



STATUS UPDATE BROKEN ARROW LANDFILL SITE BROKEN ARROW, OK

EPA VIRTUAL COMMUNITY MEETING

NOVEMBER 18, 2022

BEFORE WE GET STARTED

- Welcome to those participants that dialed in on a phone line and/or joined using the Web browser.
- This presentation is being recorded using Teams.
- All lines will be muted during the presentation to prevent background noise.
- Any attendees having issues joining the meeting in the browser can join through the 'audio only' meeting using the Phone Number and Conference ID below:
- Phone Number: [\(844\) 608-7693](tel:8446087693) United States (Toll-free)
 - Conference ID: [45612103](#) #.

SMALL SCREENS – VISIBILITY ISSUES

- Cell Phone – Zoom in using two fingers. Start by placing two fingers side-by-side on the screen and then separate them.
- Small Computer Screen – Zoom in by holding Ctrl + and rolling your mouse up or down.

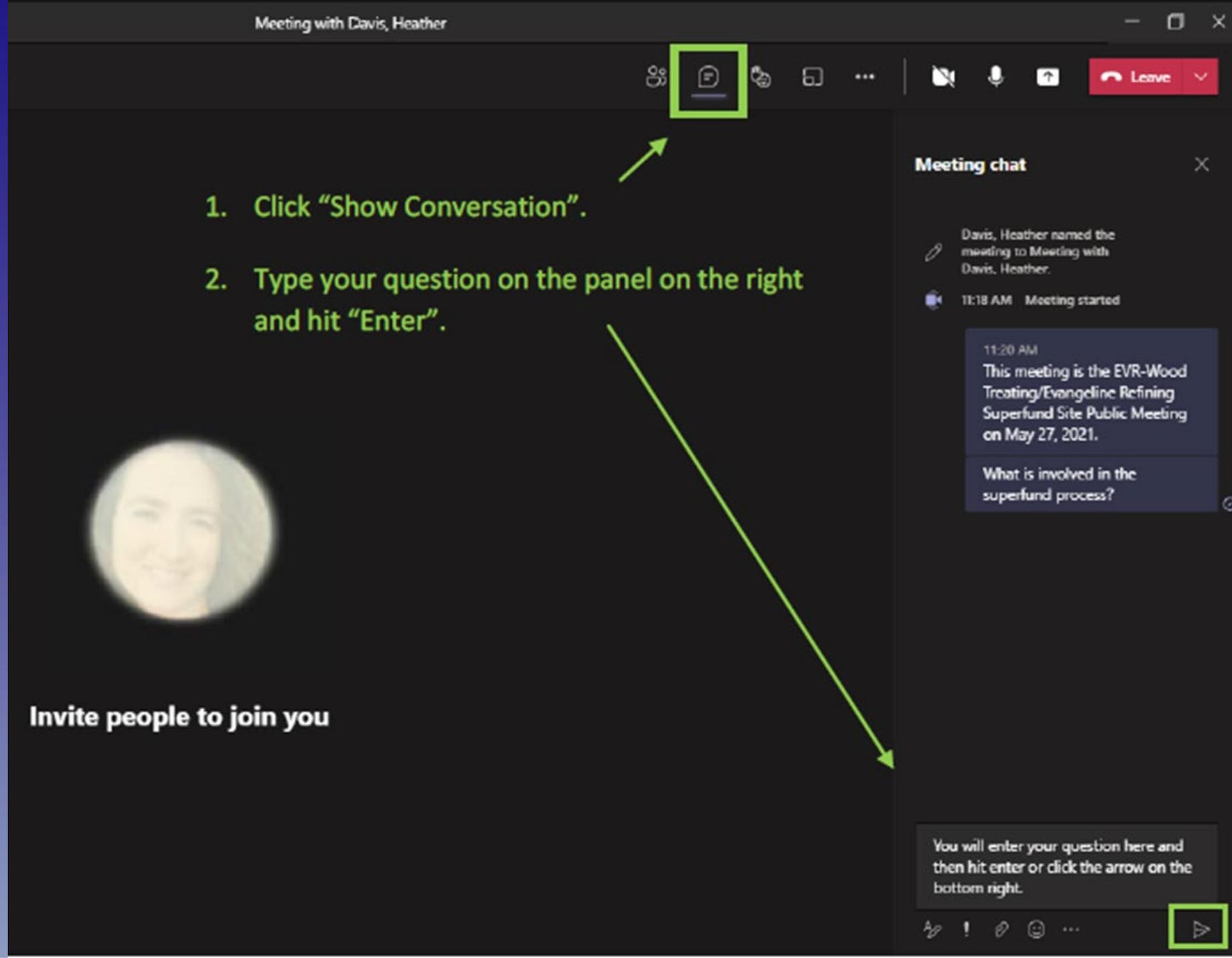


MEETING AGREEMENT

- Separate the person from the problem – avoid personal attacks, name calling, or questioning people’s motives.
- Keep remarks brief, to the point, and non-repetitive of comments others have made.
- One person speaks at a time.
- Trust that our intention is to ensure that everyone has an opportunity to ask a question.
- Limit questions to 2-3 minutes so ensure others have a chance to ask a question.
- The subject matter for this meeting is specifically about Broken Arrow. EPA is unable to address issues outside of the Broken Arrow.

HOW TO USE THE CHAT BOX

1. Click "Show Conversation".
2. Type your question on the panel on the right and hit "Enter".



The screenshot shows a Zoom meeting window titled "Meeting with Davis, Heather". The top toolbar contains several icons, with the "Show Conversation" icon (a speech bubble) highlighted by a green box. A green arrow points from this icon to the "Meeting chat" panel on the right. The chat panel displays a message from "Davis, Heather" stating the meeting name and a question: "What is involved in the superfund process?". A green arrow points from the second step of the instructions to the bottom right of the chat panel, where a green box highlights the "Send" arrow icon. A text box at the bottom of the chat panel reads: "You will enter your question here and then hit enter or click the arrow on the bottom right." Below the chat panel, there is a blurred circular profile picture and the text "Invite people to join you".

TEAMS ICONS

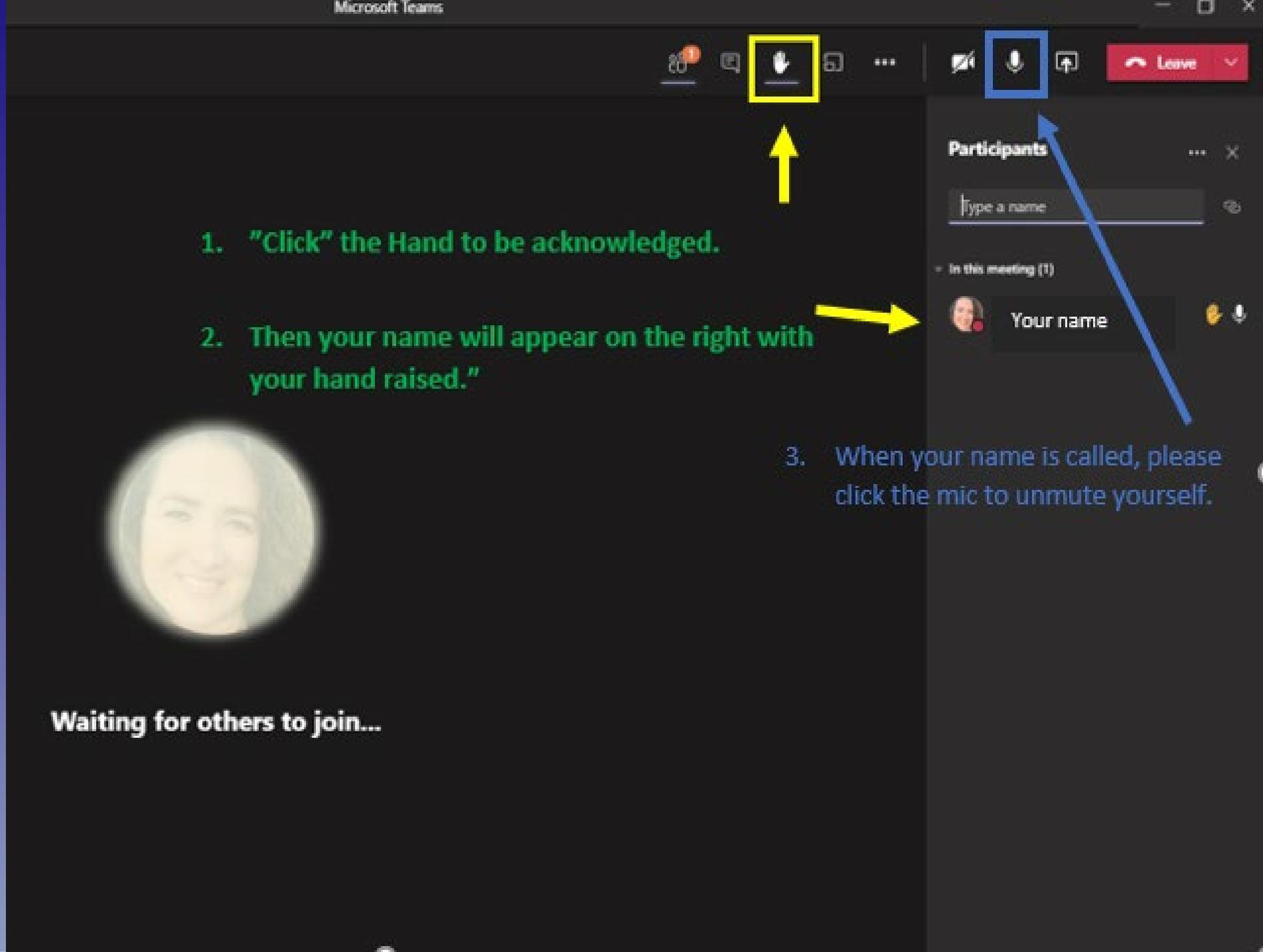
1. "Click" the Hand to be acknowledged.

2. Then your name will appear on the right with your hand raised."

3. When your name is called, please click the mic to unmute yourself.

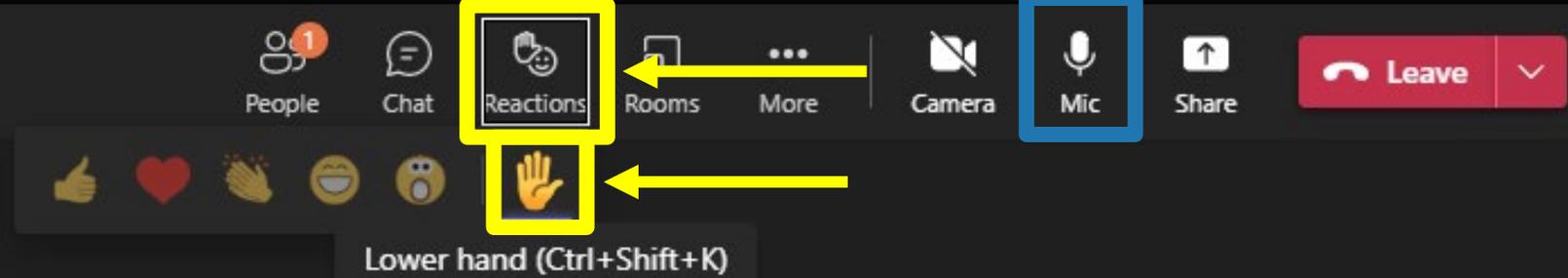


Waiting for others to join...



HOW TO RAISE YOUR HAND:

TEAMS UPDATE



1. Click “Reactions”
2. Click the “Raise Hand” button
3. Unmute yourself to speak when you are called on.



Invite people to join you

PRESS *6 TO UNMUTE THE PHONE LINE





PARTICIPATING GOVERNMENT OFFICIALS

U.S. ENVIRONMENTAL PROTECTION AGENCY

DAVID ROBERTSON – On-Scene Coordinator, Superfund and Emergency Management Division

SAM CHEEK – EPA Contractor, Weston Solutions

BRENDA COOK – Chief, Risk and Site Assessment Section

CHERYL NICHOLS – Community Involvement Coordinator, External Affairs Division

OKALHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ)

JOHN MITS DARFER – Geologist/Ground Water Expert

RACHEL FRANCKS – Environmental Programs Specialist

ALISHA GRAYSON – Environmental Programs Specialist

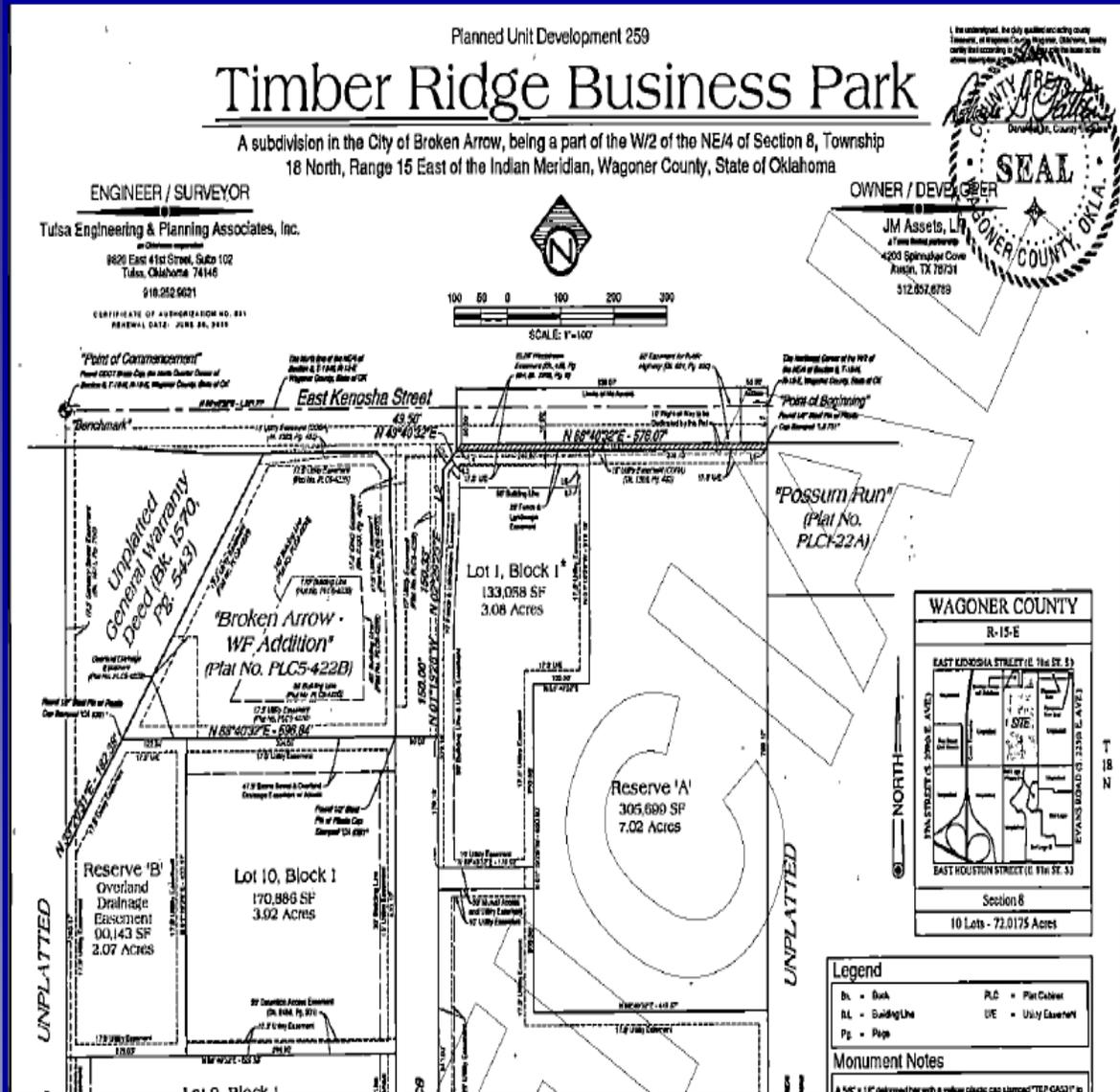
CITY OF BROKEN ARROW

KENNETH SCHWAB – Assistant City Manager

FEDERAL AND STATE AGENCY COLLABORATION



BROKEN ARROW LANDFILL SITE



SITE LOCATION



Image © 2022 Maxar Technologies

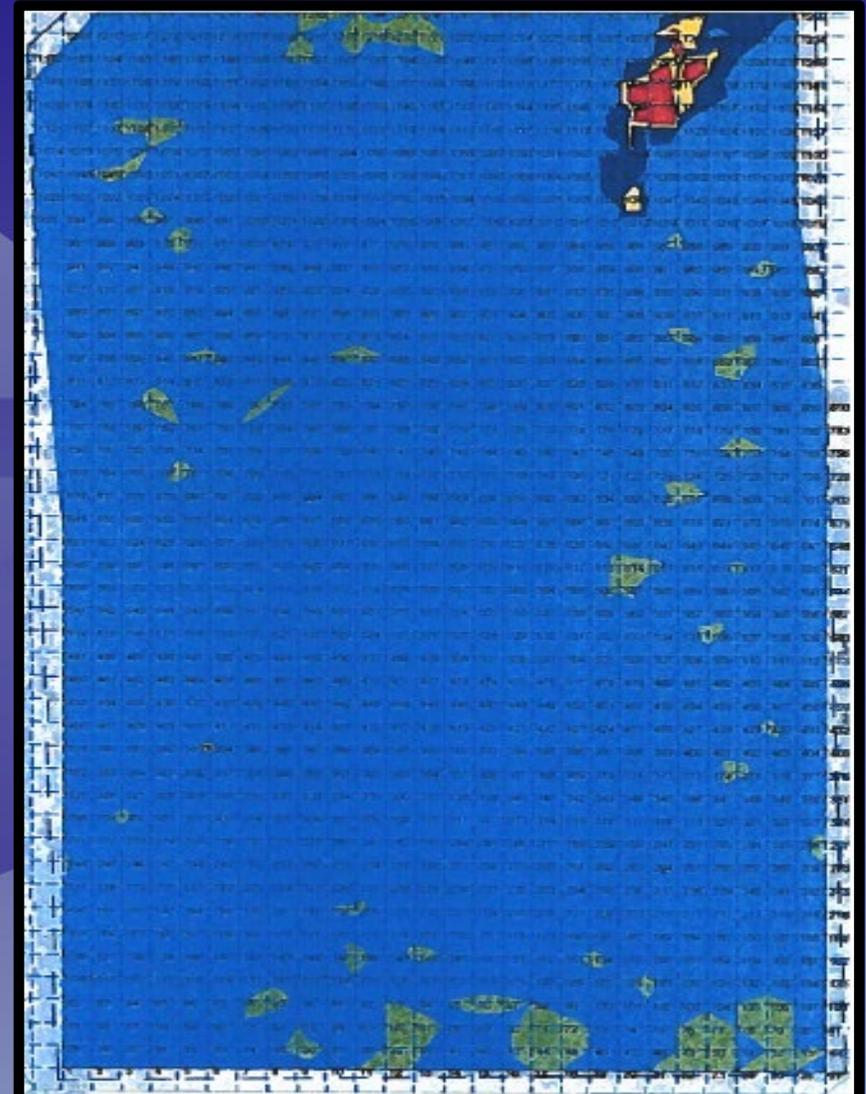
Google Earth

HISTORICAL REVIEW/TIMELINE

- 1920-30's - Coal strip mining in the Broken Arrow Area
- Up to 1960's - Limited amount of coal mining
- 1973 - Oklahoma State Department of Health (OSDH) issued a permit for a sanitary landfill in 1973
- 1976 - Permit was Closed
- 2008+ - Entered into the Oklahoma Department of Environmental Quality (ODEQ) Brownfields program sometime after 2008. During this process the radioactive materials were discovered in the Northeastern section of the property.
- 2022 – EPA began planned removal action

SITE ASSESSMENT

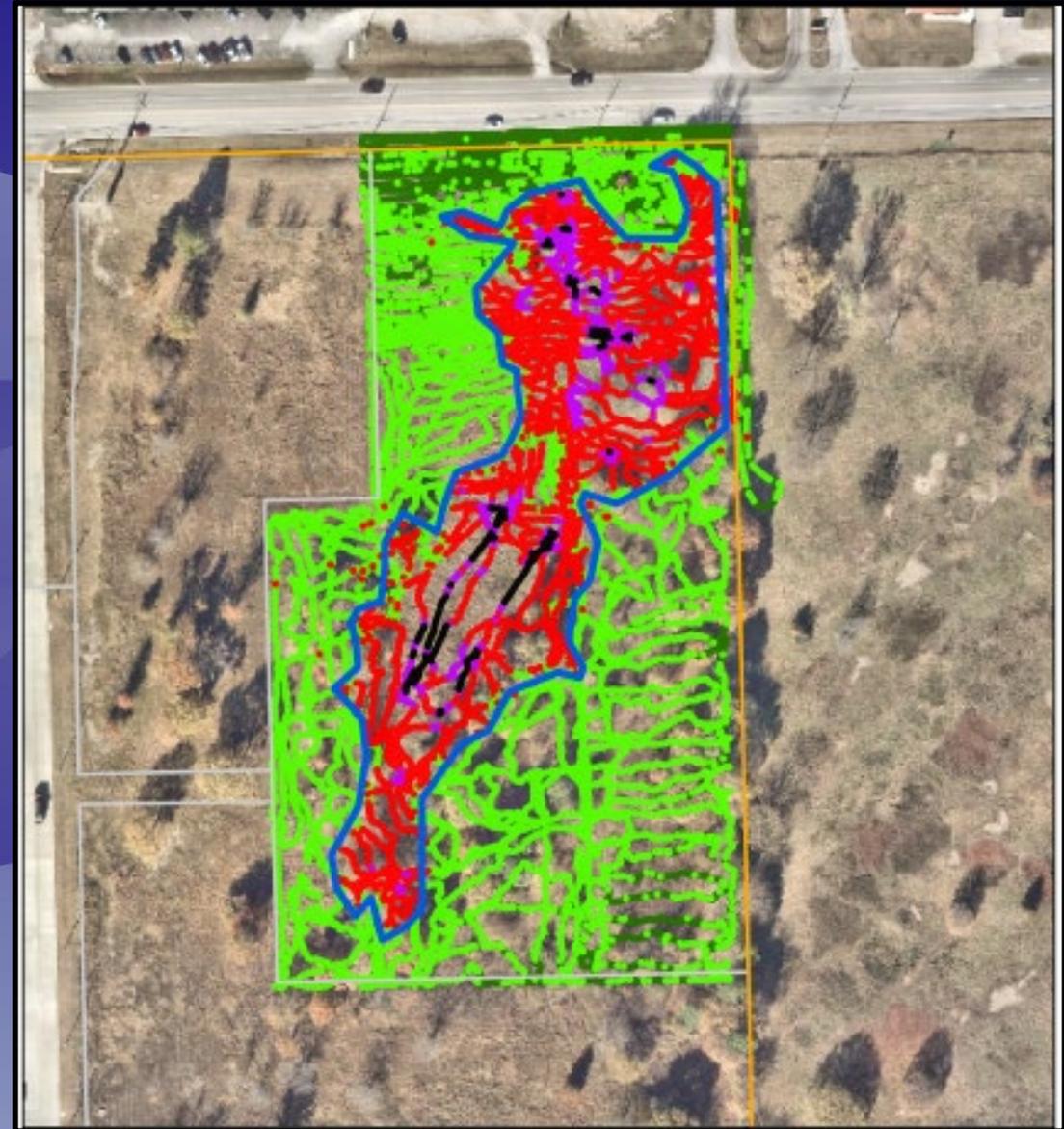
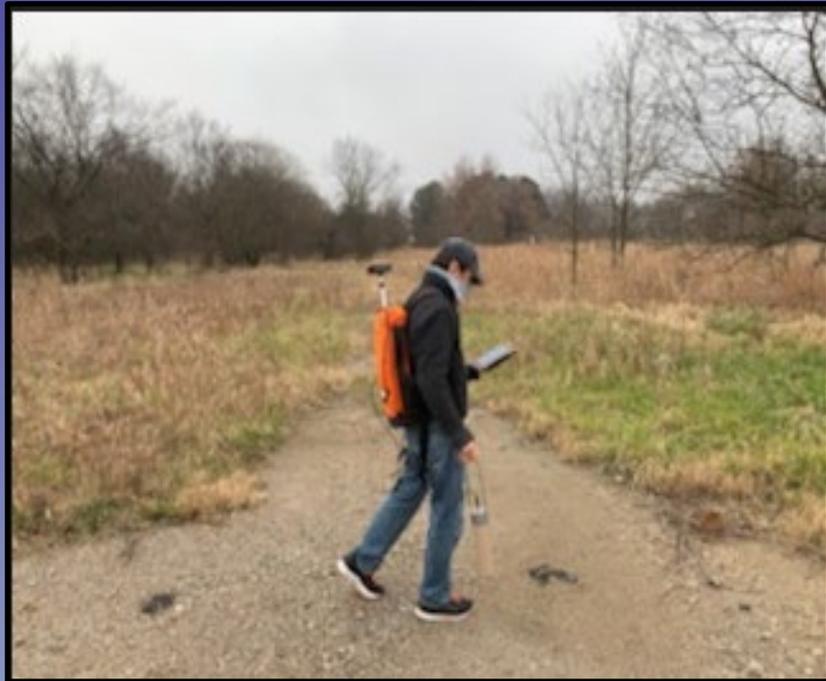
- 2008+ - ENTERED INTO THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) BROWNFIELDS PROGRAM SOMETIME AFTER 2008. DURING THIS PROCESS THE RADIOACTIVE MATERIALS WERE DISCOVERED IN THE NORTHEASTERN SECTION OF THE PROPERTY.
- BASED ON THE ODEQ FINDINGS A GAMMA SURVEY WAS CONDUCTED FOR THE ENTIRE 70 ACRE BUSINESS PARK IN 2014
- CURRENT STATUS OF THE SITE
 - IS REGULATED BY THE ODEQ AND WILL REQUIRE ODEQ APPROVAL BEFORE ANY DEVELOPMENT IS POSSIBLE



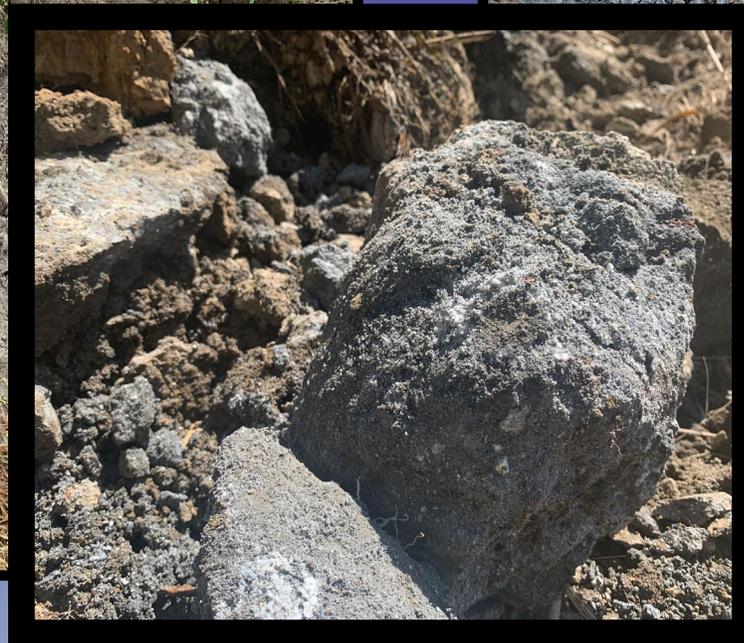
Timber Ridge Business Park Gamma Survey, May 2014

SITE ASSESSMENT

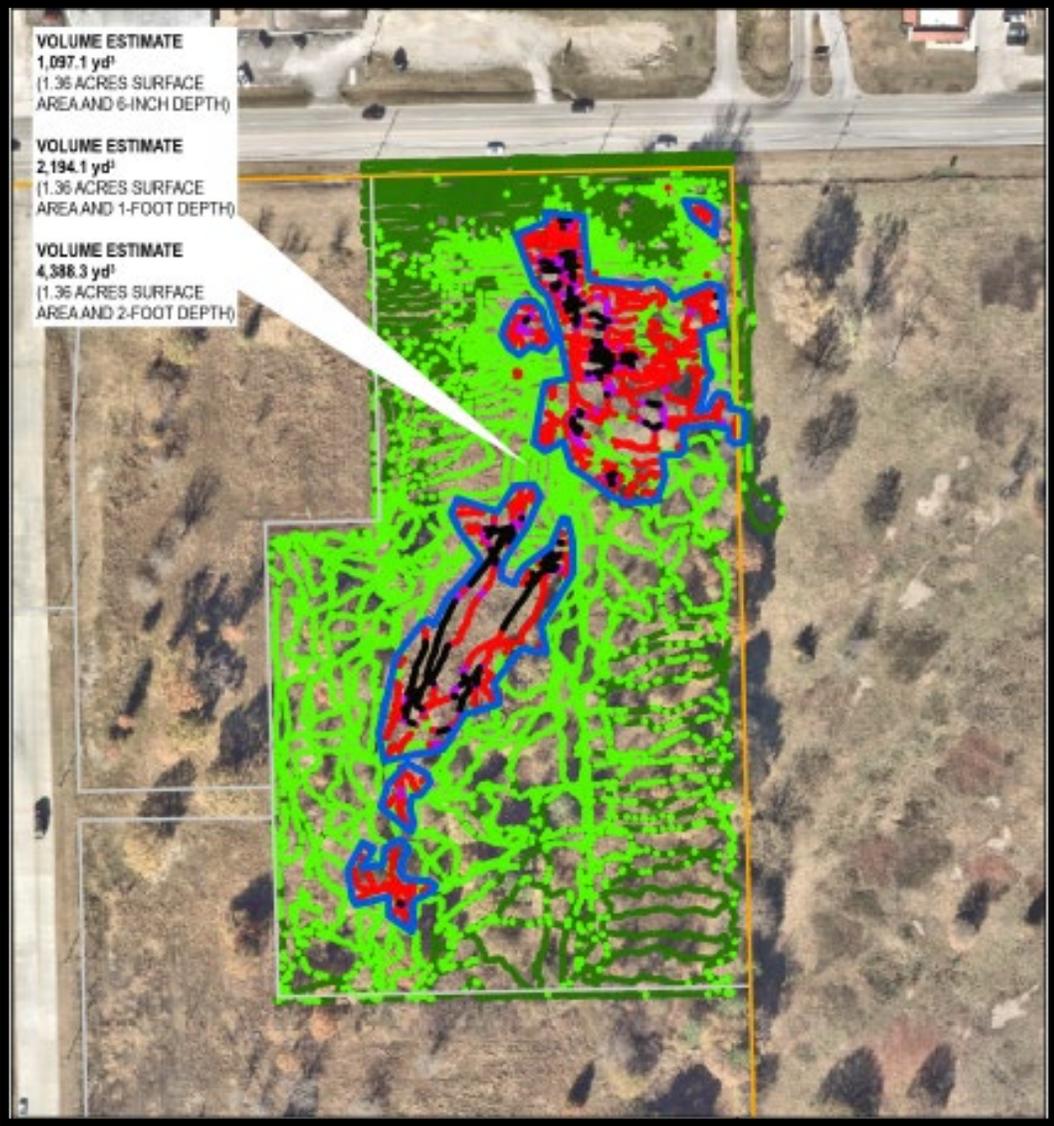
- GAMMA WALKOVER SURVEY TO DETERMINE EXTENT OF SURFACE CONTAMINATION
- COLLECT SOIL SAMPLES FOR CORRELATION OF METER (CPM) VALUES TO LABORATORY ANALYSIS(pCi/g)



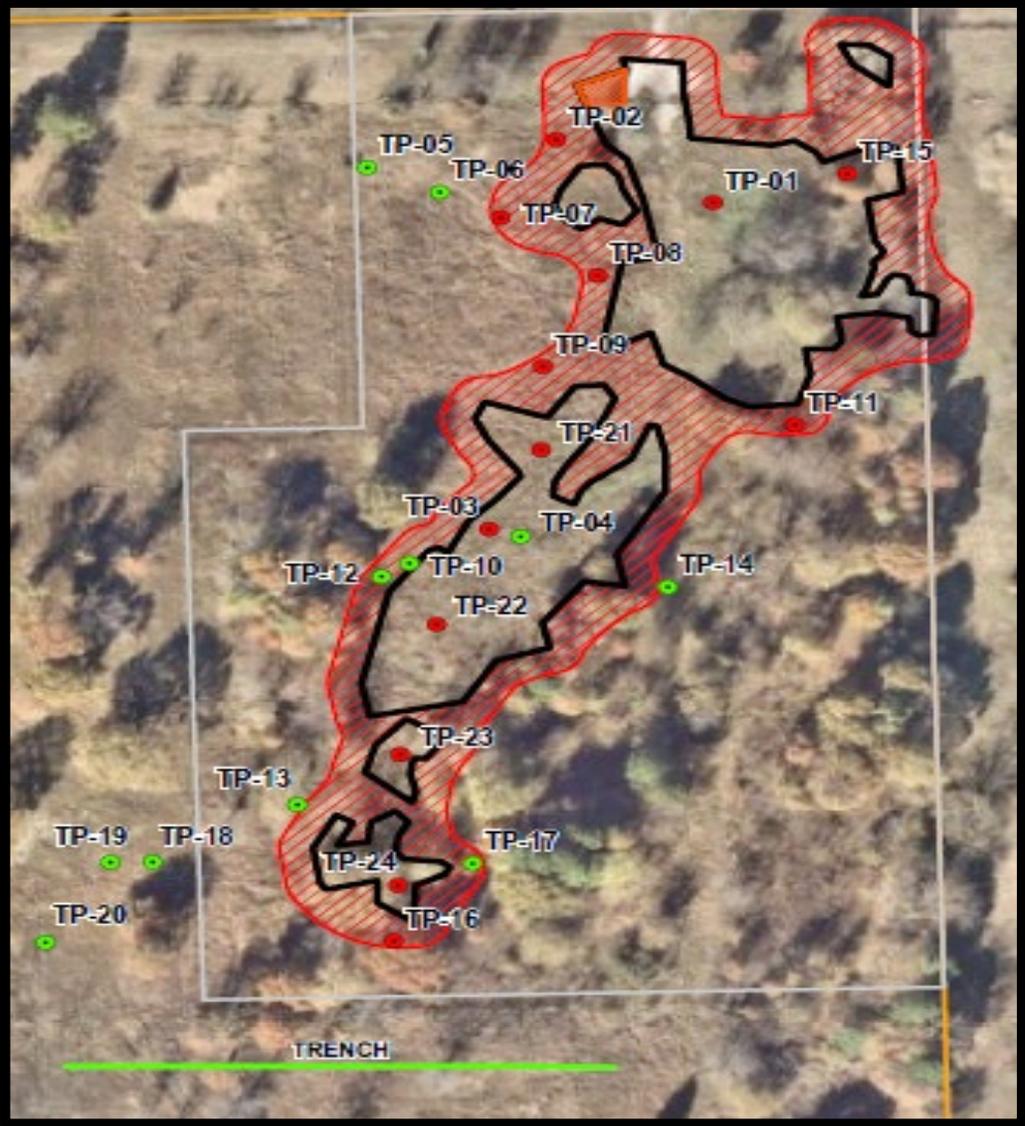
EPA REMOVAL ACTION FINDINGS



EPA REMOVAL ACTION FINDINGS



Volume Estimate base in 6 Inch Depth:
1100 yd³



Volume estimated based on 4 ft depth with
20 ft buffer: 17,800 yd³

OFF-SITE ASSESSMENT

EPA CONDUCTED AN OFF-SITE GAMMA SURVEY
ASSESSMENT OF THE WEST AND SOUTH PROPERTIES
BASED ON THE FORMER LANDFILL SITE LOCATION

THE ASSESSMENT INCLUDED THE FOLLOWING:

- THREE TEST PITS
- ONE TEST TRENCH
- COLLECT SURFACE WATER AND SEDIMENT SAMPLE



SURFACE WATER / SEDIMENT SAMPLE COLLECTION

COLLECTED SURFACE WATER AND SEDIMENT SAMPLES :

- INITIAL SCANS DID NOT INDICATE ANY RADIOACTIVE MATERIALS IN EITHER MATERIAL
- SAMPLE RESULTS ARE EXPECTED AFTER THE THANKSGIVING BREAK



SOIL SAMPLE COLLECTION

COLLECTED 7 SAMPLES THE SOIL/RADIOACTIVE MATERIAL SAMPLES
SAMPLE RESULTS ARE EXPECTED AFTER THE THANKSGIVING BREAK

ALL SAMPLES WILL BE ANALYZED FOR RADIONUCLIDES AND COMPARED TO THE SITE
RADIONUCLIDES OF CONCERN

CURRENT SITE ACTIVITIES

- A CAP MADE OF EARTHEN MATERIAL IS BEING PLACED ON TOP OF AREAS THAT EXCEEDED THE ACTION LEVEL AND AN ADDITIONAL 20 FT BUFFER
- EPA IS ERECTING A 6 FT CHAIN LINK FENCE TOPPED WITH BARBWIRE TO RESTRICT ACCESS
- EPA ENFORCEMENT WILL CONTINUE INVESTIGATION INTO THE SOURCE OF THE MATERIAL AND POTENTIAL RESPONSIBLE PARTIES
- EPA IS EVALUATING SITE FOR NPL CONSIDERATION



THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA), COMMONLY KNOWN AS SUPERFUND AUTHORIZES TWO KINDS OF RESPONSE ACTIONS:

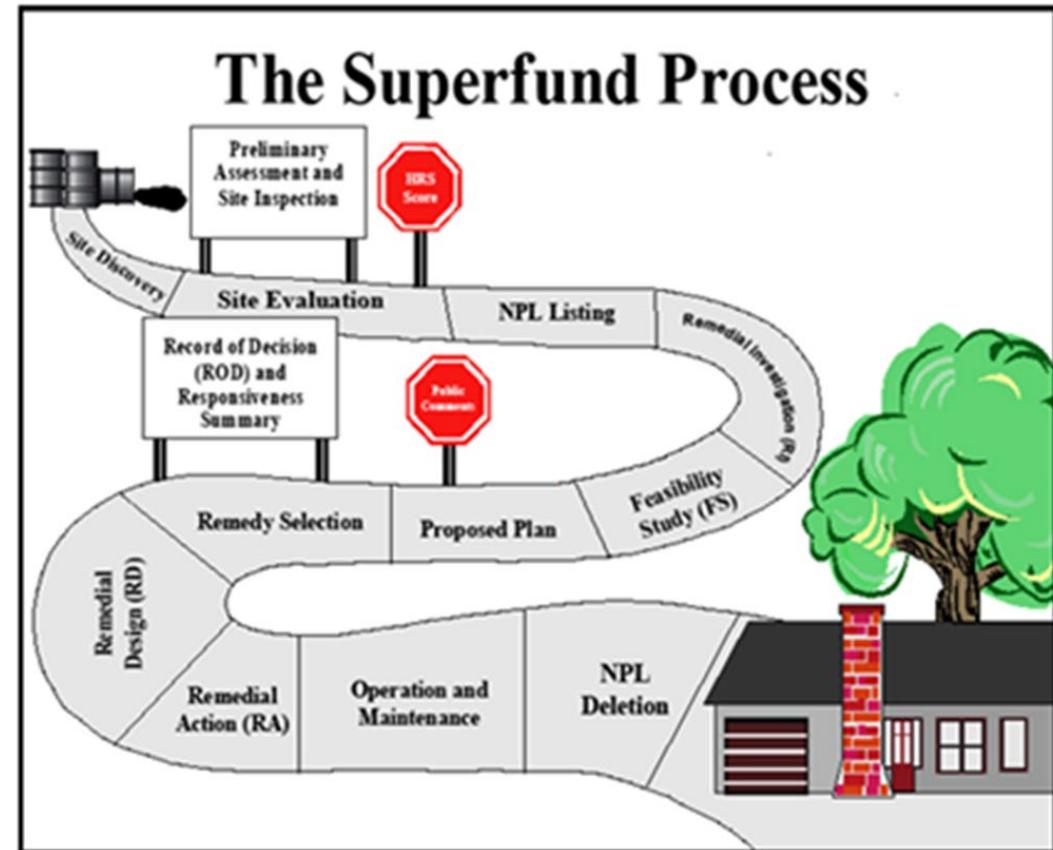
- SHORT-TERM REMOVALS, WHERE ACTIONS MAY BE TAKEN TO ADDRESS RELEASES OR THREATENED RELEASES REQUIRING PROMPT RESPONSE.
- LONG-TERM REMEDIAL RESPONSE ACTIONS, THAT PERMANENTLY AND SIGNIFICANTLY REDUCE THE DANGERS ASSOCIATED WITH RELEASES OR THREATS OF RELEASES OF HAZARDOUS SUBSTANCES THAT ARE SERIOUS, BUT NOT IMMEDIATELY LIFE THREATENING. THESE ACTIONS CAN BE CONDUCTED ONLY AT SITES LISTED ON EPA'S NATIONAL PRIORITIES LIST .

CERCLA REQUIRES THAT THE EPA:

- ESTABLISH CRITERIA FOR PRIORITIES AMONG **RELEASES** OR **THREATENED RELEASES** OF HAZARDOUS SUBSTANCES
- PREPARE A LIST OF NATIONAL PRIORITIES OF **ALL RELEASES** OR **THREATENED RELEASES** THROUGHOUT THE US

TO MEET THESE REQUIREMENTS, THE EPA:

- DEVELOPED THE HAZARD RANKING SYSTEM (HRS)
- ESTABLISHED THE NATIONAL PRIORITIES LIST (NPL), A LIST OF SITES THAT PRESENT THE GREATEST THREATS TO HUMAN HEALTH AND THE ENVIRONMENT



QUESTIONS



SITE AND CONTACT INFORMATION

GENERAL INFORMATION AND UPDATES TO SITE ACTIVITIES CAN BE FOUND ON THE WEB AT:

[HTTPS://RESPONSE.EPA.GOV/BROKENARROWLANDFILL](https://response.epa.gov/brokenarrowlandfill)

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