



# NAVFAC

Naval Facilities Engineering Systems Command

## Environmental Program Overview

Treasure Island Restoration Advisory Board Meeting

8 August 2023

# Presentation Topics

- **Site 12**
- **PFAS Program**
  - (Per and Polyfluoralkyl Substances)
- **Explanations of Significant Difference (ESD) & Land Use Control – Remedial Designs (LUC-RD)**
- **Five Year Review**
- **Petroleum Site YF3**

# Site 12

# Site 12 Next Steps – Feasibility Study Addendum #2

- Feasibility Study (FS) Addendum (#2) will present an evaluation of *additional* potential remedies for Site 12
  - First remedy implemented per the 2017 Record of Decision
  - The FS Addendum #2 will evaluate alternatives for:
    - Remaining contamination within the Solid Waste Disposal Areas (SWDA's) & Central Rubbish Area (CRA) {aka landfill areas}
    - Radiological impacted areas across IR Site 12 (*outside of 1400 series housing*)
- Request Applicable or Relevant and Appropriate Requirements (ARARs)
  - What are ARARs? (next slide!)

# Applicable or Relevant and Appropriate Requirements (ARARs)


- Congress did not specify cleanup standards in CERCLA
  - (see CERCLA Title 42, Chapter 103, Subchapter I, Section 9621)
- Instead, Congress created *a process* whereby cleanup standards found in other federal and state laws and regulations are applied to a particular CERCLA action.
- This process is known as selection of “applicable or relevant and appropriate requirements” or “ARARs.”
  - A law or regulation is “applicable” if the legal standard would apply independently of CERCLA.
  - Generally, a law or regulation is “relevant and appropriate” if it *can be applied* at the site *even though it is not otherwise legally required*.

# FS Criteria


- Threshold Criteria
  - Overall protection of human health and the environment.
  - Compliance with ARARs.
- Balancing Criteria
  - Long-term Effectiveness and Permanence
  - Reduction in Toxicity, Mobility or Volume Through Treatment
  - Short-term Effectiveness
  - Implementability (technical and administrative)
  - Cost
- Modifying Criteria
  - State Acceptance
  - Community Acceptance

# Additional Cleanup Policy

- EPA has made the policy decision that risks from radionuclide exposures at remedial sites should be estimated in the same manner as chemical contaminants
- Navy will continue to use the CERCLA process to evaluate radionuclides.
- As discussed in OSWER Directive 9200.4-18 (U.S. EPA 1997), cleanup levels for radioactive contamination at remedial sites should be established as they would for any chemical and the risks should be characterized in standard Agency risk language consistent with CERCLA guidance for remedial sites.



NAVFAC  
Naval Facilities Engineering Systems Command



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

AUG 22 1997

OSWER No. 9200.4-18

**MEMORANDUM**

**SUBJECT:** Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination

**FROM:** Stephen D. Luftig, Director *Stephen D. Luftig*  
Office of Emergency and Remedial Response

Larry Weinstock, Acting Director *Larry Weinstock*  
Office of Radiation and Indoor Air


**TO:** Addressees

**PURPOSE**

This memorandum presents clarifying guidance for establishing protective cleanup levels<sup>1</sup> for radioactive contamination at Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) sites. The policies stated in this memorandum are inclusive of all radioactive contaminants of concern at a site including radon.<sup>2</sup> The directive is limited to providing guidance regarding the protection of human health and does not address levels necessary to protect ecological receptors.

<sup>1</sup>This directive provides guidance on cleanup levels expressed as a risk, exposure, or dose level and not as a soil concentration level. The concentration level for various media, such as soil, that corresponds to a given risk level should be determined on a site-specific basis, based on factors such as the assumed land use and the physical characteristics (e.g., important surface features, soils, geology, hydro geology, meteorology, and ecology) at the site. This guidance does not alter the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) expectations regarding treatment of principal threat waste and the use of containment and institutional controls for low level threat waste.

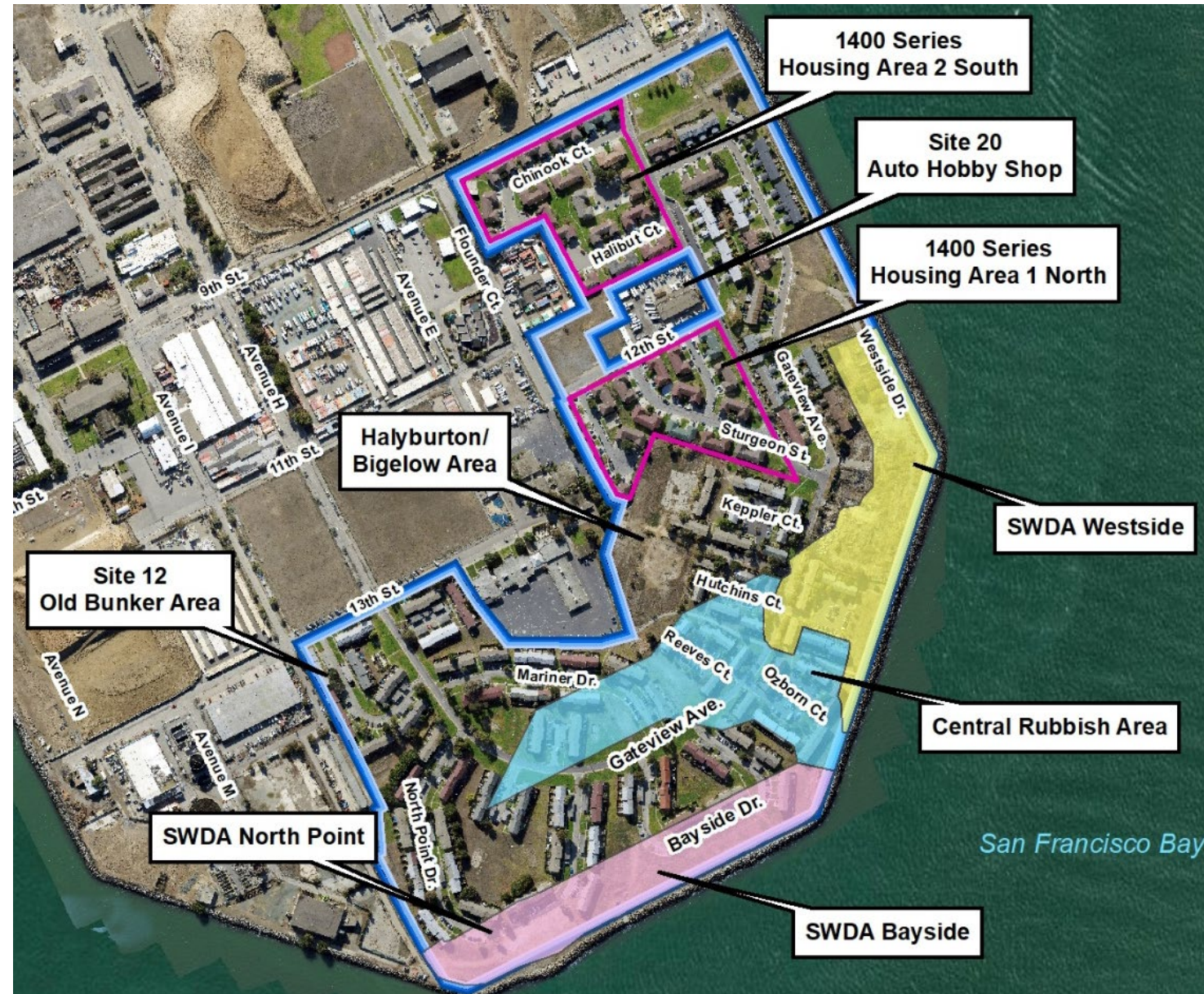
<sup>2</sup>Since radon is not covered in some Federal radiation regulations it is important to note that the cleanup guidance clarifications in this memorandum include radon. Attachment A is a listing of standards for radionuclides (including radon) that may be applicable or relevant and appropriate requirements (ARARs) for Superfund sites.

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# Site 12 Parts At a Glance

- Site consists of several major components
  - Landfill Areas
    - SWDAs and CRA\*
  - Areas outside of landfill areas
  - 1400 Series Housing Area



\*Solid Waste Disposal Area – Central Rubbish Area



# Other Factors for Consideration

- **Sea Level Rise (SLR)**

- Navy will evaluate SLR during development of remedial alternatives
- Navy will continue to monitor remedy relative to SLR
  - Tied to the Five Year Review process

- **Reasonably Anticipated Future Reuse**

- Navy's remedy *is not redevelopment* but (at BRAC bases) takes into account what the property may be used for after transfer
  - May include construction along shoreline and inland
  - May include geotechnical stabilization

# Additional Work Ongoing in Support of FS Addendum #2

- **Additional excavation in Site 12, (empty lot area)**
  - Extend previous excavation to remove residual PAH/TPH-contaminated soil



# PFAS Program

# Planned PFAS Activities

- Establish Background Area to Facilitate Nearshore Sampling
  - Sediment – Porewater – Surface Water
- IR Site 6 PFAS Reactive Barrier Pilot Test



PlumeStop/Liquid Activated Carbon stock

# Preliminary PFAS CERCLA Document Status

- Reporting for the *IR Site 6* PFAS RI
  - Final Document Target Oct 2023
  - Planning Underway for Supplemental RI Workplan
- Reporting for the AOI/IR (formerly called basewide) PFAS SI
  - Final Sept 2023
  - Planning for AOI/IR PFAS Preliminary RI
- Tracking Evolving Guidance/Policy
  - Screening Values
  - Risk Assessment Guidance
  - Laboratory Analysis





# **Explanations of Significant Difference (ESD) Land Use Controls Remedial Design (LUC RD)**

# Site 24 – Dry Cleaning Facility

- **ESD**

- ESD revised chlorinated solvent soil gas RGs for residential and commercial/industrial workers
- Final issued April 2023

- **LUC RD**

- Collect additional soil gas monitoring data (July 2023) – determine if plume extent is bounded
- Revise area requiring institutional controls if needed (ARIC)
- Final spring 2024

# Site 6 – Fire Fighting Training Facility

- **ESD**

- ROD/Final RAP identified arsenic in groundwater for the future construction worker
- Proposed RG revisions from 250 ug/l to 35 ug/l
- No new ARARs identified
- Final Oct 2023

- **LUC RD**

- Review recent groundwater monitoring data – determine if plume extent is bounded
- If not, expand monitoring well network to delineate new RG
- Revise area requiring institutional controls (ARIC)
  - Draft Nov 2023

# Site 12 – Gateview Ave Petroleum Area

- **ESD**

- ROD/Final RAP identified arsenic in groundwater as contaminant for off-site aquatic receptors
- Proposed RG establishment of 35 ug/l for construction worker scenario
- No new ARARs identified
- Final Nov 2023

- **LUC RD**

- Establish an ARIC
- Implement contaminated groundwater management plan to be followed during construction activities
- Evaluate land use controls as needed
- Draft Dec 2023

# Treasure Island Five-Year Review



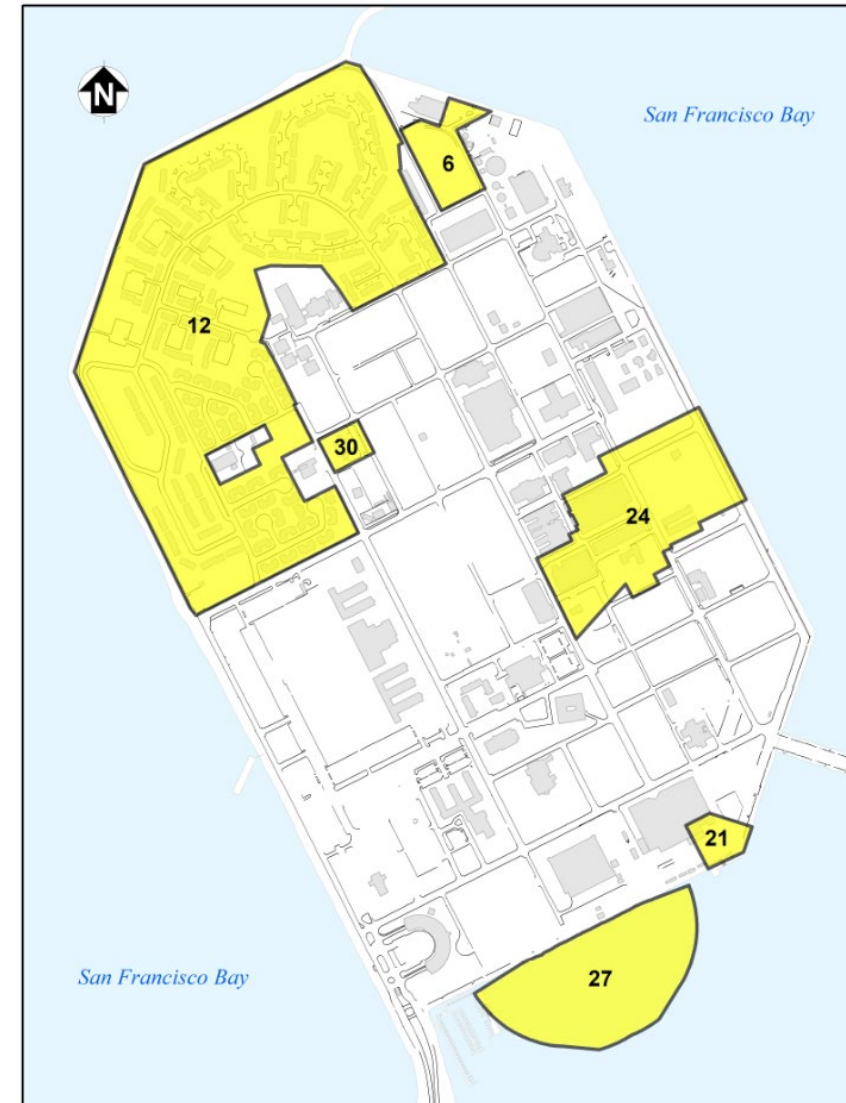
# Focus of the Five Year Review

- **To evaluate the implementation and performance of the remedy for subject sites**
  - **Determine whether the remedy is, or will be protective of human health and the environment.**



# Five Year Review Sites (2<sup>nd</sup> & 3<sup>rd</sup> FYR)

- **Six sites will be evaluated for the 3<sup>rd</sup> FYR:**
  - IR Sites 6, 12\*, 21, 24, 27, and 30
  - \*For Site 12, the evaluation will include the remedy for groundwater within the Gateview Arsenic/TPH area, as well as the implemented soil remedy.



# Five Year Review Process

Step	Purpose
Document Review	<ul style="list-style-type: none"><li>• Review of records of decision, remedial action designs, work plans, completion and monitoring reports, and annual site inspection reports</li><li>• Confirm remedial action is working as designed and/or how the remedial action is currently functioning</li></ul>
Site Inspection	<ul style="list-style-type: none"><li>• Document current site conditions to evaluate visual evidence of the protectiveness of the remedies at each site</li></ul>
Site Interviews	<ul style="list-style-type: none"><li>• Complete interviews of cross-section stakeholders to identify any problems or concerns with the remedies that remain to be addressed</li><li>• Stakeholders include: DTSC, Waterboard, TIDA, residents, and local community members</li></ul>
Protectiveness Statement	<ul style="list-style-type: none"><li>• Establishing if the remedy for each site is protective of human health and the environment</li></ul>

# 3<sup>rd</sup> FYR Schedule

- **September 2023 – Contract in Place**
- **2024 – Develop Internal Draft\***
- **Early 2025 – Draft Completed**
- **May 2025 – Concurrence on RTCs and RLSO**

\*Any new rules or regulations should be provided by early 2024

# Groundwater/Soil Gas Monitoring

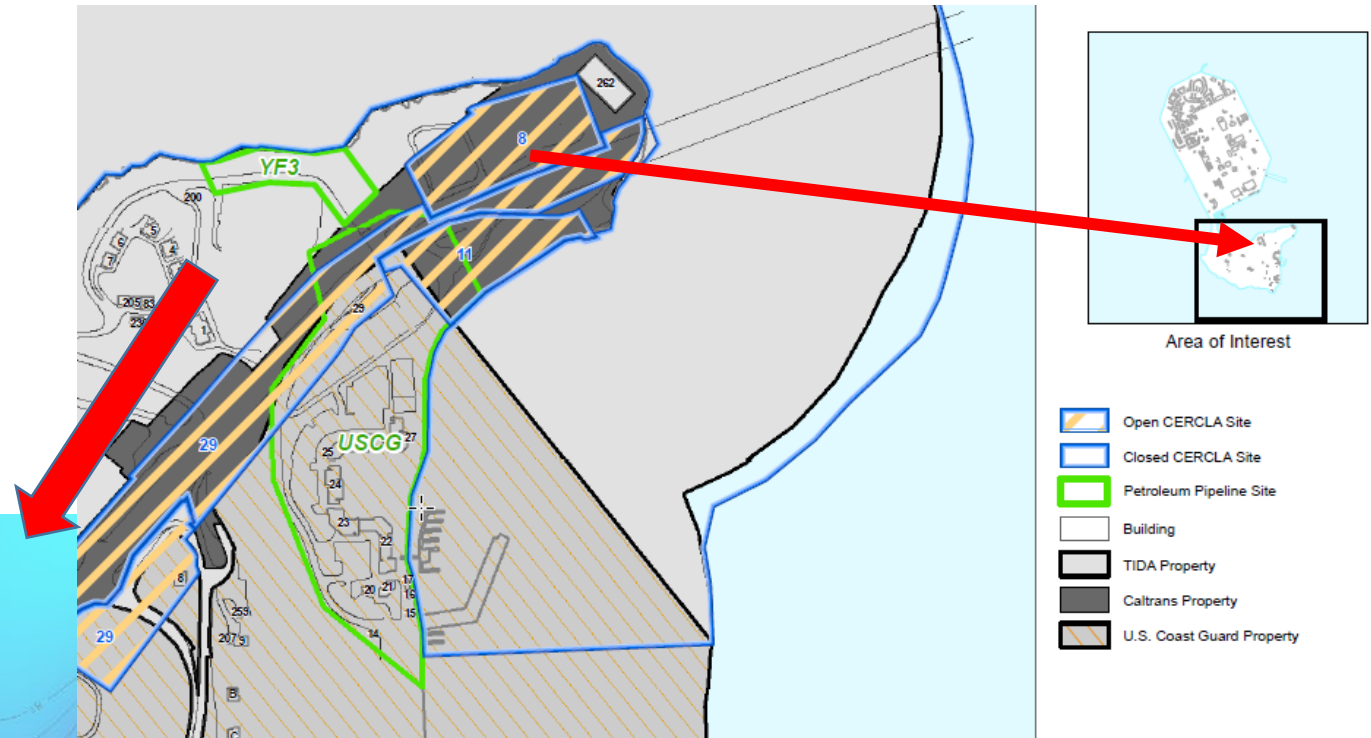


# Groundwater and Soil Gas Monitoring

- **Ongoing Monitoring at 4 sites**
  - Groundwater – Sites 6, 12, and 24
  - Soil Gas – Sites 21 and 24
- **2022 Monitoring Report – Draft October 2023**
  - Delays due to laboratory validation backlog

# Petroleum Site YF3

- **Only remaining open Navy petroleum pipeline site**
- **Located on Yerba Buena Island**



# Additional Data Collection

- Land surveying and a geophysical study to determine the physical boundaries, including bathymetric and topographical delineation, and to further characterize the depth to bedrock.
- Soil boring and porewater assessments to further define the horizontal and vertical extent of residual petroleum contamination
- Data will be collected and analyzed to supplement the existing site



# YF3 Path Forward

- **YF3 Datagap Workplan**
  - July 2024
- **YF3 Datagap Evaluation Report**
  - Oct 2025
- **YF3 NEPA Evaluation**
  - Oct 2026
- **YF3 CAP**
  - Oct 2027
- **YF3 CAP Post Construction Summary Report**
  - Dec 2028



# Questions?

