

# Motorola 52<sup>nd</sup> Street Superfund Site OU1 and OU2 Updates

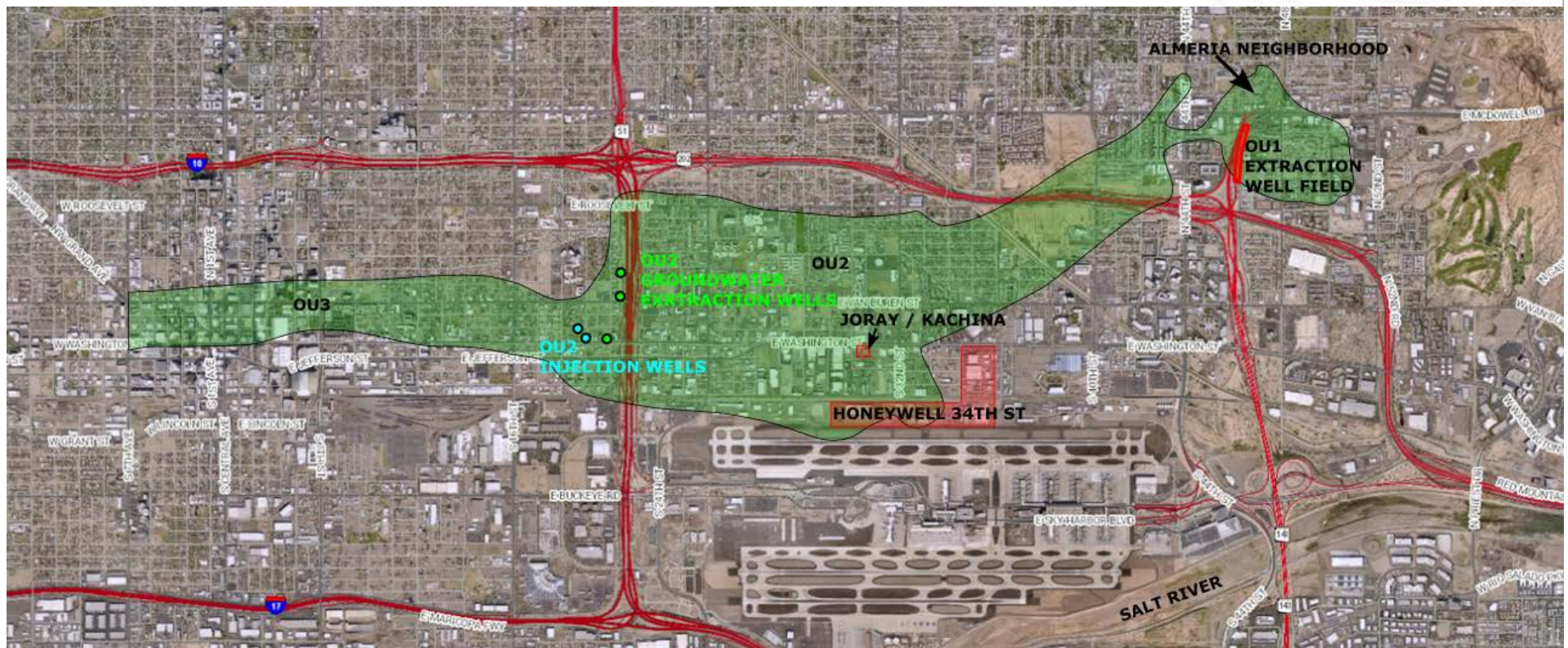
Community Information Group Meeting  
November 16, 2022

Project Manager  
Brett McDaniel, ADEQ



# Motorola 52<sup>nd</sup> St Superfund Site

- OU1 and OU2 - Status / Updates
  - ❖ OU1 recent activities
  - ❖ OU2, Joray-Kachina & Honeywell 34<sup>th</sup> Street Facilities recent activities
  - ❖ Please ask about any information presented

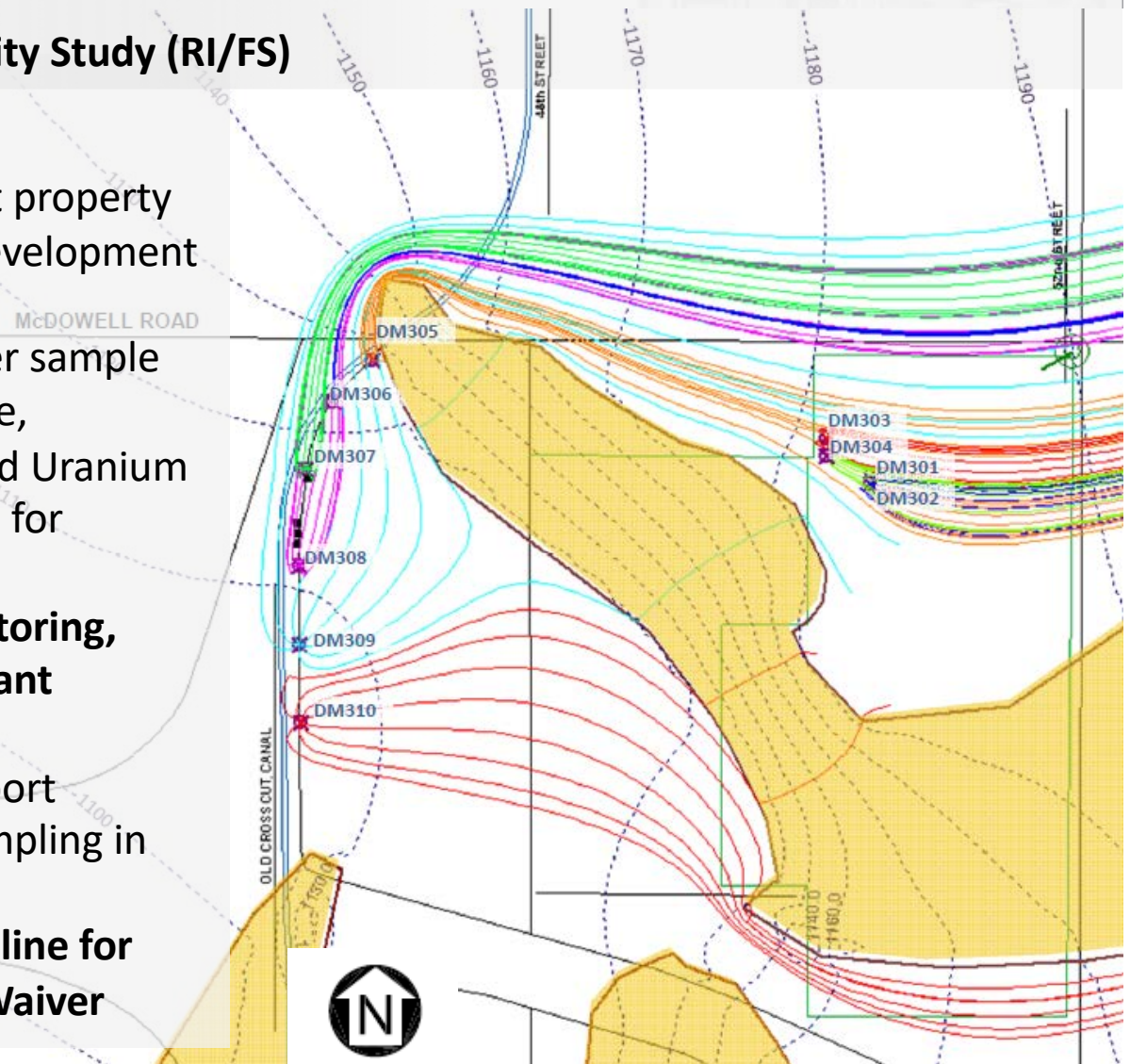




## OU1 – Activities Performed During the Last Year

### Progress Toward Completion of Remedial Investigation / Feasibility Study (RI/FS)

- **Facility sale, development**
  - Former Motorola plant property purchased by Baker Development
- **Data gap work**
  - Additional groundwater sample analysis for 1,4-Dioxane, Hexavalent Chrome and Uranium
  - Review data objectives for additional gaps
- **Annual Groundwater Monitoring, Groundwater Treatment Plant Operation**
  - 2021 Effectiveness Report
  - 2022 Groundwater sampling in Sept. and Oct.
- **Scoping and Annotated outline for Technical Infeasibility (TI) Waiver**



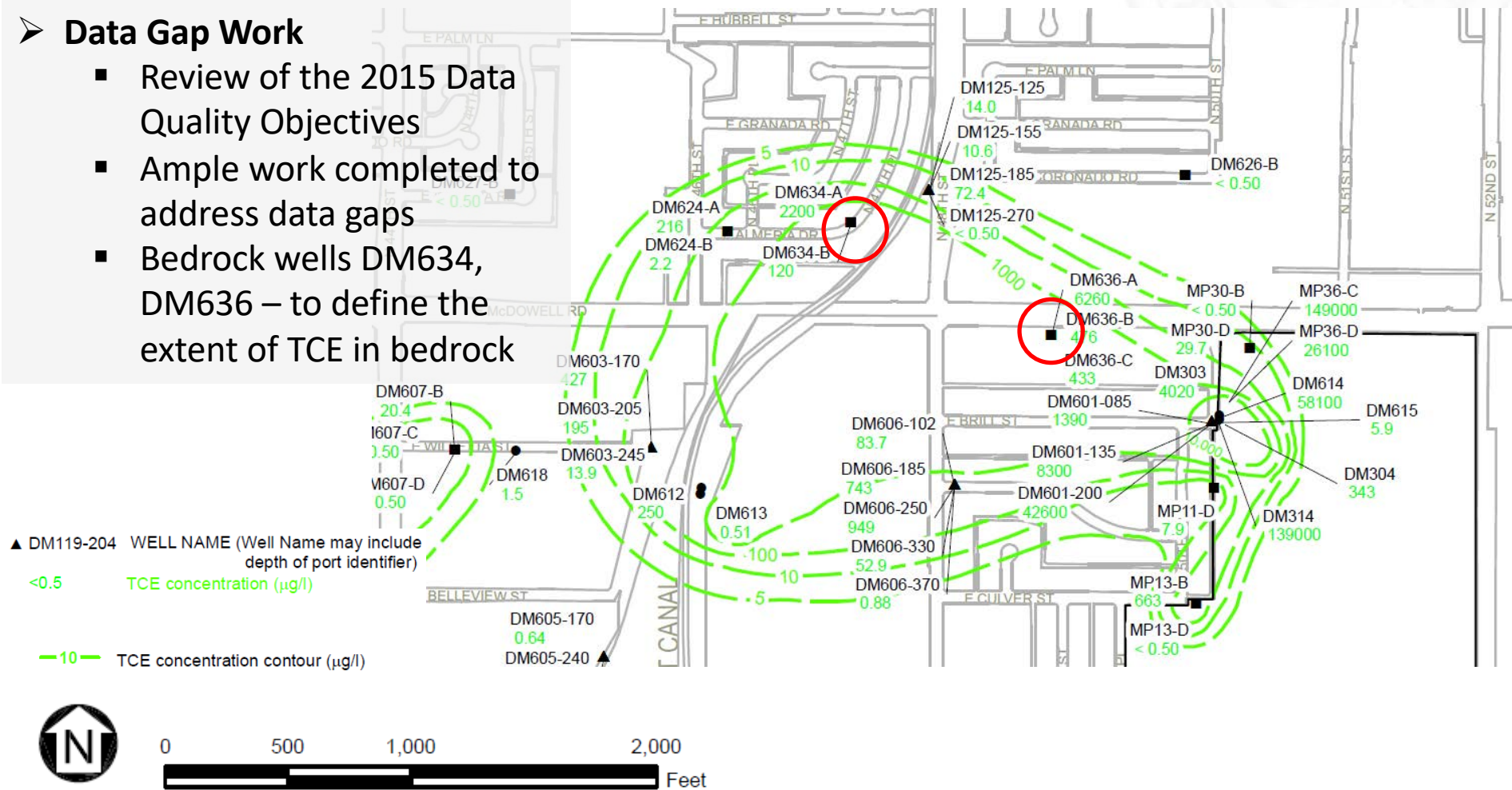
# Motorola 52<sup>nd</sup> St Superfund Site

## OU1

### Progress Toward Completion of RI/FS

#### ➤ Data Gap Work

- Review of the 2015 Data Quality Objectives
- Ample work completed to address data gaps
- Bedrock wells DM634, DM636 – to define the extent of TCE in bedrock



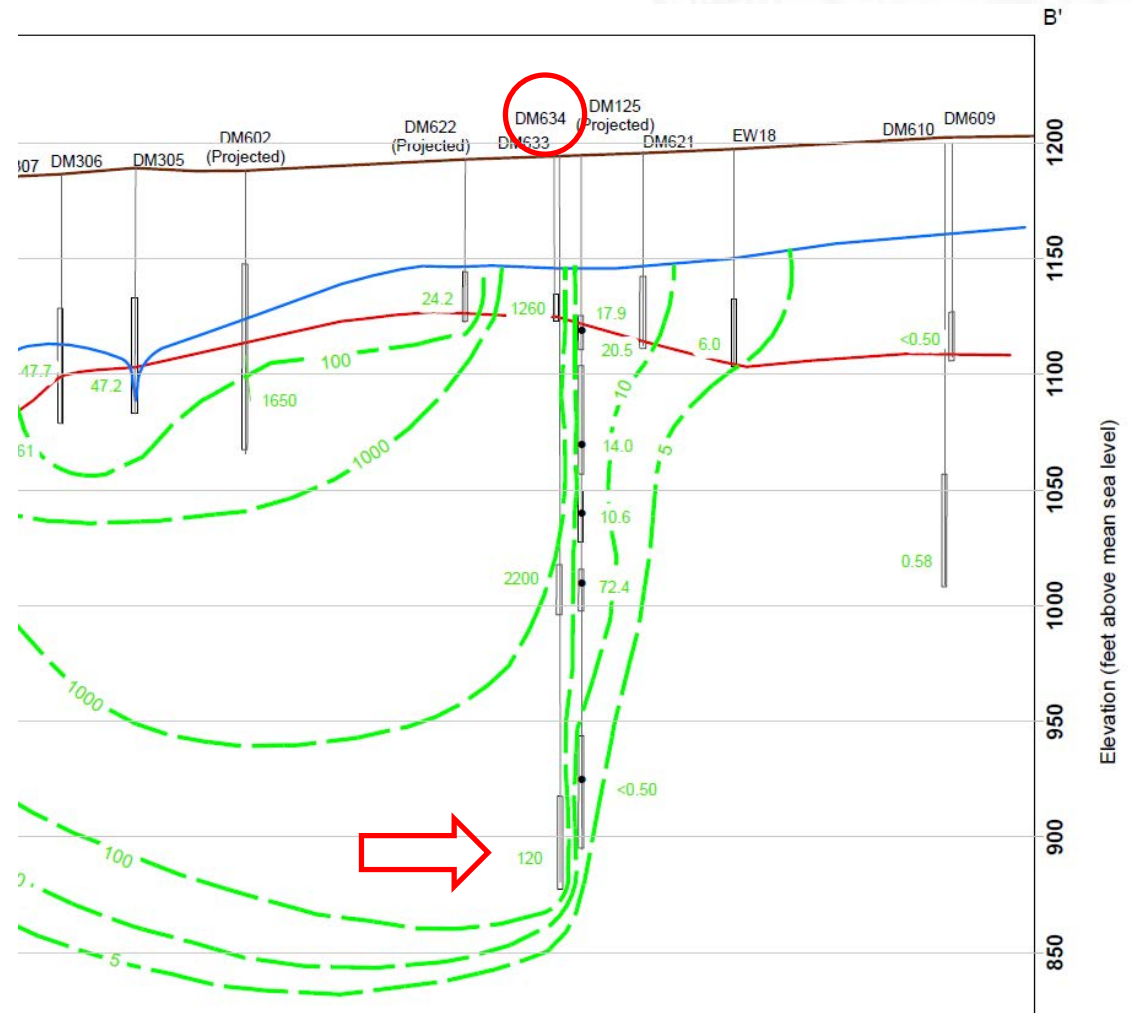
# Motorola 52<sup>nd</sup> St Superfund Site

## OU1

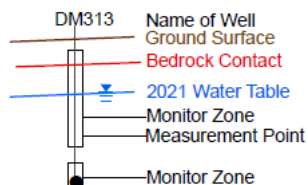
### Progress Toward Completion of RI/FS

#### ➤ Data Gap Work

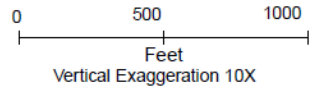
- **DM634 – Vertical extent undefined**



#### LEGEND



<0.50 TCE Concentration in micrograms per liter (µg/l)  
 -10- TCE Concentration Contour (µg/l)



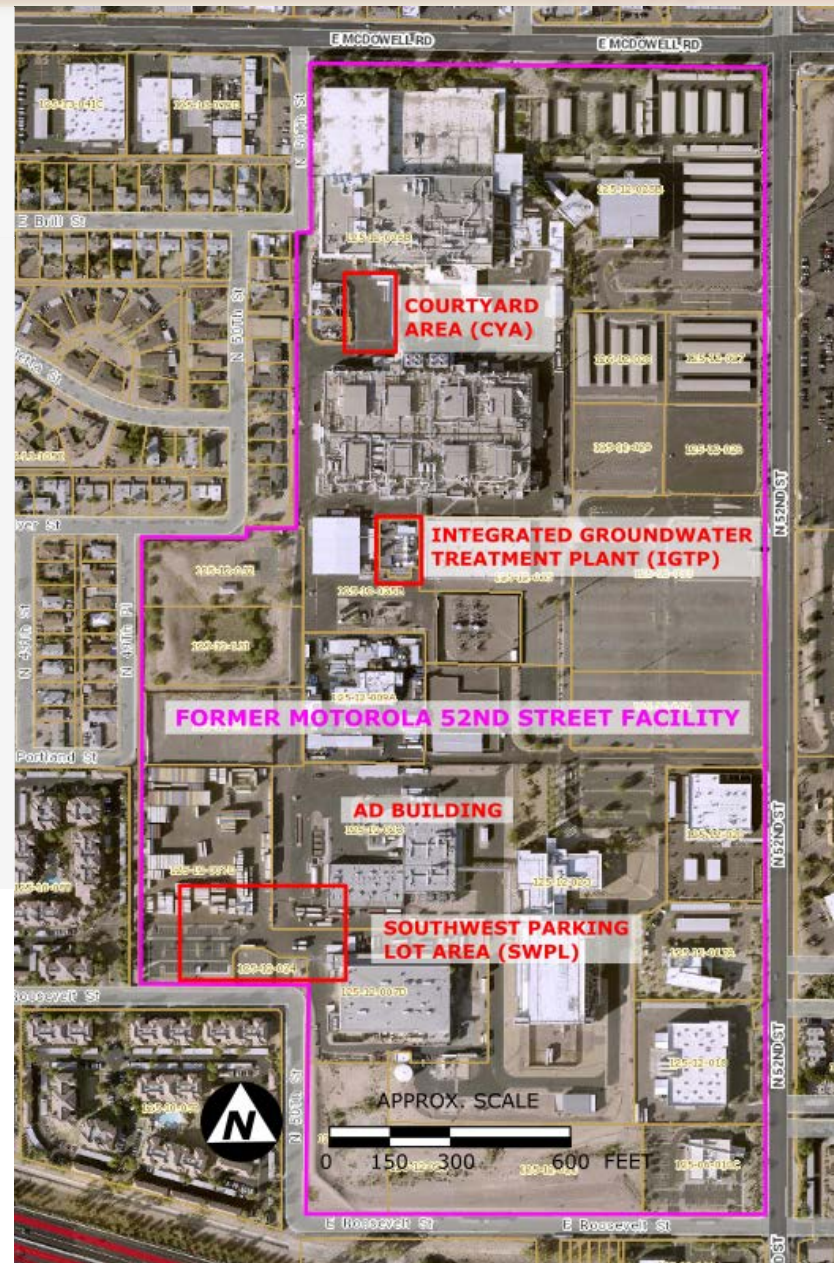


# Motorola 52<sup>nd</sup> St Superfund Site

## OU1

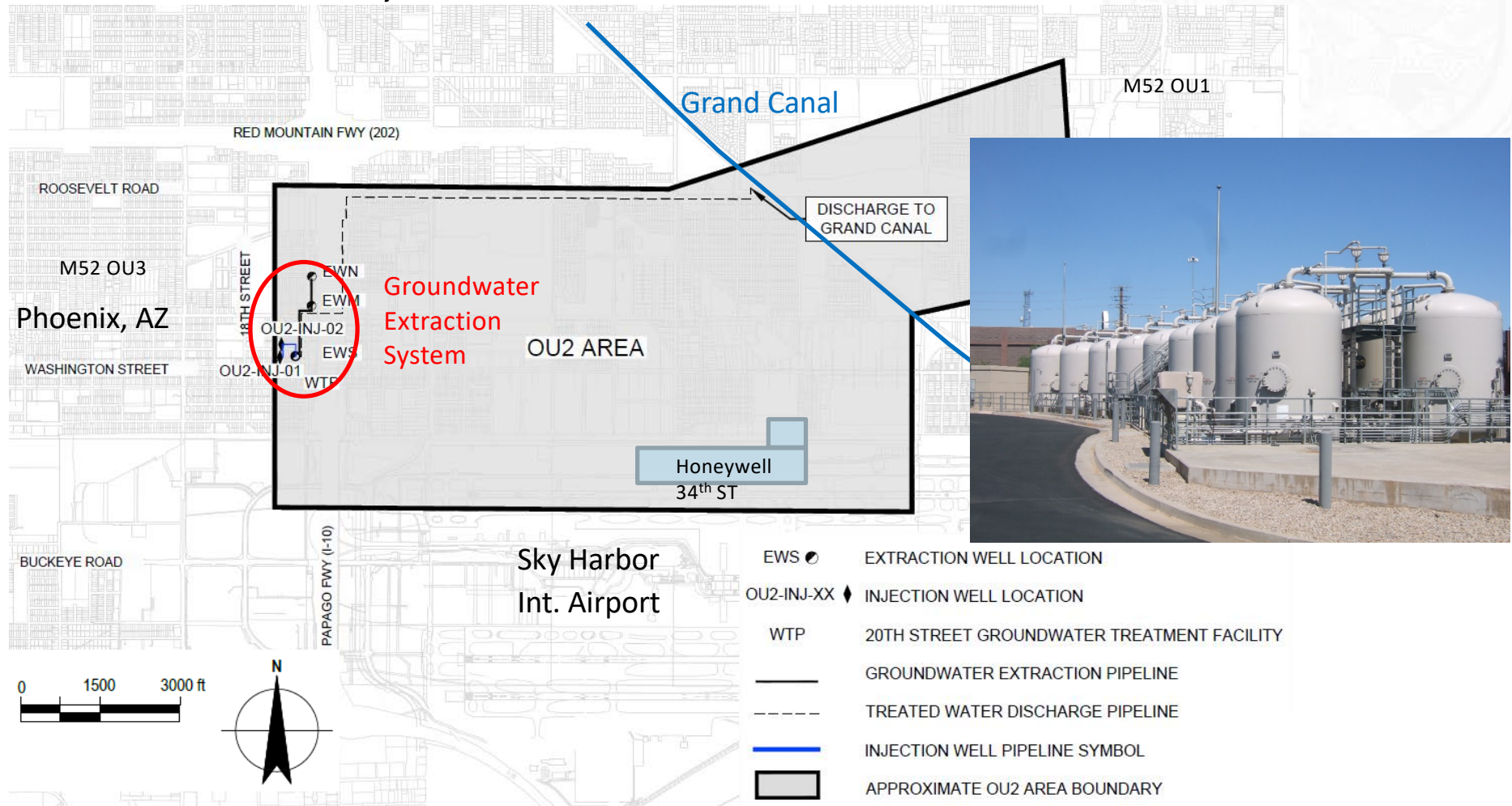
### Progress Toward Completion of RI/FS

- **Focused RI Work – SWPL Area**
  - As mentioned by T. Suriano
- **Planned Activities**
  - Scoping work to ID any other data gaps for RI and TI Waiver
  - Completion of RI data collection identified through scoping
  - Continued Annual GW Sampling and IGTP Operation



# OU2 – Groundwater Extraction System

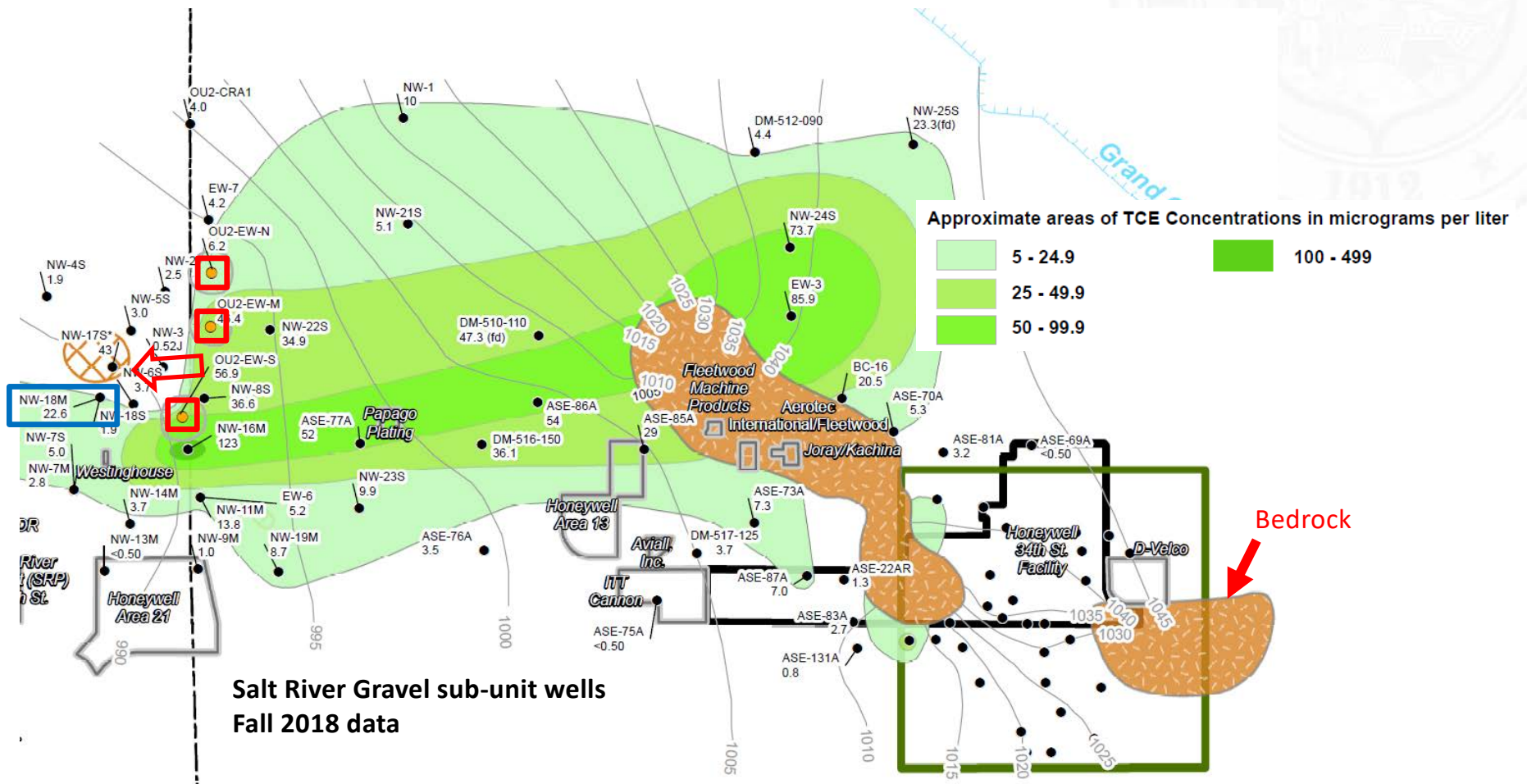
## Site Location, Notable Features





# Motorola 52<sup>nd</sup> St Superfund Site – OU2

## Why an enhancement?





# Motorola 52<sup>nd</sup> St Superfund Site – OU2

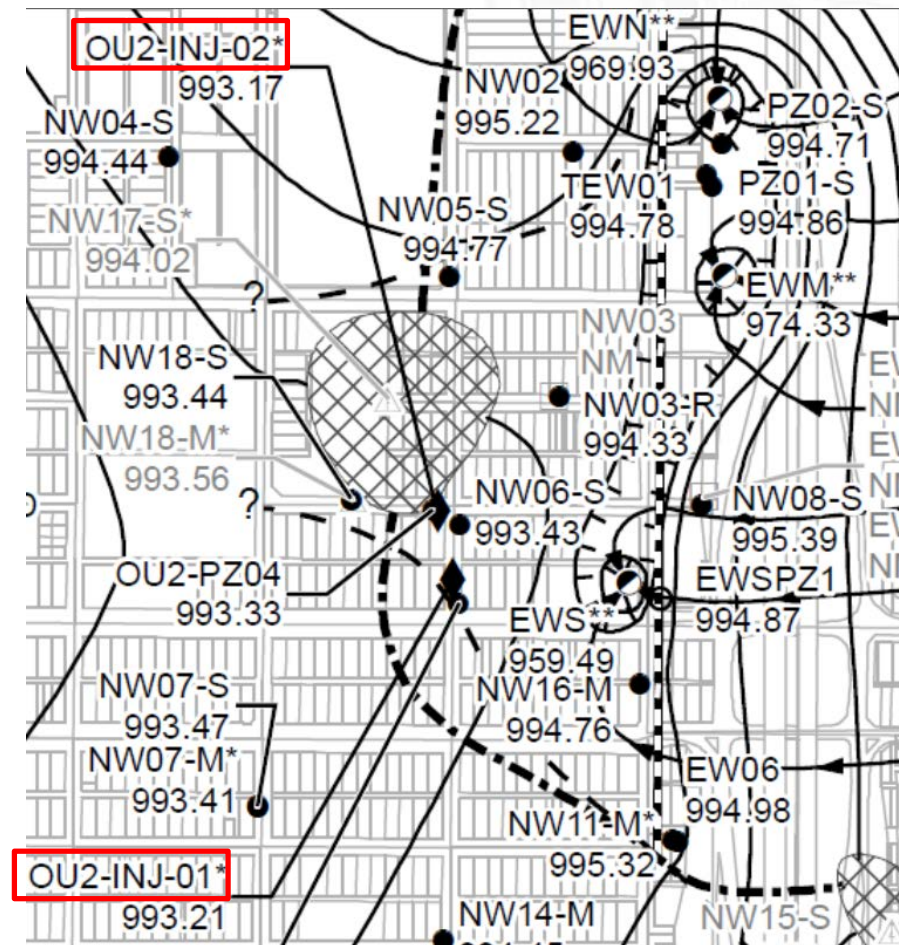
## Remedy for loss of capture – Central portion of extraction wells

### Action taken by responsible parties – NXP, Honeywell

- 2019 – Workplan for the installation of two (2) injection wells, downgradient of the extraction wells EWM and EWS
- 2019 – 2020 - Installation, equipping and testing of injection wells
- Oct. 2021 – startup of injection wells

### Evaluation of data

- Water level measurements of up to 34 wells adjacent to the injection well
- Data collected in Sept. (shown), Oct., Nov., and Dec. 2021, and Feb. 2022
- Analysis of groundwater gradient of extraction / injection systems and estimation of capture

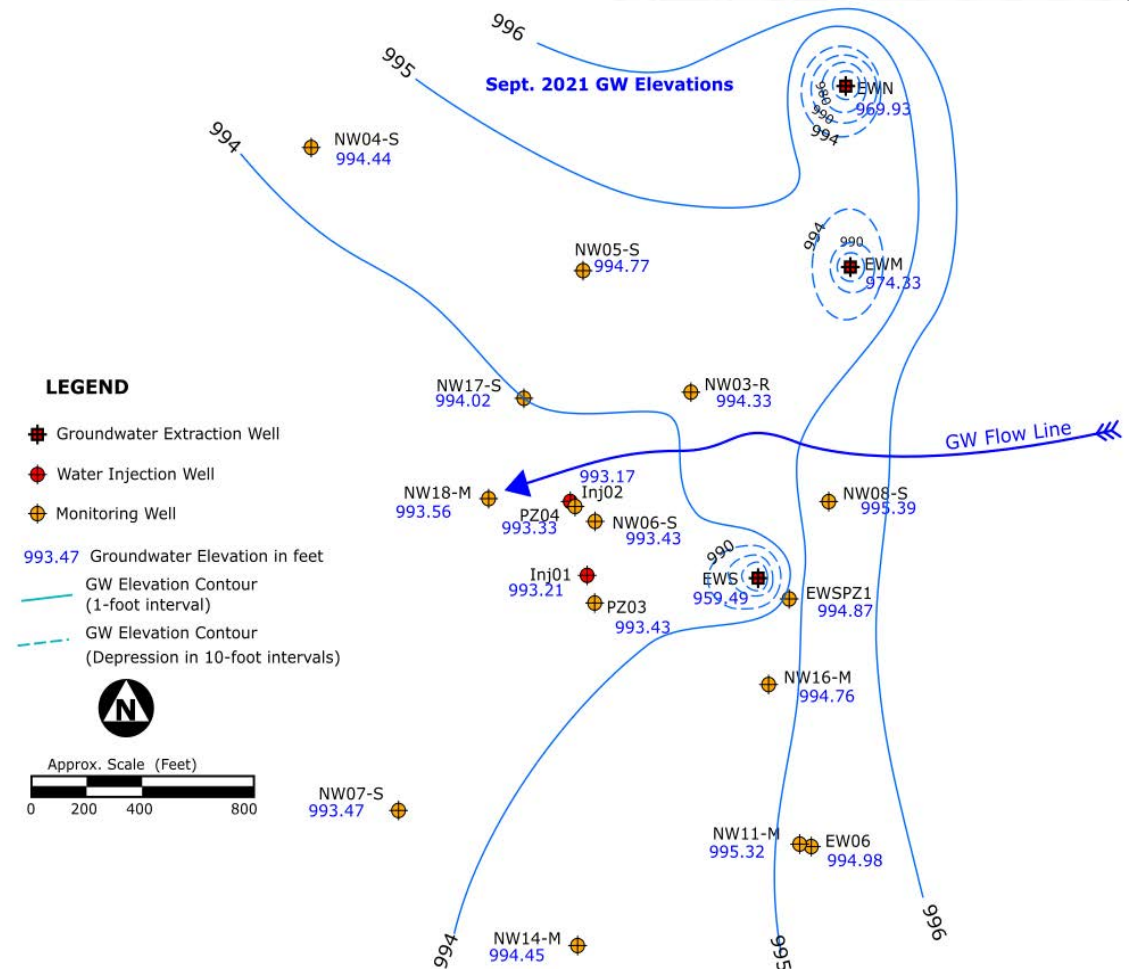


# Motorola 52<sup>nd</sup> St Superfund Site – OU2

## Groundwater Flow Analysis

### Groundwater conditions with pumping ONLY

- Water level data collected in early **Sept. 2021**
- Depressions at extraction wells
- Bypass illustrated – NW18 in path



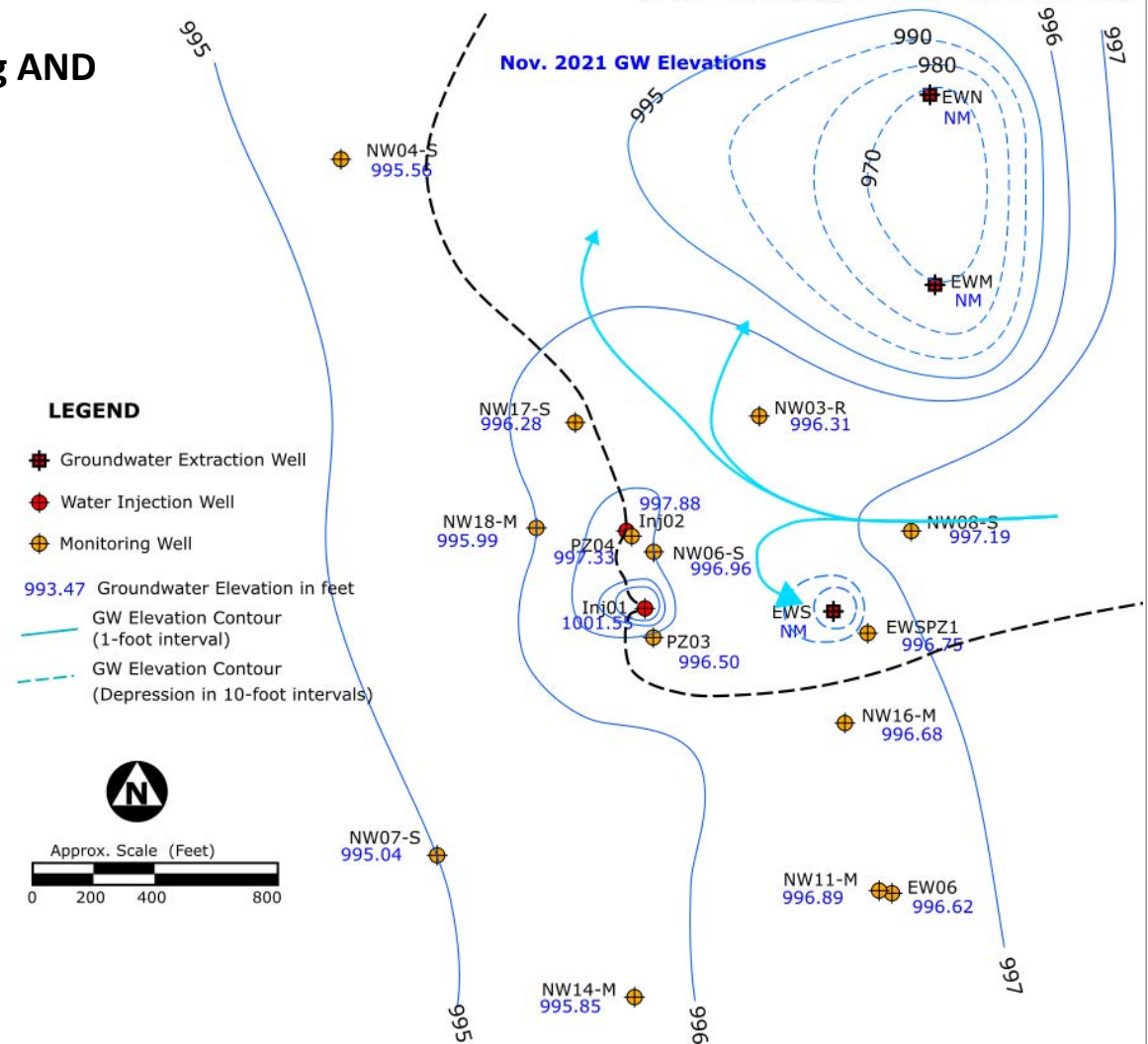


# Motorola 52<sup>nd</sup> St Superfund Site – OU2

## Groundwater Flow Analysis

### Groundwater conditions with pumping AND injection

- Water level data collected in mid **Nov. 2021**
- Injection wells operating at approx. 300 gpm
- Mounding at injection wells redirects flow to extraction wells

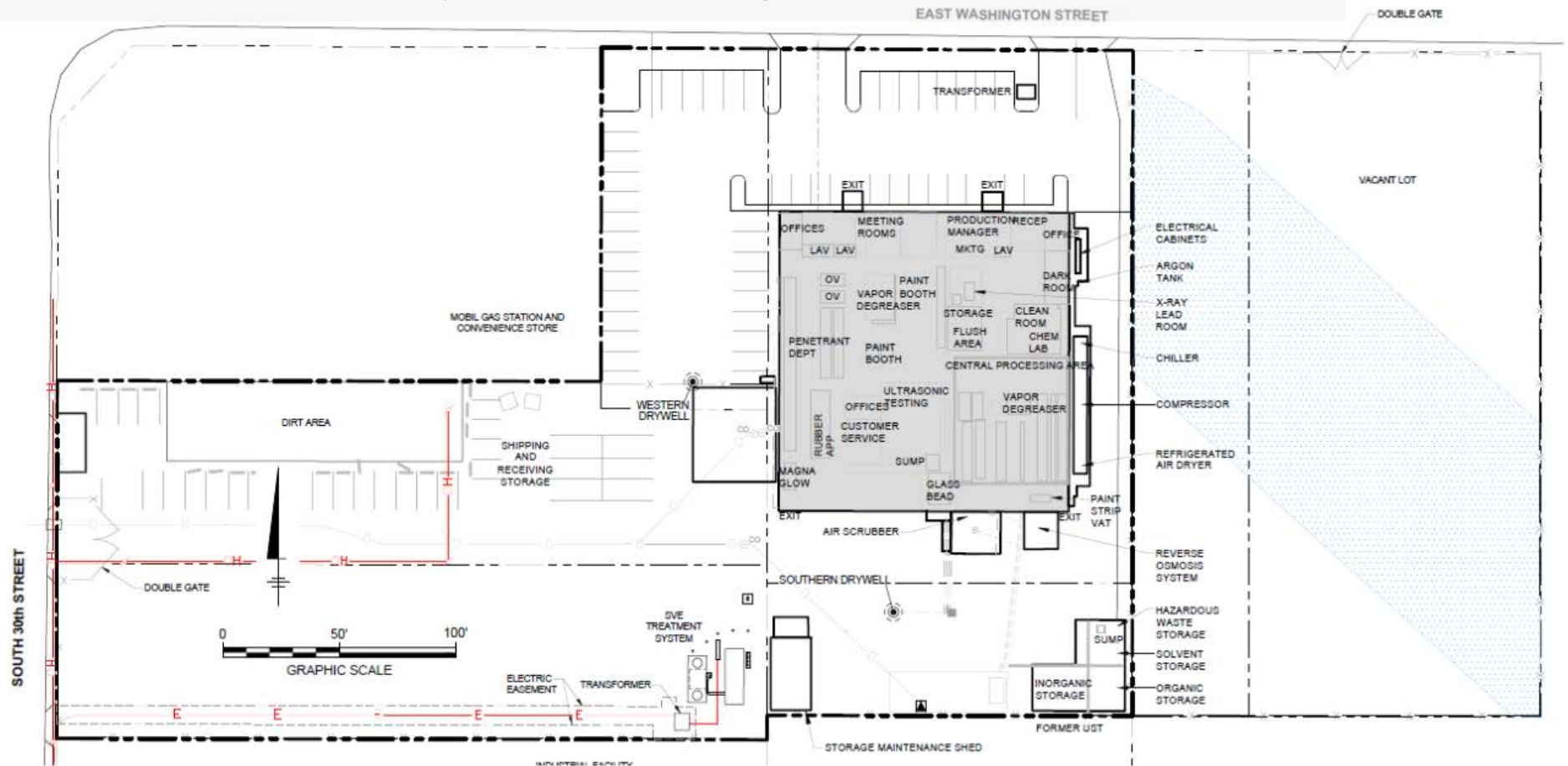


# Motorola 52<sup>nd</sup> St Superfund Site

## Within OU2 – Joray-Kachina Site

### ➤ Recent Activities

- Continued RI Work
- Continued Soil Vapor Intrusion Mitigation





# Motorola 52<sup>nd</sup> St Superfund Site

## Within OU2 – Joray-Kachina Facility

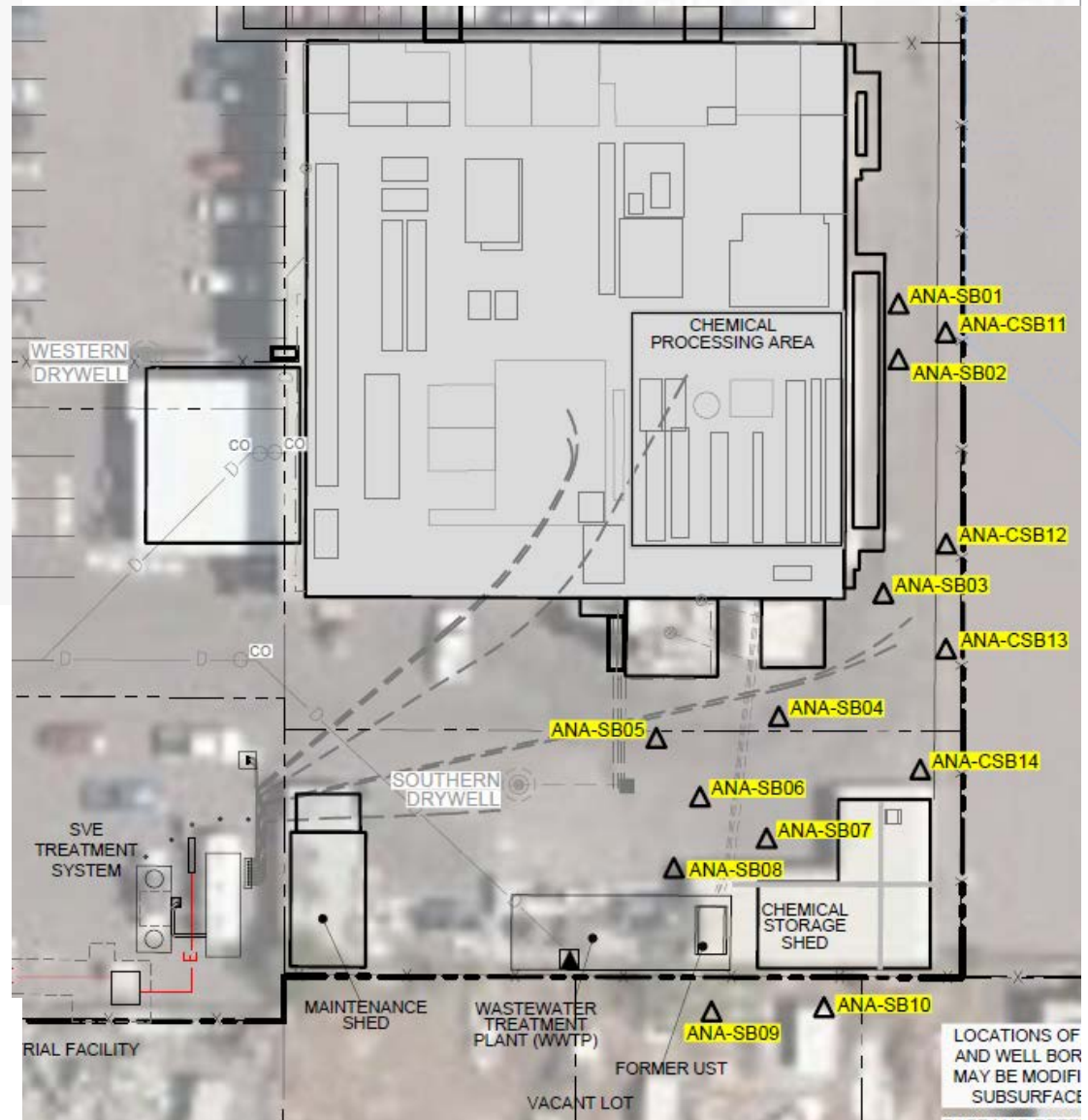
### ➤ Recent Activities

- Continued RI Work
  - Soil sampling on-site for Hexavalent Chromium (Cr[vi])
  - Purpose – To define the lateral extent of contaminants of concern
  - Work began last week

- ANA-SB01 ▲ PROPOSED GEOPROBE BORING TO 20 FEET BCS (15 FEET BGS)
- ANA-CSB11 ▲ CONTINGENT GEOPROBE BORING TO 20 FEET BCS (15 FEET BGS)

BASE MAP REFERENCES:  
1. BUILDING AND INTERNAL SITE FEATURES ARE APPROXIMATE.  
• BASEMAP SOURCE: (KACHINA 1990).  
• BASE SOURCE: (WESTON, 1999).  
• BASEMAP/INTERNAL SITE FEATURES REVISED BY MALCOLM PIRNIE, 2009.

GRAPHIC SCALE

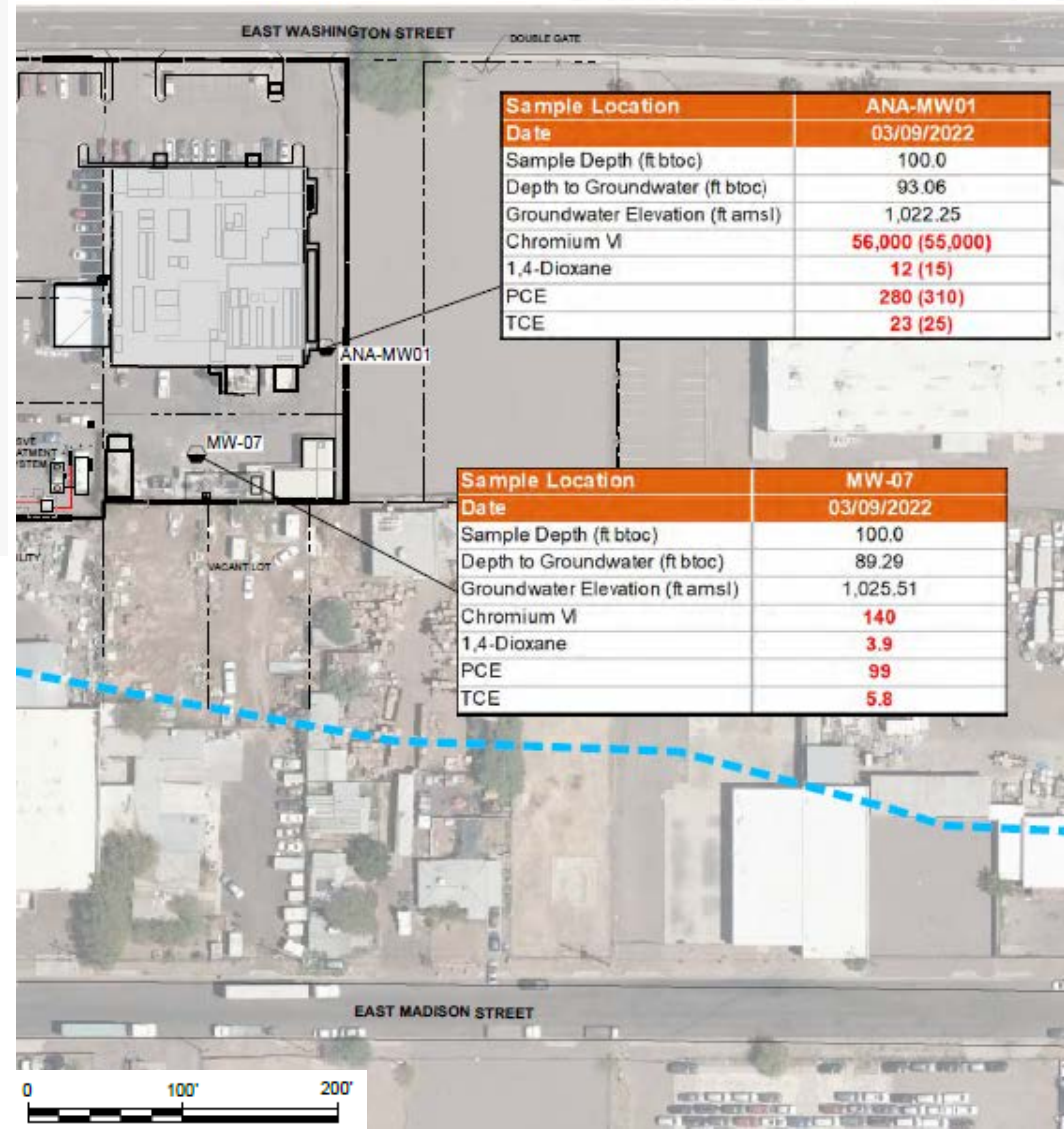


# Motorola 52<sup>nd</sup> St Superfund Site

## Within OU2 – Joray-Kachina Facility

### Recent Activities

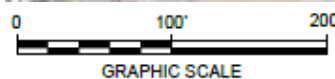
- Continued RI Work
  - Groundwater sampling – performed semi-annually
  - Recent sampling performed in Sept. included 3 off-site monitor wells



Sample result in **RED FONT** exceeds the Arizona AWQS or the USEPA MCL, or both, indicated in Table below:

|              | AWQS | MCL |
|--------------|------|-----|
| Chromium VI* | 100  | NE  |
| 1,4-dioxane  | NE   | NE  |
| PCE          | 5    | 5   |
| TCE          | 5    | 5   |

\* = A GROUNDWATER AWQS HAS NOT BEEN ESTABLISHED FOR CHROMIUM VI. HOWEVER, THE GROUNDWATER AWQS FOR TOTAL CHROMIUM IS 100 µg/L.



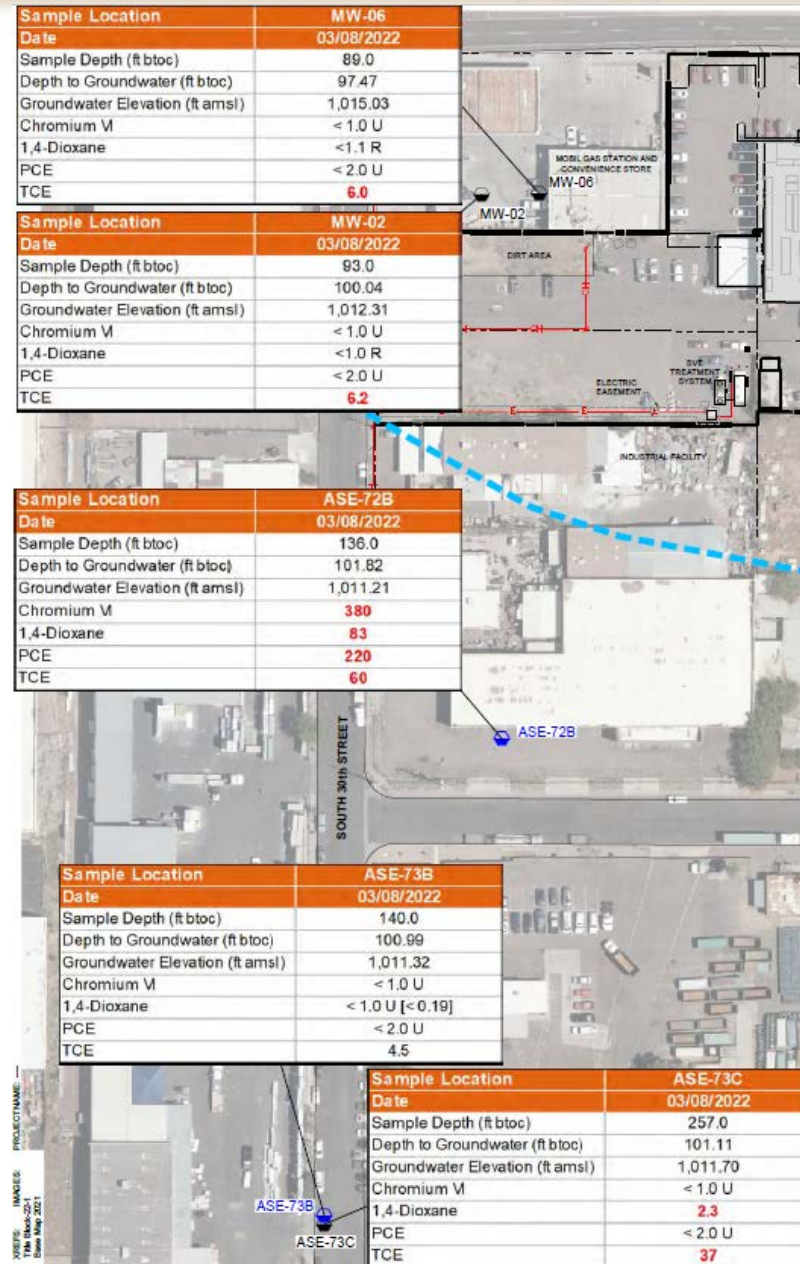


# Motorola 52<sup>nd</sup> St Superfund Site

## Within OU2 – Joray-Kachina Facility

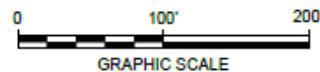
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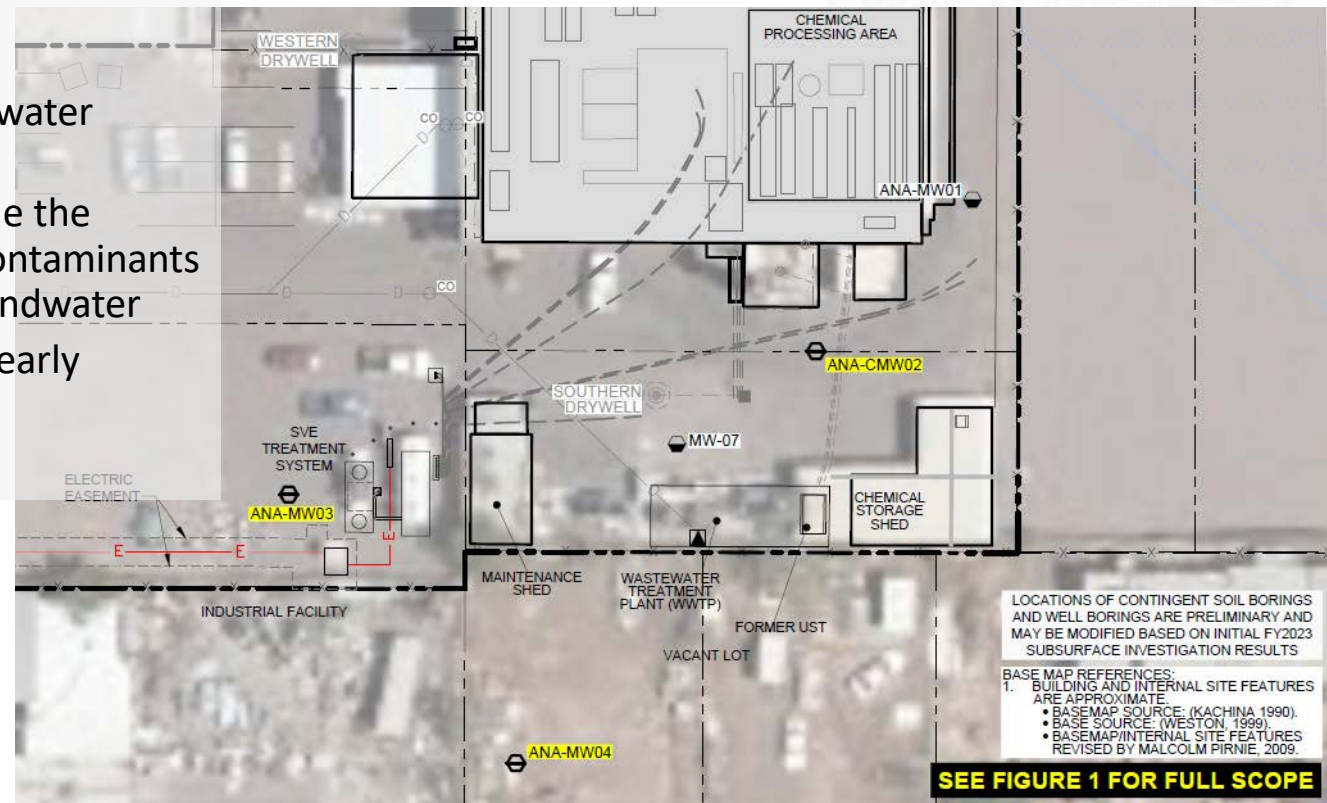
# Motorola 52<sup>nd</sup> St Superfund Site

## Within OU2 – Joray-Kachina Facility

### ➤ Planned Activities

#### RI Work

- Additional groundwater monitor wells
- Purpose – To define the lateral extent of contaminants of concern in groundwater
- Work planned for early December

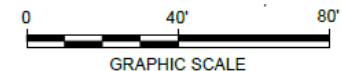


ANA-MW01

BEDROCK HYDROSTRATIGRAPHIC UNIT  
GROUNDWATER MONITORING WELL

ANA-MW03

PROPOSED BEDROCK HYDROSTRATIGRAPHIC  
UNIT GROUNDWATER MONITORING WELL



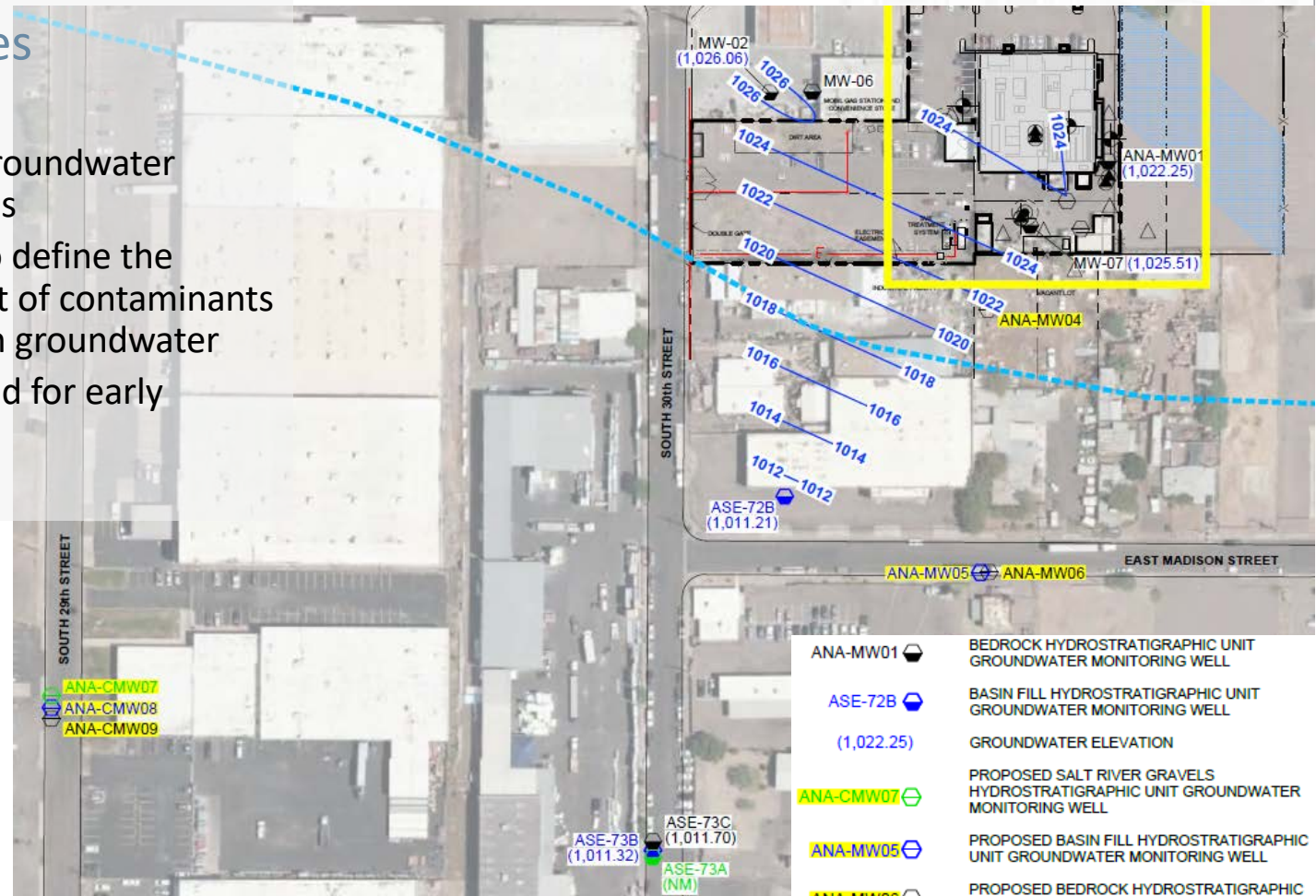
GRAPHIC SCALE

# Motorola 52<sup>nd</sup> St Superfund Site

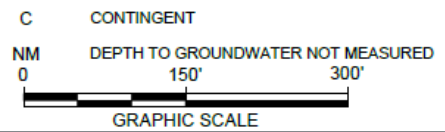
## Within OU2 – Joray-Kachina Facility

### Planned Activities

- RI Work
  - Additional groundwater monitor wells
  - Purpose – To define the lateral extent of contaminants of concern in groundwater
  - Work planned for early December



|            |   |
|------------|---|
| ANA-MW01   | BEDROCK HYDROSTRATIGRAPHIC UNIT GROUNDWATER MONITORING WELL                     |
| ASE-72B    | BASIN FILL HYDROSTRATIGRAPHIC UNIT GROUNDWATER MONITORING WELL                  |
| (1,022.25) | GROUNDWATER ELEVATION   |
| ANA-CMW07  | PROPOSED SALT RIVER GRAVELS HYDROSTRATIGRAPHIC UNIT GROUNDWATER MONITORING WELL |
| ANA-MW05   | PROPOSED BASIN FILL HYDROSTRATIGRAPHIC UNIT GROUNDWATER MONITORING WELL         |
| ANA-MW06   | PROPOSED BEDROCK HYDROSTRATIGRAPHIC UNIT GROUNDWATER MONITORING WELL            |



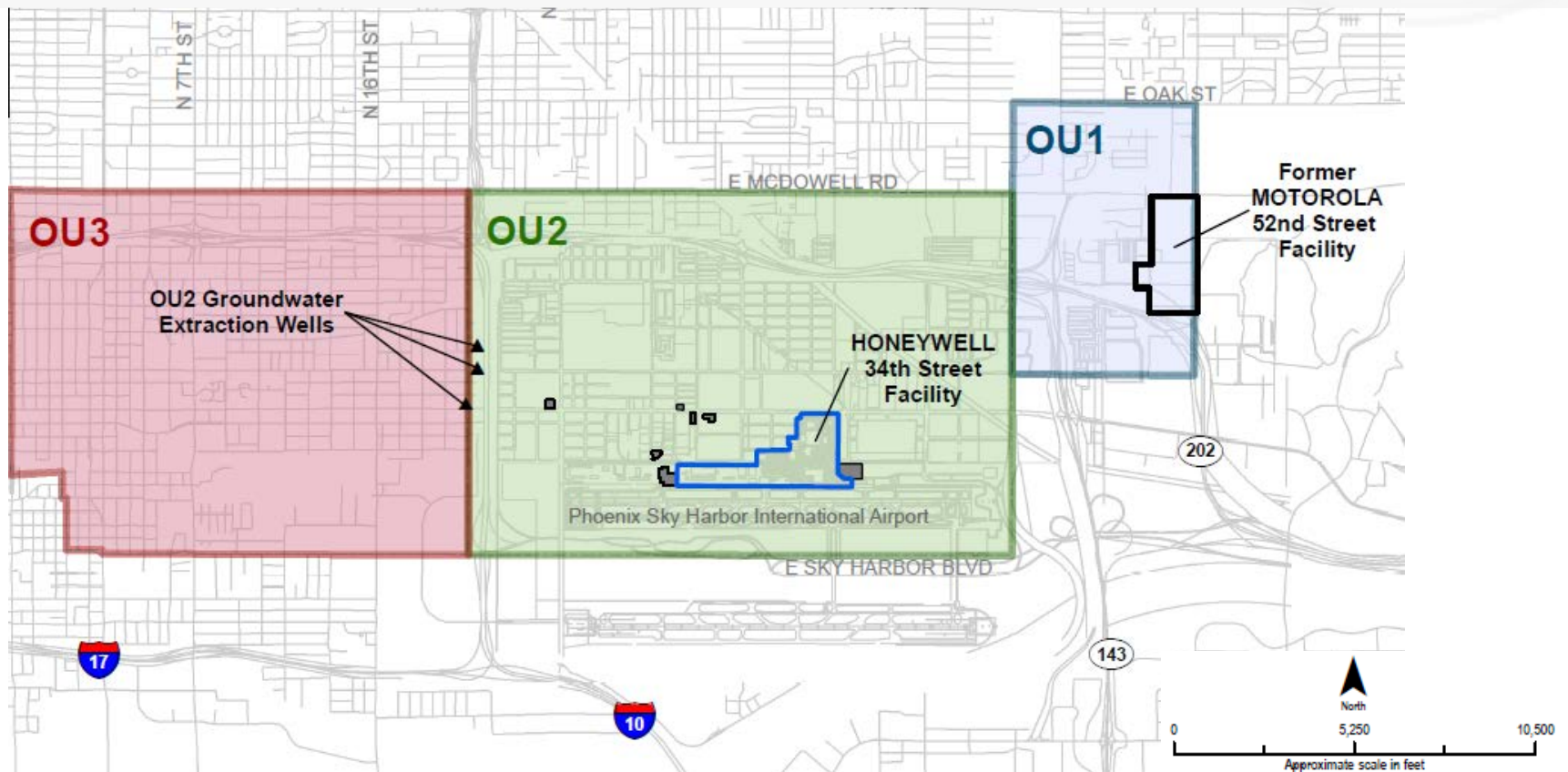


# Motorola 52<sup>nd</sup> St Superfund Site

## Within OU2 – Honeywell 34<sup>th</sup> Street Facility

### Recent Activities

- Revised Integrated Focused Human Health Risk Assessment – July 8, 2022
  - Included inclusion of soil vapor sample data from Bio Soil Vapor Extraction operation (1999 - 2017)
- Groundwater monitoring (annual sampling, semi-annual water levels)



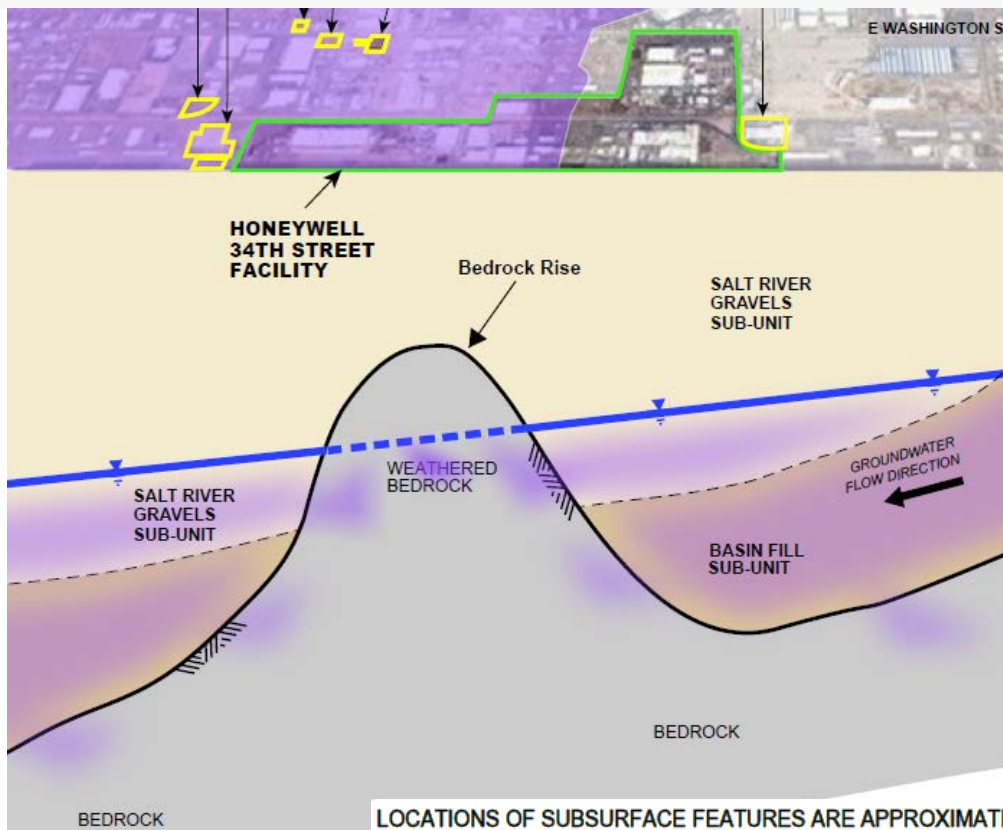
# Motorola 52<sup>nd</sup> St Superfund Site

## Within OU2 – Honeywell 34<sup>th</sup> Street Facility

### ➤ Recent Activities

- Conceptual site model presented in 2020 Annual Groundwater Monitoring Report reviewed by agencies

**West**



**East**

CVOCs =  
(variable concentrations not  
indicated by shading)

LOCATIONS OF SUBSURFACE FEATURES ARE APPROXIMATE AND NOT TO SCALE

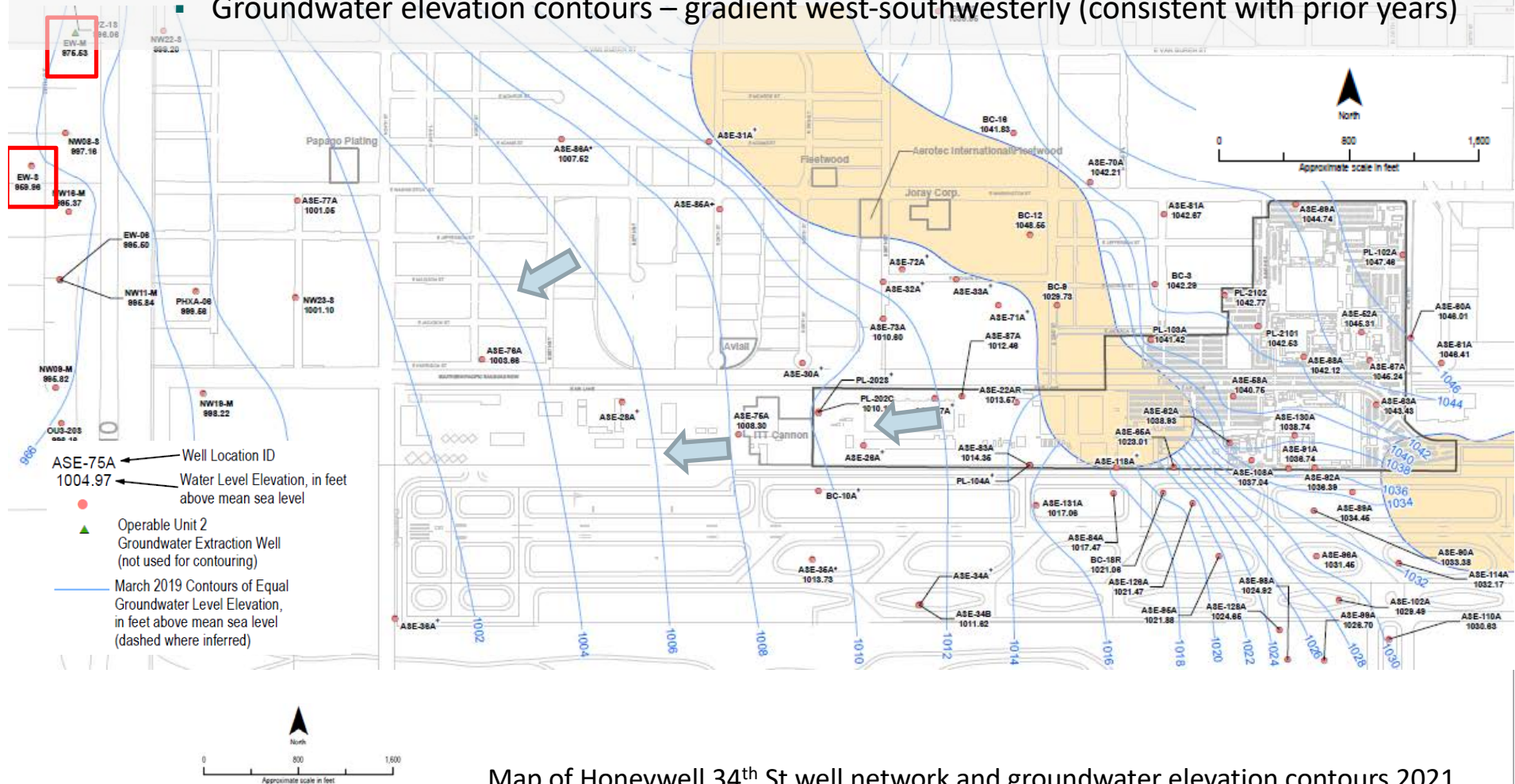
# Motorola 52<sup>nd</sup> St Superfund Site



## ■ Within OU2 - Honeywell 34<sup>th</sup> Street Facility

### ➤ Annual Groundwater Monitoring Results

- Groundwater elevation contours – gradient west-southwesterly (consistent with prior years)





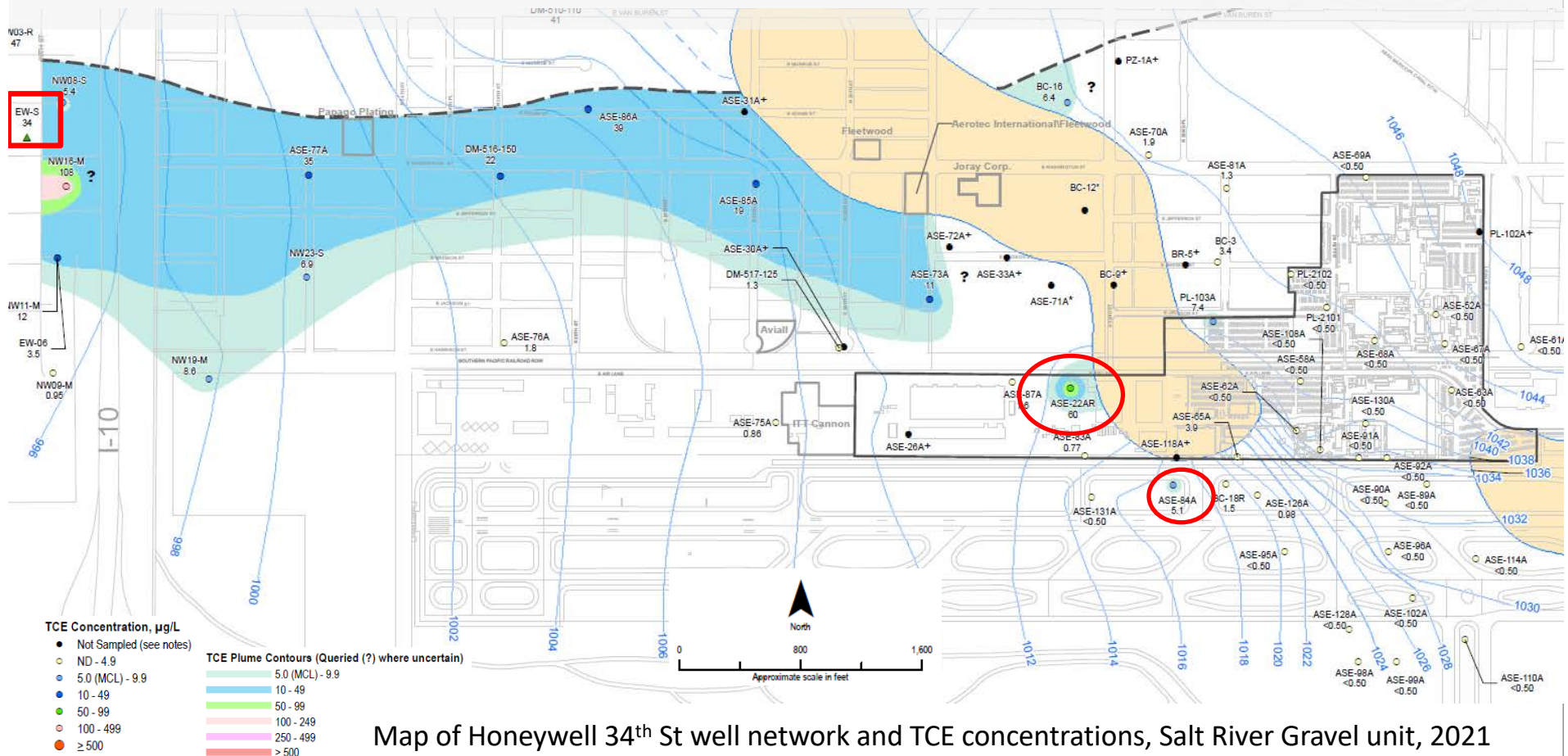
# Motorola 52<sup>nd</sup> St Superfund Site

## ■ Within OU2 - Honeywell 34<sup>th</sup> Street Facility

### ➤ Annual Groundwater Monitoring Results

#### ■ Trichloroethene (TCE) concentrations in Salt River Gravel (upper alluvial) unit – 2020 to 2021

- ❖ ASE-22AR – TCE concentration increase from **43 micrograms per liter (ug/L) to 60 ug/L**
- ❖ ASE-84A – Slight TCE concentration increase from **4.4 ug/L to 5.1 ug/L**



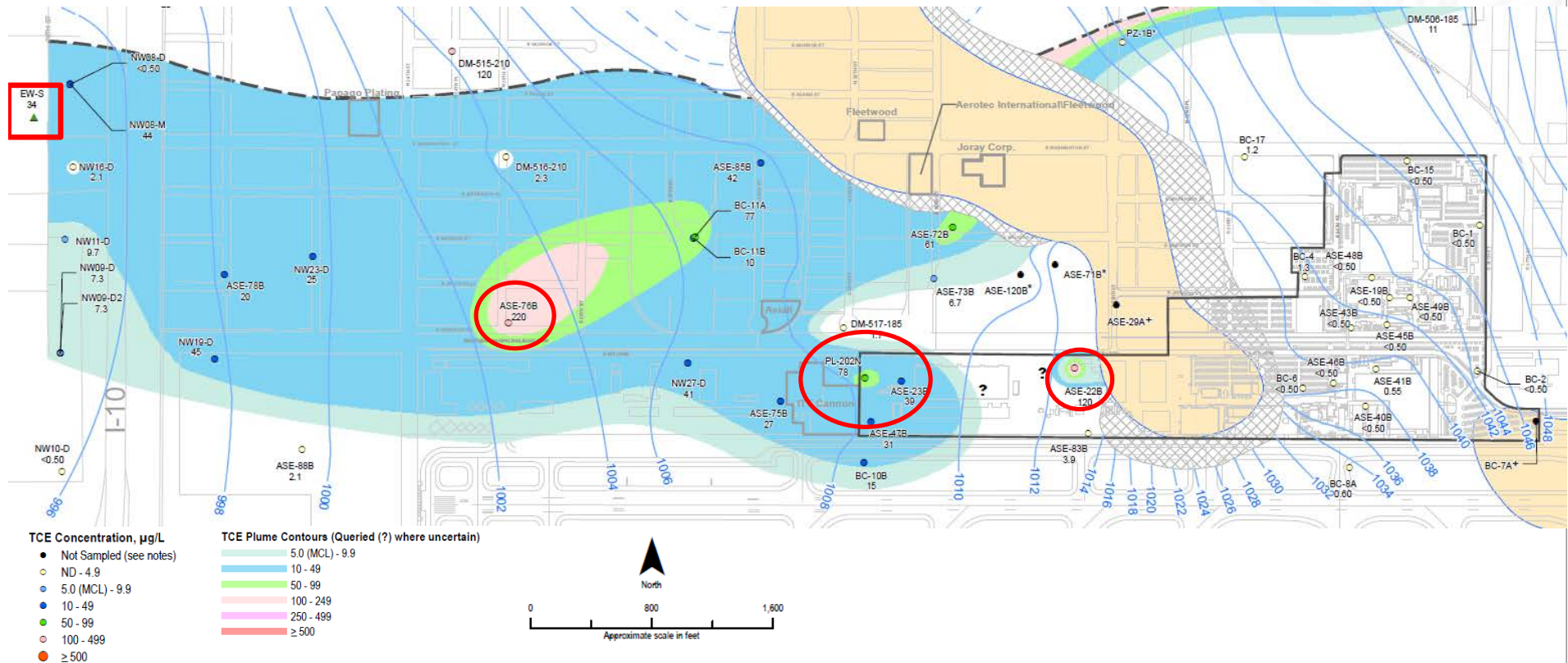
# Motorola 52<sup>nd</sup> St Superfund Site

## ■ Within OU2 - Honeywell 34<sup>th</sup> Street Facility

### ➤ Annual Groundwater Monitoring Results

#### ■ TCE concentrations in Basin Fill (lower alluvial) unit – 2020 to 2021

- ❖ **PL-202N** – TCE concentration **decrease from 93 ug/L to 78 ug/L**
- ❖ **ASE-22B** – TCE concentration **increase from 44 ug/L to 120 ug/L**
- ❖ **ASE-76B** – TCE concentration **increase from 180 ug/L to 220 ug/L**



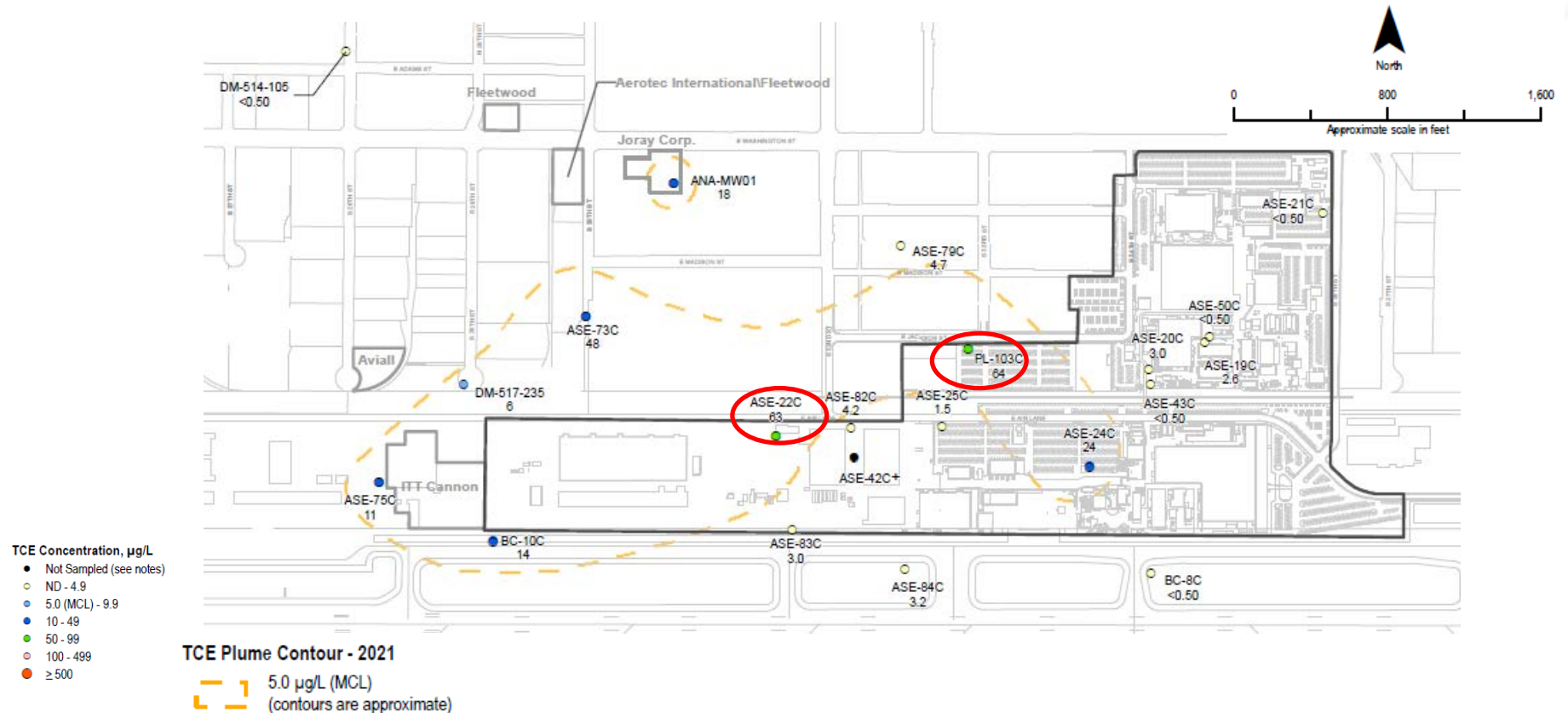
# Motorola 52<sup>nd</sup> St Superfund Site

## ■ Within OU2 - Honeywell 34<sup>th</sup> Street Facility

### ➤ Annual Groundwater Monitoring Results

#### ■ TCE concentrations in Bedrock unit – 2021

- ❖ ASE-22C – TCE concentration **decrease from 83 ug/L in 2020 to 63 ug/L in 2021**
- ❖ PL-103C – TCE concentration **decrease from 98 ug/L in 2020 to 64 ug/L in 2021**





# Motorola 52<sup>nd</sup> St Superfund Site



## ■ Within OU2 - Honeywell 34<sup>th</sup> Street Facility

### ➤ Planned Activities

- Continue Annual Groundwater Monitoring – Samples collected recently in September 2023
- Finalize IFHRA (**December 2022**)
- Revised Focused Feasibility Study (**2023**)
- **Proposed Plan**

DRAFT FINAL REPORT

Integrated Focused Human Health Risk  
Assessment Report  
Honeywell 34th Street Facility  
Phoenix, Arizona

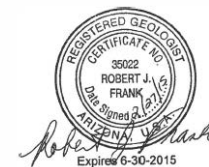
Prepared for  
Honeywell International Inc.

*Draft*

## Focused Feasibility Study Report Honeywell 34<sup>th</sup> Street Facility Phoenix, Arizona

Prepared for  
Honeywell International Inc.

February 2015



Prepared by  
 CH2MHILL.

# Motorola 52<sup>nd</sup> St Superfund Site



The screenshot shows the ADEQ website's navigation menu with categories like Air Quality Programs, Water Quality Programs, and Waste Programs. A sidebar lists various programs such as Biohazardous Medical Waste, Brownfields, and Federal DOD Sites. Below the menu is a 'MY COMMUNITY' section with a link to 'What is a Superfund Site?'. The article snippet explains that Superfund sites are governed by CERCLA and are on the National Priorities List (NPL).

## Questions?

Brett McDaniel, ADEQ  
email: [mcdaniel.brett@azdeq.gov](mailto:mcdaniel.brett@azdeq.gov)  
phone: 602-771-0200

The screenshot shows the ADEQ Superfund Site page for Motorola 52nd Street. The page includes a search bar, navigation menu, and a sidebar with 'MY COMMUNITY RESOURCES' such as Arizona Emissions Bank and Glossary of Terms. The main content area provides details about the site, including its location, EPA status, and contaminants of concern.

**Superfund Site | Motorola 52nd Street**

Revised on: March 31, 2020 - 10:36am

**EPA #: AZD009004177**

**Superfund National Priority List (NPL) Status:** The EPA listed this site on Oct. 4, 1989

**Location:** The Motorola 52nd Street Superfund Site (the site) is located in Phoenix, Arizona within the general boundaries of 52nd Street on the east, Palm Lane on the north, Seventh Avenue on the west and Buckeye Road on the south. Due to its size and to better manage cleanup efforts, the site was divided into three areas called Operable Units (OUs). The operable units, from east to west, include OU1, OU2, and OU3.

The site consists of a large area of contaminated groundwater extending from the former Motorola facility at 52nd Street and other sources west of 52nd Street, including Honeywell, the former Joray Corporation, and Arizona Public Service. ADEQ, working in concert with the U.S. Environmental Protection Agency (EPA), is the lead agency for activities in OU1 and OU2 with the exception of the vapor intrusion/indoor air investigation. The EPA is the lead agency for OU3 and vapor intrusion/indoor air investigations.

**Contaminants of Concern:** Volatile Organic Compounds (VOCs), including trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA) and tetrachloroethene (PCE), are the main contaminants of concern (COCs) for the site. Additional COCs may be identified in one or more of the remedial investigation/feasibility studies (RI/FS) currently in progress.

**Public Health Concerns:** There are currently no known exposures to COCs in excess of applicable health based screening levels at the site. This includes studies conducted to

<https://azdeq.gov/node/1916>