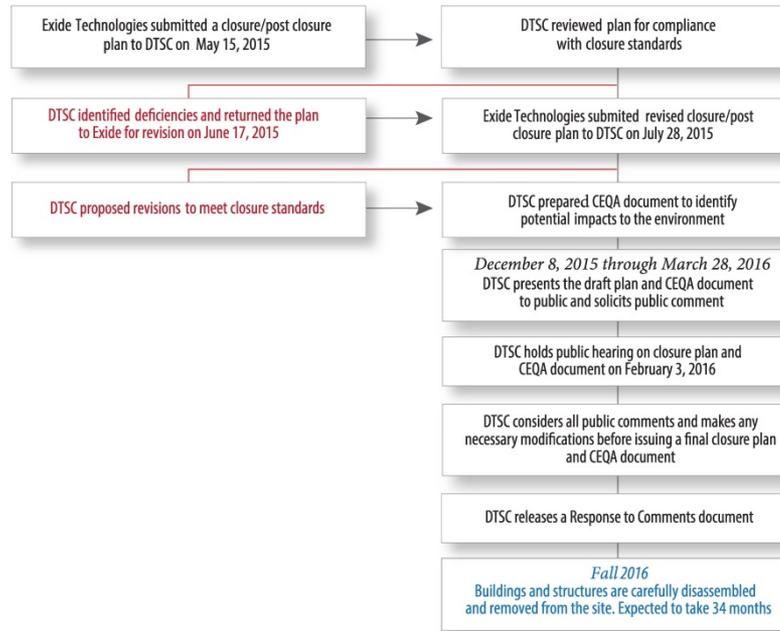


Suhasini Patel,  
Senior Scientist,  
Hazardous Waste Management Program

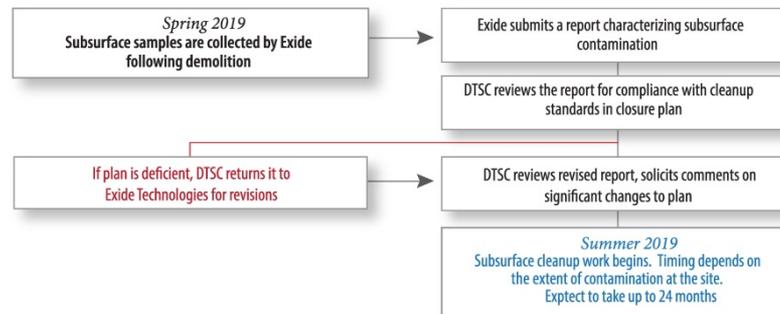
# DTSC's CLOSURE PROCESS

The safe closure of the Exide facility will occur in two phases.

## PHASE 1: DEMOLITION OF ABOVEGROUND STRUCTURES



## PHASE 2: CLEAN-UP CONTAMINATED SOILS BENEATH STRUCTURES



# Exide's Draft Closure Plan

- Addresses potential impacts from hazardous waste management units at the facility and excludes areas included in 2002 Order
- Phase I:
  - Removal of Hazardous Waste Inventory
  - Decontamination, removal, and disposition of Hazardous Waste Management units;
  - Prevent fugitive emissions and comply with air quality standards;
- Phase II:
  - Foundation and Soil removal based on Phase I data
  - Post-closure permit application, if necessary



# Advisory Group & Community Input

- Significant public feedback considered prior to public noticing draft plan
  - Lead in kettles
  - Truck identification
  - Truck routes
  - Protecting the public during closure
  - Regulatory oversight during closure
  - Community outreach/comment period
  - Interaction of closure and corrective action processes



# Kettles

- 13 kettles each about 2 stories tall, ~90 ton capacity
- 6 kettles have less than 12 tons of lead,
- 7 kettles have over 12 tons of lead



tro

# CEQA Evaluation of Kettles

- Draft EIR evaluated alternatives for removing lead from kettles
  - Manual removal
  - Water cutting
  - Reheating kettles (Exide's proposed method)
- DTSC will make a decision on which alternative to implement based on public comments received



# Other Community Concerns

- Truck identification
- Truck routes
- Protecting the public during closure
- Regulatory oversight during closure
- Community outreach/comment period
- Interaction of closure and corrective action processes



# Public Review and Comment

- Dec. 8, 2015 public notice of Draft Closure Plan and Draft EIR
- Hearing on Feb. 3, 2016
- Comment period extended to March 28



# Next Steps

- DTSC will:
  - Consider all comments
  - Draft a written response to all comments
  - Modify Exide's Draft Closure Plan
  - Issue final Closure Plan and final EIR
  - Exide required to implement approved plan within 30 days of approval
  - DTSC will monitor implementation in addition to third-party oversight



# DTSC's Commitment During the Exide Facility Closure Process

- Safeguard the community
- Protect the environment
- Engage the community
- Partnered with SCAQMD to ensure the control of air emissions:
  - Tent and keep the facility under negative pressure
  - Maintain air pollution control equipment
  - Monitor for emissions



# Commitment: Preventing Release of Contamination

- Decontamination of trucks
- Confirmation testing
- Loading in a containment structure
- All water treated
- Wastes contained during transport
- ID numbers on trucks so community can observe
- Third party monitoring



# Commitment: Community Engagement

- Meet with Advisory Group
- Work with Technical Advisor
- Consult with experts
- Brief city councils
- Train and involve community in soil sampling in residential areas
- Daily contacts in field
- Hearing on Closure Plan



# RESIDENTIAL CLEANUP

Ray Leclerc, Division Chief,  
Brownfields & Environmental  
Restoration Program

Ana Mascareñas,  
Assistant Director,  
Environmental Justice and Tribal Affairs

# Residential Cleanup: Background

- Ordered Exide to begin residential testing in 2013
- Two Initial Assessment Areas containing 219 properties:
  - North: Boyle Heights
  - South: Maywood
- Enforcement Order of 2014



# Initial Assessment Areas

- Of the 219 properties
  - 195 provided access for sampling
  - 186 cleaned up
  - 6 declined cleanup
  - 3 did not require cleanup
- DTSC escalating pressure on property owners who have not provided access



# Expanded Area, Initial Testing

- DTSC ordered Exide to determine the extent of its contamination
- Testing began in September 2014, ended in April 2015
- 146 residential properties tested
- Results shared with public in early May 2015

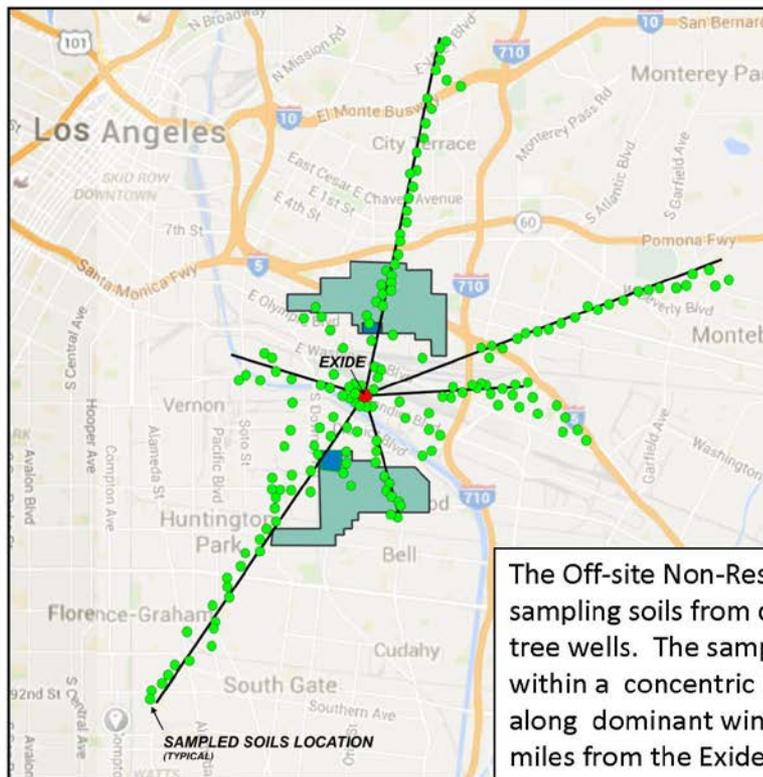


# Expanded Area, Additional Testing

- Testing along dominant wind directions up to 4.5 miles away
- Evaluation of data in the Industrial Area
- Additional sampling and analysis of “marker metals”



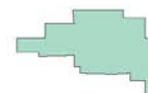
# Off-Site Non-Residential



Initial Assessment  
Area Soils (Residential)



Expanded Areas



Sampling Transects  
Wind Directions



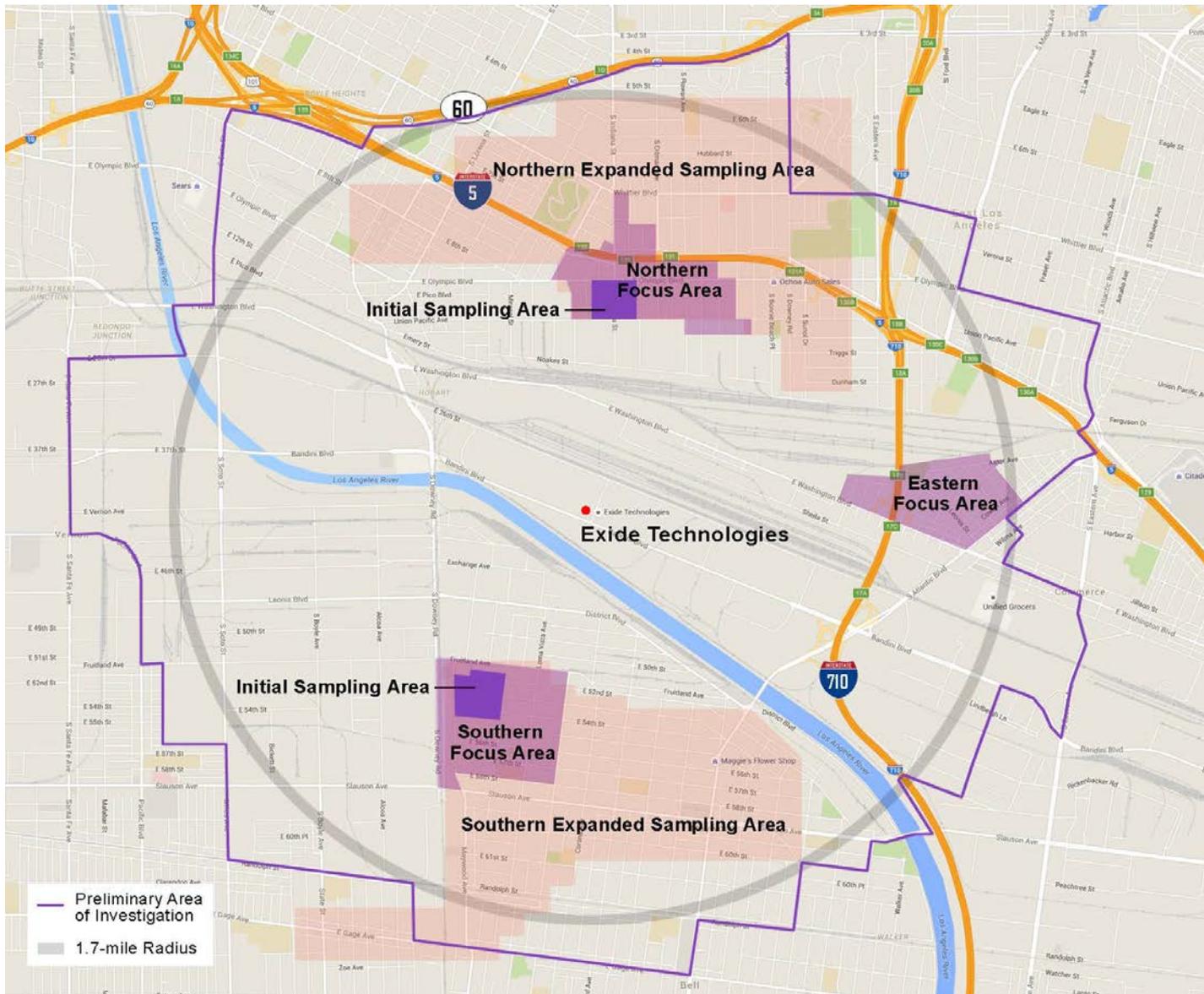
The Off-site Non-Residential soil sampling consisted of sampling soils from common areas such as medians and tree wells. The sampling began by collecting soils within a concentric radial pattern to 7500 feet, then along dominant wind transects to approximately 4.5 miles from the Exide Facility. Analysis included 20,000 data points.



# Expanded Area, Analysis

- Analysis completed in July 2015:
  - Total of 19,894 samples, 4,144 locations
  - Distribution not a circle
  - 1.7-mile circle encompasses about 10,000 homes
- We do not know how many will require cleanup
- Committed to testing and prioritizing cleanups





# Budget Augmentation

- In August 2015 the Administration augmented DTSC's budget by \$7 million to:
  - Test up to 1,500 residential properties in Expanded Area
  - Clean up most contaminated properties
- Shared this information with Advisory Group and Public in August 2015



# Draft Approach

- In November 2015 DTSC met with Advisory Group:
  - Draft method for prioritizing properties
  - Draft plan for cleaning highest priority properties
- Advisory Group comments reflected in finalized method and plan



# Near-term Cleanup

- **Cleaning up 50 priority properties**
  - 35 high priority in expanded area
  - Additional high priority properties from testing this year
- **Environmental Review**
  - Current document covers 50 cleanups
  - Further review is required for additional cleanup

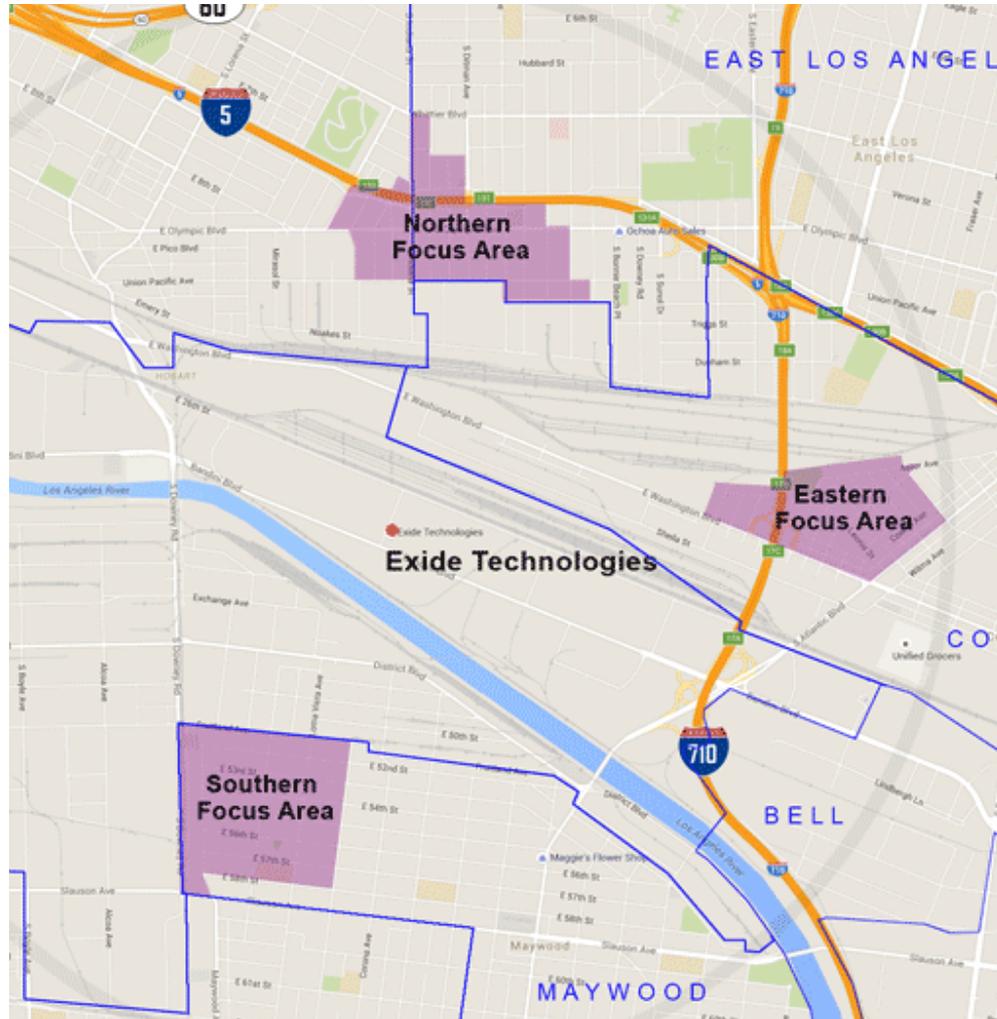


# Next Phase of Testing

- Plan for testing of all homes in 1.7-radius
- Finalized in November 2015
- Testing began immediately
- 411 access agreements in place
- 5 additional cleanups since Jan. 1, 2016
- Working with community-based groups to obtain access agreements
- Expect all 50 properties cleaned up by July 1, 2016



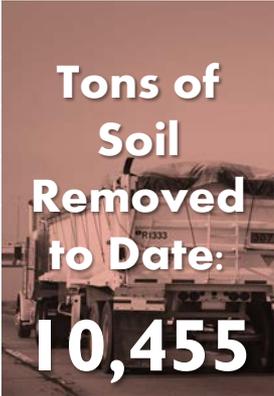
# Focus Areas



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# Progress on Residential Cleanup

Residential Investigation and Cleanup Progress				
	Initial Assessment Area	Preliminary Investigation Area	Total	
Properties potentially impacted	219	~10,000	~10,000	 <p><b>Tons of Soil Removed to Date:</b> <b>10,455</b></p>
Properties with signed access agreements	195	557	752	
Properties sampled	195	301	496	
Properties assigned Priority I cleanup status	40	76	116	
Properties cleaned up	186	7	193	
Properties refused access for cleanup	6	0	6	
Properties no cleanup required	3	2	5	
<p>Last update: 02/02/2016      For questions, contact: Mary Sue Maurer, Public Participation Specialist (818) 717-6566</p> <p>PIA - Preliminary Investigation Area: 1.7-mile radius around Exide Facility, properties potentially impacted is approximately 10,000</p>				



# Lead in Soil

- Lead Paint contribution
  - We do not know how significant
- Data indicate Exide is a very significant contributor as far as 1.7 miles
- Other contributors to lead in soil
  - Gasoline prior to 1980s
  - Other industries



# Lead-based Paint

- In 1977 the United States banned lead-based paint (LBP) for residential properties
- Homes built before 1977 are likely to have LBP unless it was already removed



# Why is Addressing Lead Paint Important?

- LBP on houses & structures is a continuing health risk, especially to children
- Deterioration of LBP is a continuing source of contamination inside the home and in the yard
- Need to hold Exide accountable for its contamination



# Cleanup Inside Homes

- Best practice: clean up interior following yard cleanup
  - Previous practice: voucher and discussion
  - New practice: include scheduling at time of yard cleanup
    - Ensures that the indoor cleanup is not overlooked
  - Follow-up to ensure that everyone is aware of indoor cleaning benefits



# On-Site Corrective Action

- Requirements that go beyond Site Closure
  - Investigate and remediate site releases >5 feet
    - 2888 tons of CA HW soils
    - 3492 tons of RCRA HW soils
  - Storm water piping
    - Removal of ~ 3,100 linear feet of piping
    - 33 structures (including manholes and drain inlets)
    - Abandonment of ~ 600 linear feet of piping



# Current RCRA Facility Investigation Efforts

- Fieldwork completed in December 2015
  - Over 300 shallow and deep soil borings
  - Thousands of soil samples
  - More than 25 groundwater wells
- Draft reports due in Spring 2016



# RCRA Corrective Measures

- Exide must submit a Corrective Measures Study for Soil and Groundwater by December 31, 2016



# Off-site Industrial Cleanup

- Dust and dirt cleaning
- Emergency response interim measures
- Sidewalks and curbs vacuuming
- Storm water inlets and piping cleaned and soil removed street-side tree wells and landscaped areas
- Flood control channel cleaning



# Public Involvement

- Partnerships
- Community networking
- Advisory group
- Technical advisor
- Importance of establishing trust with community and individual home owners/tenants



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# Draft Outreach Plan

- Three goals:
  - Inform affected communities about lead sampling, cleanup activities and closure
  - Collaborate closely
  - Ensure information is available



# Efforts in Past Year

- 20 public meetings/forums
- Tens of thousands of notices
- Advisory Group
  - Met 8 times
  - Technical Advisor
  - Facilitator
  - Governance charter under development



# Access for Sampling

- Three focus areas:
  - Mailed access agreements
  - Pilot projects with community groups



# Communication

- Interior cleaning
  - Revised protocols
  - Changes in communication
- Access agreements for sampling
  - Tenants
  - Property owners
- Revising outreach materials
- Collaborations
- Empower the community
- Enhanced contact points

