

# Public Information Meeting

## Former Raritan Arsenal

### Formerly Used Defense Site (FUDS)

#### Edison, New Jersey

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US Army Corps of Engineers  
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# Item discovery on 23 April 2015

- On Thursday, April 23, 2015 – A private contractor, working in the Middlesex County College identified an unusual object during their construction activities; item identified as AN-M43 500 lb. Bomb, NOT fuzed, NOT chemical and DID NOT contain high explosive.
- 87<sup>th</sup> Civil Engr Battalion Explosive Ordnance Disposal (EOD) personnel unit from Joint Base McGuire-Dix-Lakehurst (JB MDL), NJ responded; removed the item and detonated (as per their protocol) it during the evening of April 23;
- Property owner / private contractor followed the 3R's of Explosive Safety
  - ▶ **RECOGNIZE** – Construction crews recognized an unusual metallic object, and since the USACE provided a safety briefing prior commencing their work they were familiar with the area's history they were aware that it could be an item of concern
  - ▶ **RETREAT** – Crews immediately stopped construction activities and left the unknown object alone
  - ▶ **REPORT** – Crews, as per proper safety protocol, reported their find to local law enforcement, who ultimately coordinated with local EOD at the nearby military base and the U.S. Army Corps of Engineers
- Synopsis:
  - ▶ An unusual incident;
  - ▶ The incident was handled safely and efficiently by the proper authorities; and
  - ▶ Currently, the US Army Corps of Engineers is overseeing geophysical digital mapping of the area around where the item was located to determine if there may be other metallic subsurface anomalies that could warrant further investigation of the area or removal action.





# Photos of Munitions Debris Finding



Side view

Top view



*Images of  
actual item  
found*



*Image of a replica AN-M43\**

*\* AN-M43 is a bomb from the WWII era*



# Agenda

- Status of Specific areas of focus:

- 1) Site-wide Groundwater (GW) / Indoor Air (IA)
- 2) Middlesex County College property
- 3) Commercial / Industrial Area
- 4) USEPA / GSA property
- 5) Area 5
- 6) Area 9 & 19
- 7) Area 10
- 8) Area 13
- 9) Area 16
- 10) Area 6, 6A, 6B and DSA #1
- 11) Area 11 and DSA #2
- 12) Area 12, OB/OD and DSA # 3
- 13) DSA #4, DSA #5 and DSA #6
- 14) Area 18D

- FY 2015\* Milestones
- FY 2016\* Future Planned Activities
- Funding
- Questions

*Legend:*

\* FY 2015: 10/1/2014 – 9/30/2015

\* FY 2016: 10/1/2015 – 9/30/2016

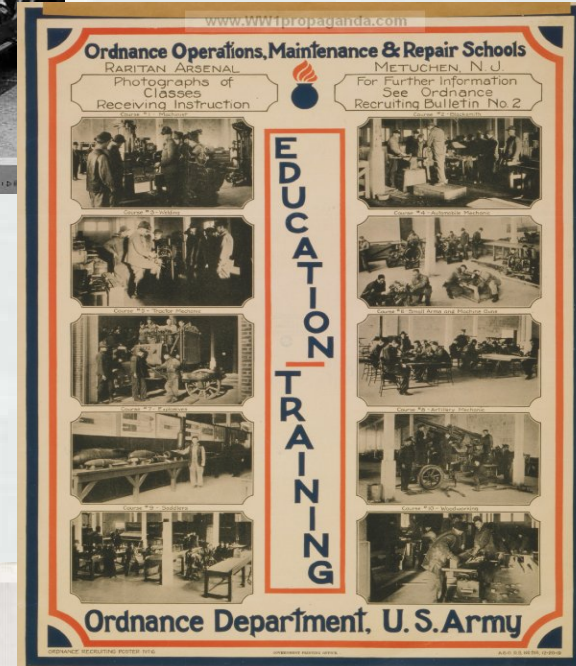
❖ OB/OD = Open Burn / Open  
Detonation

❖ DSA = Dredged Spoils Area



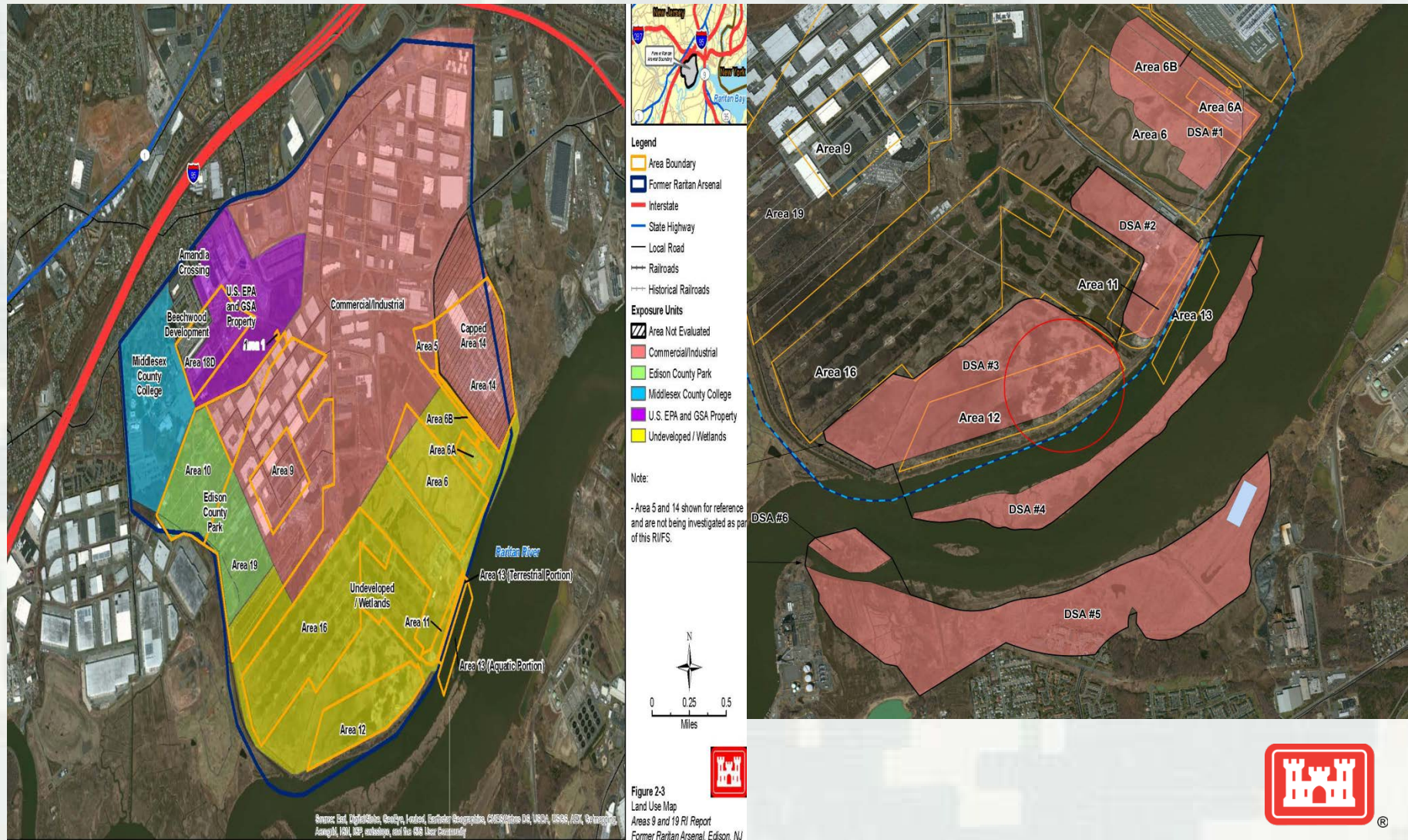
# Site History

- Mission of Arsenal from 1917-1963
  - ▶ shipping and storage of ordnance material;
  - ▶ general supplies to other arsenals and military facilities;
  - ▶ stored, modified, and shipped military vehicles.
- Decontamination process completed in October 1963.
- Arsenal closed 1964
- Upon disposition, Arsenal consisted of 3,234 acres, approximately 440 buildings, 2.8 million square feet.
- Site-wide network of over 62 miles of roads and railways.
- Government officials and citizens proposed an orderly conversion of property from military to civilian use.
- Group recommended two-thirds of Arsenal be targeted for future industrial use.
- In 1964, GSA sold 2,360 acres to private landowners.
- EPA/GSA, Middlesex County College and Thomas Edison Park retained 840 acres of former Arsenal property.





# Site Map





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# Groundwater Long Term Monitoring

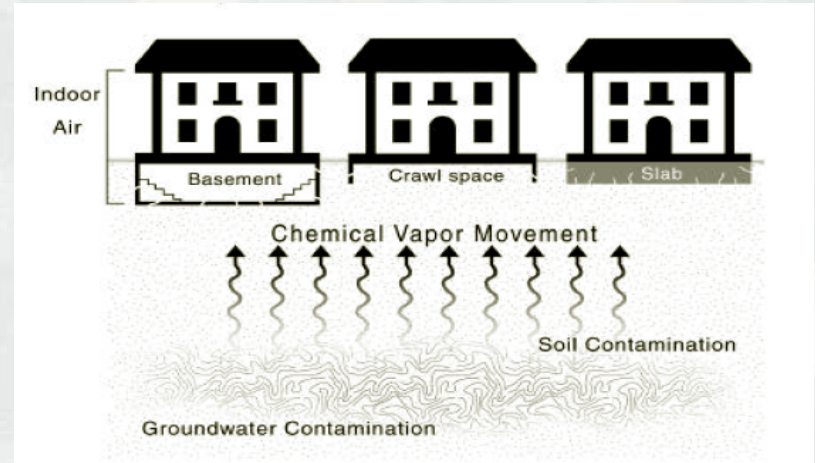
- Monitor Groundwater Areas of Concerns (AOCs) for natural attenuation in the 6 AOCs (2, 4, 6, 8, 9 & 10)
  - ▶ Sampling schedule for monitored natural attenuation:
    - ✓ First round of sampling: Summer 2010 (completed)
    - ✓ Second round of sampling: Summer 2012 (completed )
    - Future sampling (2017) – every five (5) years up to thirty years (until 2042)
  - ▶ Monitored natural attenuation is a process of decreasing concentration of contaminants in groundwater without human involvement.
- Based on previous sampling results showing decreasing concentration levels: 4 GW AOCs dropped from consideration (AOCs 1, 3, 5 & 7) – no further action is required; and
- Results are showing contaminants but there is evidence of attenuation; plumes are at or reaching steady-state condition



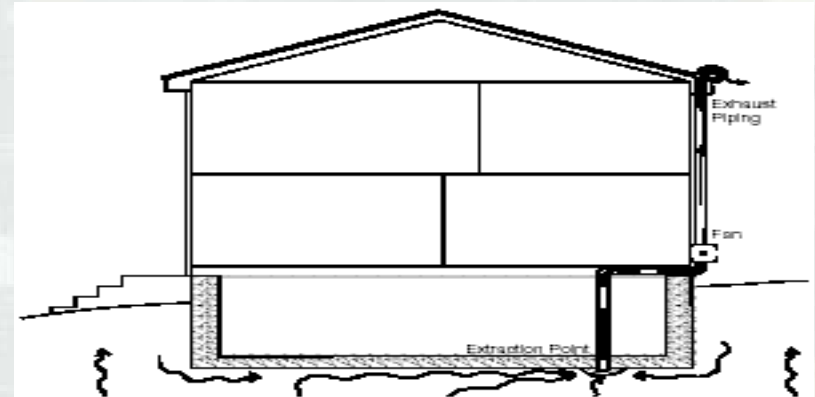


# Indoor Air / Vapor Intrusion

- What is Vapor Intrusion: volatile chemicals can evaporate from groundwater and soil and may build up in the indoor air of nearby buildings
- What is vapor mitigation system: its designed to reduce the air pressure beneath the building and keep vapors that may collect beneath the building from entering into building.
- Status:
  - Monitoring 8 industrial buildings for volatile organic compounds (VOCs) in indoor air and sub-slab soil gas
  - ✓ These results are documented in the Indoor Air Quality Reports; currently up to report #11
  - ✓ Report #11 will be submitted to NJDEP for review



## Subsurface Depressurization System



# Middlesex County College property

(addresses HTW only – chemical constituents in soil)



- Prepare a Remedial Investigation (RI) / Proposed Plan (PP) / Decision Document (DD)
  - ✓ Completed a Remedial Investigation report;
  - ✓ Submitted to NJDEP;
  - RI conclusion no further action for HTW; munitions will be addressed separately
  - There will be no Feasibility Study (FS) since there is no unacceptable risk for soil HTW;
  - USACE will present the proposed plan to public for review & comment (30 days review period);
  - Public Meeting will be held – Summer 2015; and
  - Decision Document to be prepared after Proposed Plan is finalized.





# USEPA / GSA property

(Area 1 and 18A thru G)

(addresses HTW only – chemical constituents in soil)

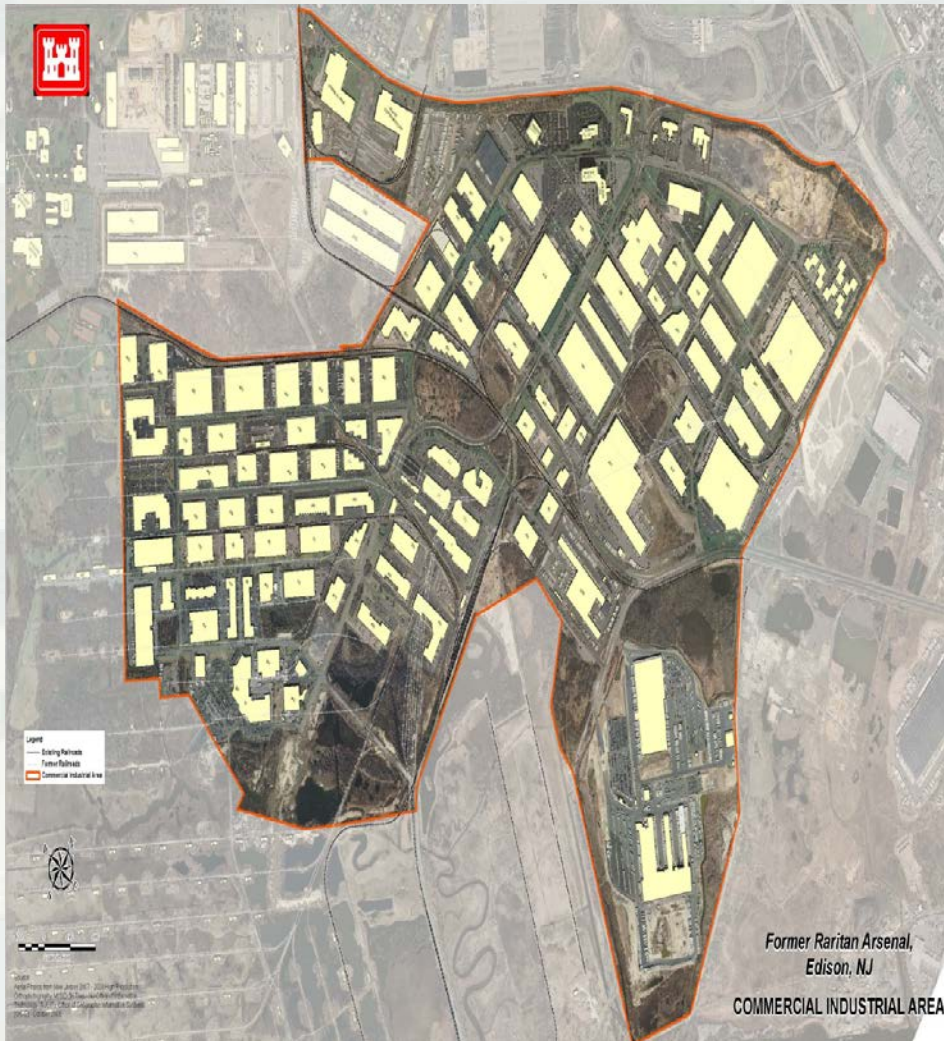


- Prepare a Remedial Investigation (RI) / Feasibility Study (FS) / Proposed Plan (PP) / Decision Document (DD)
  - A Remedial Investigation report is being prepared;
  - Submit to NJDEP for review – Summer 2015;
  - The need for a Feasibility Study will be determined after the RI;
  - USACE will present the Proposed Plan to the public for review & comment (30 days review period);
  - A public meeting will be held; and
  - Decision Document to be prepared after Proposed Plan is finalized.



# Commercial / Industrial Area

(addresses HTW only – chemical constituents in soil)



- Prepare a Remedial Investigation (RI) / Feasibility Study (FS) / Proposed Plan (PP) / Decision Document (DD)
  - A Remedial Investigation report is being prepared;
  - Submit to NJDEP for review – Summer 2015;
  - The need for a Feasibility Study will be determined after the RI report;
  - USACE will present the Proposed Plan to the public for review & comment (30 days review period);
  - A public meeting will be held; and
  - Decision Document to be prepared after Proposed Plan is finalized.





# Area 5

(addresses CWM, HTW & MMRP)



- Prepare a Remedial Investigation (RI) / Proposed Plan (PP) / Decision Document (DD)
  - ✓ A Remedial Investigation has been prepared;
  - ✓ Submitted to NJDEP – Apr 2015;
    - The need for a Feasibility Study will be determined after the Final RI report;
    - USACE will present the proposed plan to the public for review & comment (30 days review period);
    - A public meeting will be held – Summer 2015; and
    - Decision Document to be prepared after Proposed Plan is finalized.



# Ongoing Remedial Investigation

(addresses 12 Investigation areas:

1, 6, 6A, 6B, 10, 10 Part I, 11, 12, 13 (Pier), 16, 18D and 9/19 and DSAs#1-6)

- Scope of work: Conduct remedial investigation to fully characterization areas
  - ▶ Fieldwork commenced (Oct) 2013
    - ✓ Phase I (field survey): completed October 2013;
    - ✓ Phase II (intrusive investigation): completed May 2014;
    - Phase III (soil sampling): Summer 2015
      - pending NJDEP concurrence of the sampling plan





# Remedial Investigation Reporting

- Scope of Work: Prepare a Remedial Investigation (RI) / Feasibility Study (FS) / Proposed Plan (PP) / Decision Document (DD)
  - ✓ Area 9 and 19 RI has been submitted to NJDEP for review
  - Area 10 RI is being prepared
  - Area 13 RI is being prepared
  - Area 16 RI is being prepared
  - Area 6, 6A, 6B and DSA #1 RI is being prepared
  - Area 11 and DSA #2 RI is being prepared
  - Area 12, OB/OD, and DSA # 3 RI is being prepared
  - DSA #4, DSA #5, and DSA #6 RI is being prepared



# Area 18D

- Scope of work: Conduct remedial investigation to fully characterization this area
  - ▶ Fieldwork efforts:
    - ✓ Phase I (field survey): completed 2014
    - Phase II (intrusive investigation): summer 2015
      - Prior to commencing, USACE will be hosting public meetings to inform the public (nearby residents) of the upcoming work
    - Phase III (soil sampling): TBD
  - ▶ Collect sufficient data to evaluate our alternatives in the reports that will follow.





# FY 2015 Milestones

- Groundwater Compliance Monitoring Progress Report
- Feasibility Study – Groundwater / Indoor Air (Vapor Intrusion)
- Proposed Plan (incl. Public meeting) – Groundwater / Indoor Air (Vapor Intrusion) for public comments
- Indoor Air Quality report #10
- Indoor Air Quality report #11
- Remedial Investigation Report – Area 5
- Remedial Investigation Report – Area 9 and 19
- Proposed Plan (incl. Public meeting) – Middlesex County College (HTW) for public comments
- Remedial Investigation & Remedial Actions Summary Report – USEPA / GSA property
- Remedial Investigation & Remedial Actions Summary Report – Commercial / Industrial Area
- Work Plan addendum: Site-wide Remedial Investigation (incl. Phase 3 soil sampling)
- Management Action Plan
- Complete fieldwork and soil sampling activities at various areas
- Stakeholders / Working Group Meetings – December 2014 and May 2015
- Public Information Meetings – December 2014 and May 2015



# FY 2016

## Future Planned Activities

- Annual Indoor Air Quality report # 11
- Annual Indoor Air Quality report # 12
- Proposed Plan (incls. Public meeting) – Area 5 for public comments
- Decision Document – Area 5
- Decision Document – Groundwater / Indoor Air (Vapor Intrusion)
- Decision Document – Middlesex County College (HTW)
- Proposed Plan (incls. Public meeting) – USEPA / GSA property for public comments
- Decision Document – USEPA / GSA
- Proposed Plan (incls. Public meeting) – Commercial / Industrial Area for public comments
- Decision Document – Commercial / Industrial Area
- Remedial Investigation – Various specific areas
- Feasibility Study – Various specific areas
- Proposed Plan (incls. Public meeting) – Various specific areas
- Stakeholders / Working Group Meetings – November 2015 and April 2016
- Public Information Meetings – November 2015 and April 2016





# Funding

- Funding spent to date: \$ 92.2M
  - ✓ Allocated, 2014: \$ 1.6M
  - Planned, 2015: \$ 2.6M\*
  - Planned, 2016: \$ 1.3M
- Cost to Complete: \$ 8.2M\*\*

\* subject to change

\*\* previous year cost to complete amount (\$41.7M) was reduced since no additional remedial investigations were needed



# The CERCLA Process

## Removal Actions

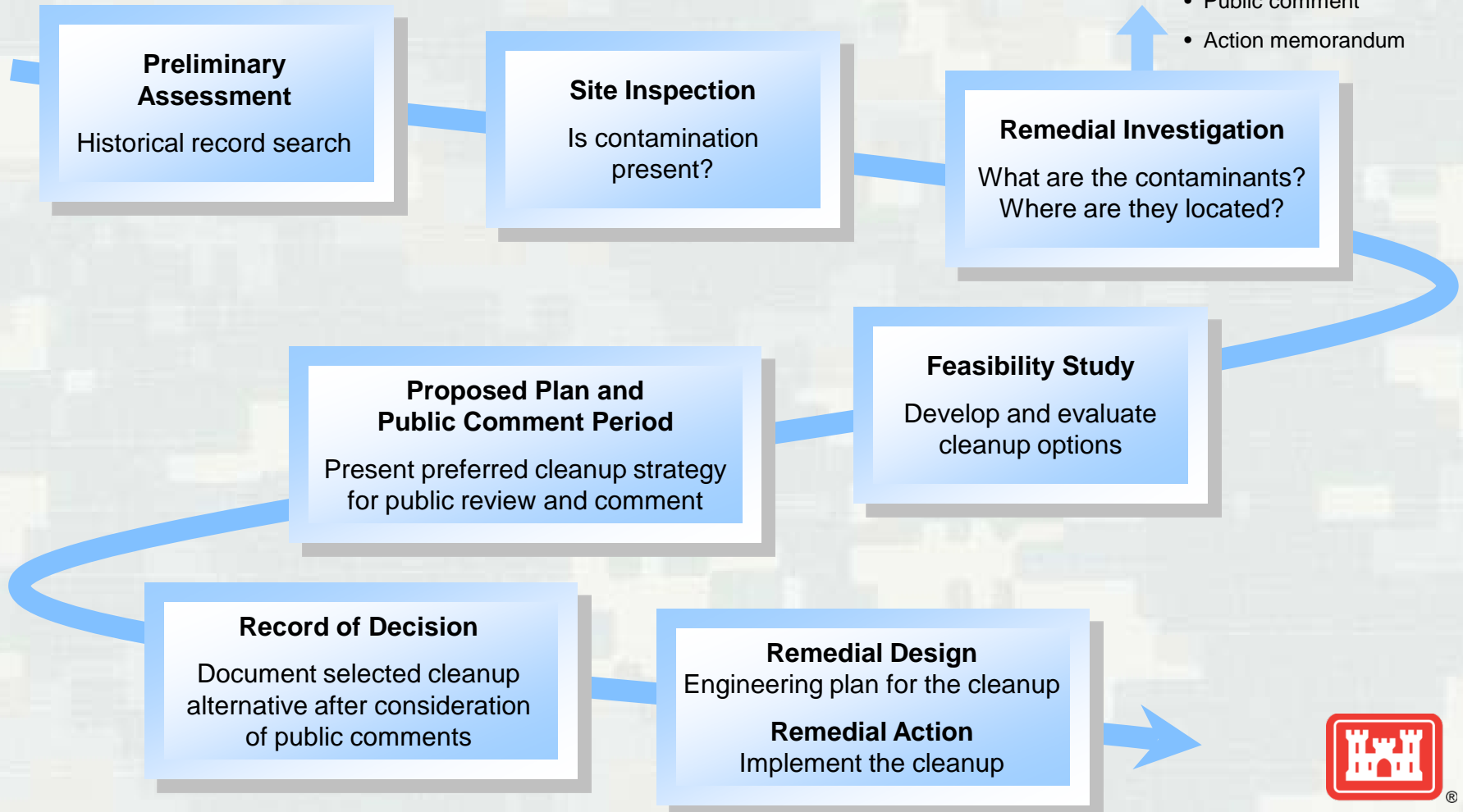
(this can occur at any phase)

Time-critical removal

- Action memorandum

Non-time critical removal

- Engineering evaluation/ cost analysis
- Public comment
- Action memorandum





# MMRP (Ordnance) Safety Education

[www.denix.osd.mil/uxosafety](http://www.denix.osd.mil/uxosafety)

- The USACE remains committed to protecting public safety by reducing the risk presented by the presence of military munitions to the maximum extent possible.
- **"3Rs"** of explosives safety
  - ▶ **RECOGNIZE** — when you may have encountered a munition
  - ▶ **RETREAT** — do not touch, move or disturb it, but leave the area
  - ▶ **REPORT** — call 911 and advise the police what you saw



For more information on the USACE's environmental cleanup activities, please visit the USACE's former Raritan Arsenal webpage at:

[www.nan.usace.army.mil/Raritan](http://www.nan.usace.army.mil/Raritan)





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