Independent Review Panel
Closure Efforts for Exide Technologies

February 10, 2016

Department of Toxic Substances Control

Cal/EPA

Introduction

- Overview
  - Barbara Lee, Director
- Closure Process
  - Elise Rothschild, Deputy Director, Hazardous Waste Management Program
- Exide Closure: Financial Assurance
  - Ann Carroll, Senior Staff Counsel
- Exide Closure Plan
  - Suhasini Patel, Supervising Scientist, Hazardous Waste Program
- 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

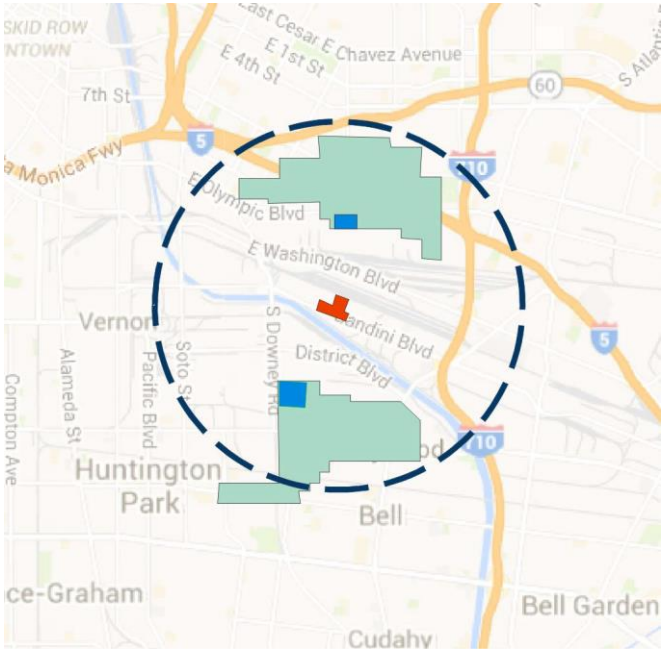
- 523 residential properties tested
- 194 residential properties cleaned up

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

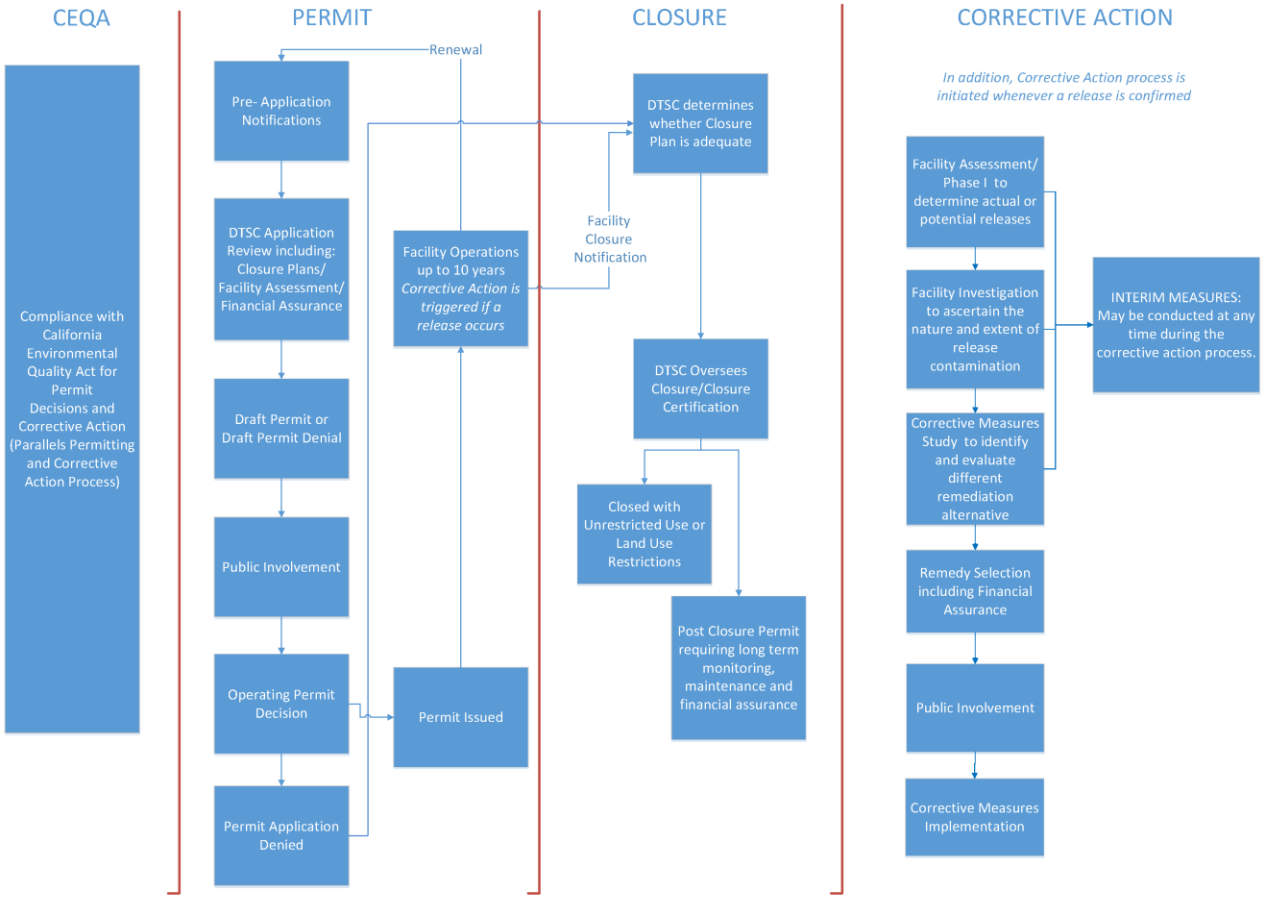
Elise Rothschild,
- Deputy Director,
Hazardous Waste Management Program

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



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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

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.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
subtotal	$8,250,000.00		
5	$3,250,000.00	November 1, 2017	Future Payment
6	$3,250,000.00	March 31, 2018	Future Payment
Total	$14,750,000.00		

EXIDE CLOSURE: PROCESS

Suhasini Patel,
Supervising 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

- Exide Technologies submitted a closure/post closure plan to DTSC on May 15, 2015
- DTSC reviewed plan for compliance with closure standards
- DTSC identified deficiencies and returned the plan to Exide for revision on June 17, 2015
- Exide Technologies submited revised closure/post closure plan to DTSC on July 28, 2015
- DTSC proposed revisions to meet closure standards
- DTSC prepared CEQA document to identify potential impacts to the environment
- *December 8, 2015 through March 28, 2016* DTSC presents the draft plan and CEQA document to public and solicits public comment
- DTSC holds public hearing on closure plan and CEQA document on February 3, 2016
- DTSC considers all public comments and makes any necessary modifications before issuing a final closure plan and CEQA document
- DTSC releases a Response to Comments document
- *Fall 2016* Buildings and structures are carefully disassembled and removed from the site. Expected to take 34 months

Phase 2: Clean-Up Contaminated Soils Beneath Structures

- *Spring 2019* **Subsurface samples are collected by Exide following demolition**
- Exide submits a report characterizing subsurface contamination
- DTSC reviews the report for compliance with cleanup standards in closure plan
- If plan is deficient, DTSC returns it to Exide Technologies for revisions
- DTSC reviews revised report, solicits comments on significant changes to plan
- *Summer 2019* Subsurface cleanup work begins. Timing depends on the extent of contamination at the site. Exptect to take up to 24 months

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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

Community Concerns

- 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

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

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 flags 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

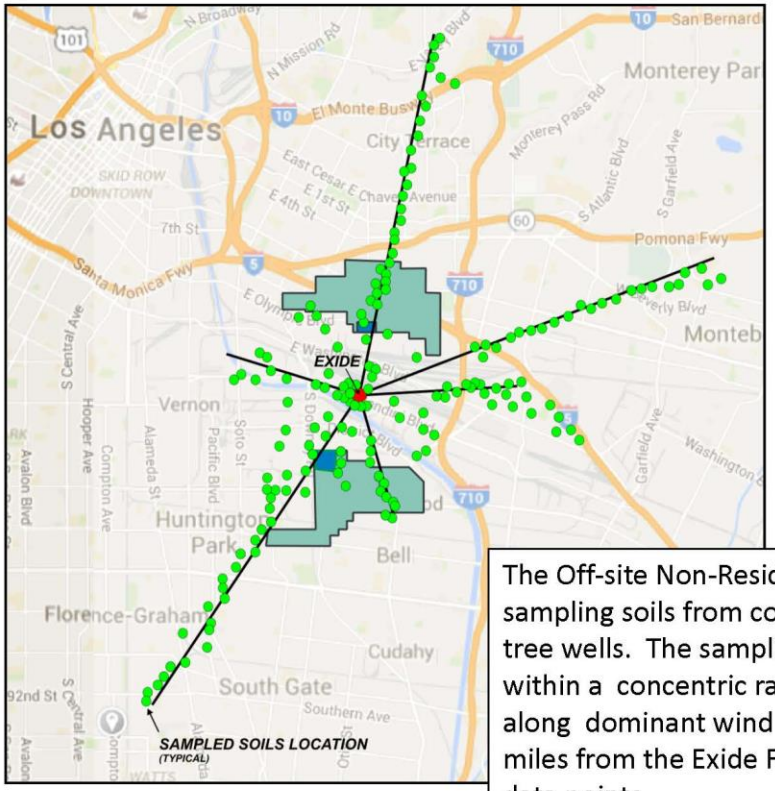
Expanded Area, Initial Testing

- 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)

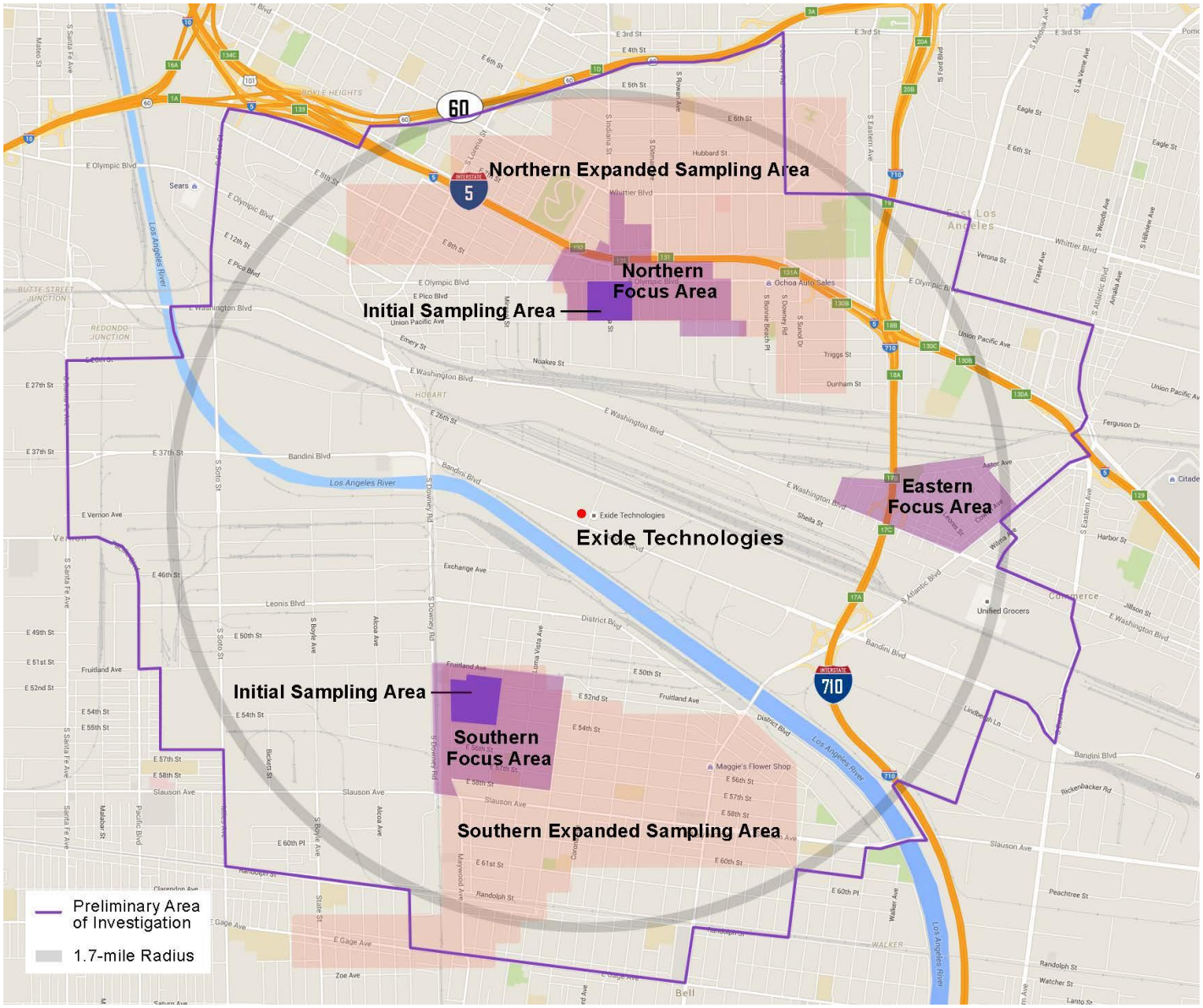
Expanded Areas

Sampling Transects Wind Directions

The Off-site Non-Residential soil sampling consisted of sampling soils from common areas such 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


Northern Expanded Sampling Area
Northern Focus Area
Initial Sampling Area
Eastern Focus Area
Exide Technologies
Initial Sampling Area
Southern Focus Area
Southern Expanded Sampling Area
Preliminary Area of Investigation
1.7-mile Radius

Budget Augmentation

- In August 2015 the Administration augmented DTSC's budget by $7 million to:
  - Test up to 1,500 residential properties in Preliminary Area of Investigation
  - 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

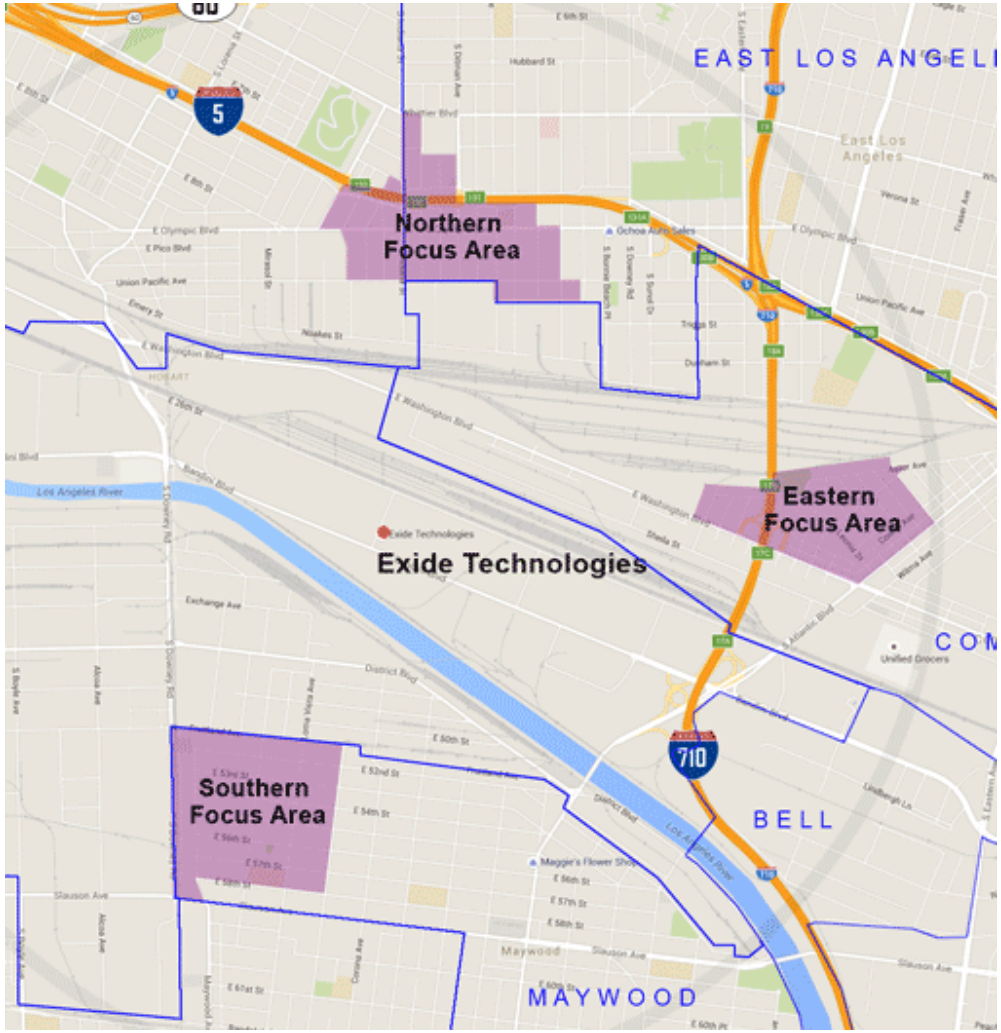
Near-term Cleanup

- 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
- 760 access agreements in place
- 6 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
Properties with signed access agreements	195	565	760
Properties sampled	195	328	523
Properties assigned Priority 1 cleanup status	40	86	126
Properties cleaned up	186	8	194
Properties refused access for cleanup	6	0	6
Properties no cleanup required	3	2	5

Last update: 02/02/2016 For questions, contact: Mary Sue Maurer, Public Participation Specialist (818) 717-6566

PIA - Preliminary Investigation Area: 1.7-mile radius around Exide Facility, properties potentially impacted is approximately 10,000

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

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

California's Health Screening Level for Lead

- Office of Environmental Health Hazard Assessment has presented information to the Advisory Group
- Exposure, sources, and steps people can take to protect themselves from lead

Access for Sampling

- In 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