



# Motorola 52nd Street Superfund Site Five-Year Review Report Overview

CIG Meeting January 25, 2012



Arizona Department of  
Environmental Quality



URS  
Corporation



U.S. Environmental Protection  
Agency, Region 9

# Overview of Presentation

- Purpose and Scope of Five-Year Review
- Protectiveness Statements
- Accomplishment of Goals from Previous Five-Year Review
- Current Issues and Recommendations
- Specific Questions From the Community

# Purpose and Scope of Five-Year Review

# Purpose of Five-Year Review Report

- Review the remedy to determine its protectiveness
- Review is based on the requirements of the applicable Record of Decision (ROD)
- Review Scope is defined by the EPA guidance document
- Review is focused on the remedy operation relative to the requirements of the ROD

# Why Perform the Five-Year Review?

- Performed at every superfund site that has waste remaining that does not allow for unrestricted use
- Required by Federal Regulations
  - CERCLA
  - National Contingency Plan
- Review of remedy relative to ROD

- Review Includes:
  - Site Inspection
  - Document Review
  - Interviews
- Information is compiled into a technical assessment
- Technical Assessment is used to determine:
  - Issues
  - Recommendations
  - Protectiveness

# Record of Decision Requirements

- Operable Unit One Requirements from the Record of Decision
  - Clean-up of onsite soils
  - Capture of width and depth of groundwater plume near the cross-cut canal
- Operable Unit Two Requirements of the Record of Decision
  - Capture of the width and depth of the groundwater plume in the vicinity of I-10

# Review Period

- Previous Document signed in September 2006
- August 2006 through October 2010
- Signed: September 30, 2011

# Report Contents

- Site history and background for all three operable units
- Technical assessment of interim remedies for operable units one and two
- Issues and recommendations for operable units one and two
- Protectiveness summaries for operable units one and two

# Protectiveness Statements

# OU1 Protectiveness Statement

A protectiveness determination of the interim remedy at Motorola 52nd Street Superfund Site OU1 can not be made at this time until further information is obtained.

Further information will be obtained by completing a soil gas and vapor intrusion to indoor air investigation on the former Motorola facility.

It is expected that this investigation will be completed no later than the next Five-Year Review.

# OU2 Protectiveness Statement

A protectiveness determination of the interim remedy at Motorola 52nd Street Superfund Site OU2 can not be made at this time until further information is obtained.

Further information will be obtained by completing a soil gas and vapor intrusion to indoor air investigation within the OU2 area.

It is expected that this investigation will be completed no later than the next Five-Year Review.

# Accomplishment of Goals from Previous Five-Year Review for Operable Unit 1 (OU1)

# OU1 Goals Accomplished from Previous Five-Year Review

- Groundwater Capture
- Bedrock Evaluation
- Site Vadose Zone
- Health Assessments
- Operations and Maintenance (O&M)
- General

# OU1 Goals Accomplished from Previous Five-Year Review

## • **Groundwater Capture**

- Bedrock Evaluation
- Site Vadose Zone
- Health Assessments
- O&M
- General

- Recommendations purpose to refine capture evaluation
- Recommended workplan completed in 2007
- Additional wells installed based on workplan
- Capture reviews occur at each annual effectiveness report

# OU1 Goals Accomplished from Previous Five-Year Review

- Groundwater Capture
- **Bedrock Evaluation**
- Site Vadose Zone
- Health Assessments
- O&M
- General

- Recommended workplan completed in 2008
- Pilot study completed based on workplan
- Current pilot study data under review
- Pilot study is ongoing

# OU1 Goals Accomplished from Previous Five-Year Review

- Groundwater Capture
  - Bedrock Evaluation
  - **Site Vadose Zone**
  - Health Assessments
  - Operations and Maintenance (O&M)
  - General
- Administrative order with EPA signed in 2010
  - Recommended workplan in process

# OU1 Goals Accomplished from Previous Five-Year Review

- Groundwater Capture
  - Bedrock Evaluation
  - Site Vadose Zone
  - **Health Assessments**
  - O&M
  - General
- Vapor Intrusion (VI) pathway being addressed through specific upcoming efforts
  - Recommended workplan in process
  - Sampling of the Morgan Well is being conducted

# OU1 Goals Accomplished from Previous Five-Year Review

- Groundwater Capture
  - Bedrock Evaluation
  - Site Vadose Zone
  - Health Assessments
  - **Operations and Maintenance (O&M)**
  - General
- Specific O&M actions from the previous report have been addressed

# OU1 Goals Accomplished from Previous Five-Year Review

- Groundwater Capture
  - Bedrock Evaluation
  - Site Vadose Zone
  - Health Assessments
  - O&M
  - **General**
- List of sitewide Chemicals Of Concern (COCs) is in process
  - Influent and effluent air and groundwater data is included in the effectiveness reports
  - Potentially Responsible Party (PRP) research is ongoing

# Accomplishment of Goals from Previous Five-Year Review for Operable Unit 2 (OU2)

# OU2 Goals Accomplished from Previous Five-Year Review

- Groundwater Capture
- Health Assessment
- General

# OU2 Goals Accomplished from Previous Five-Year Review

- **Groundwater Capture**

- Health Assessment
- General

- Recommendations purpose to refine capture evaluation
- 7 additional monitoring wells installed
- Monitoring wells installed in 2007
- Additional data used to refine capture evaluations

# OU2 Goals Accomplished from Previous Five-Year Review

- Groundwater Capture
- **Health Assessment**
- General
- Boron mixing zone for treated discharge established

# OU2 Goals Accomplished from Previous Five-Year Review

- Groundwater Capture
- Health Assessment
- **General**
- Technical working group meetings conducted regularly

# Current Issues and Recommendations for Operable Unit 1

# Issues and Recommendations in OU1

- DNAPL in Bedrock
  - Continue review of approaches to mitigate DNAPL impacts on the OU1 groundwater
- New Beneficial Use for Treated Groundwater
  - Select a new beneficial end use
- Reduction in Groundwater Extraction Rates
  - Take measures to increase extraction rates if and when possible

# Issues and Recommendations in OU1

- Age of Treatment System
  - Conduct engineering review to assess remaining service life of equipment
- Ceased Soil Vapor Extraction Operations
  - Conduct investigations to demonstrate effectiveness of clean-up actions
  - Conduct Acid Treatment Plant Soil clean-up as needed to meet requirements of Record of Decision

# Issues and Recommendations in OU1

- Vapor Intrusion Pathway Evaluation
  - Evaluate pathway in and around the Former Motorola Facility

# Current Issues and Recommendations for Operable Unit 2

# Issues and Recommendations in OU2

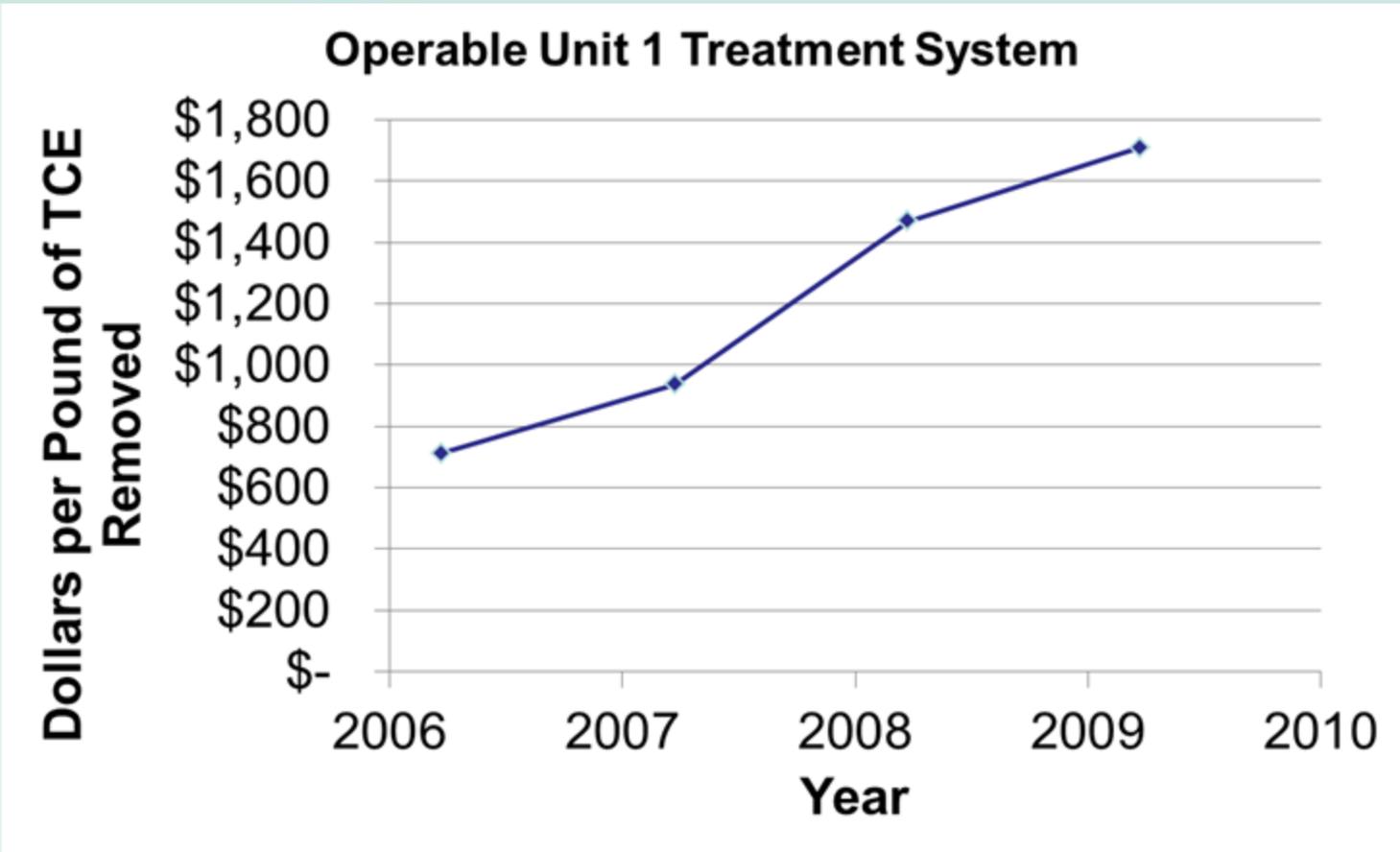
- Long-term Southeastern Capture Area
  - Develop a Workplan to address contamination southeast of the Current Treatment System Target Capture Area
- Vapor Intrusion Pathway Evaluation
  - Develop a comprehensive approach to evaluate the vapor intrusion to indoor air pathway for the OU2 area

# Specific Questions From the Community

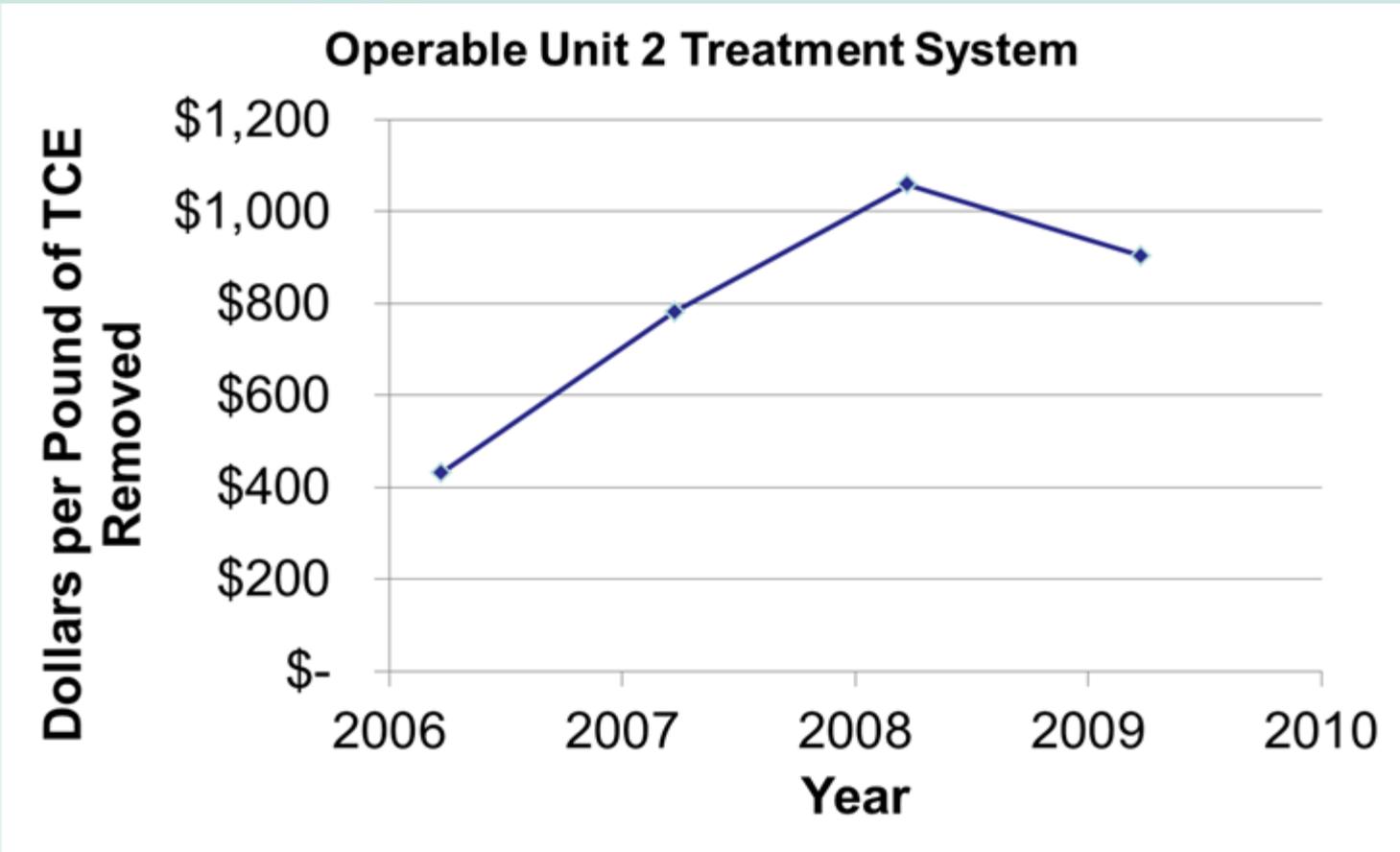
# Specific Questions

- What was general report approach to vapor intrusion?
- Why are there carryover issues?
- What is the trend for treatment system cost per pound of VOCs removed?

# Specific Questions



# Specific Questions



# Specific Questions

- Does the report address the recent sampling results for chloroform?
- How will changes in TCE toxicity be addressed in the future?

# Contact Information

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