



## Final NAVAL AIR STATION ALAMEDA Restoration Advisory Board (RAB) Meeting Minutes

November 12, 2015

[www.bracpmo.navy.mil](http://www.bracpmo.navy.mil)

950 West Mall Square, Alameda City Hall West  
Room 140, Community Conference Room  
Alameda Point  
Alameda, California

The following participants attended the meeting:

### **Co-Chairs:**

Cecily Sabedra      Base Realignment and Closure (BRAC) Program Management Office  
(PMO) West, BRAC Environmental Coordinator (BEC), Navy Co-Chair

Susan Galleymore      Restoration Advisory Board (RAB) Community Co-Chair

### **RAB Members**

Richard Bangert; Carol Gottstein, M.D.; George Humphreys; Bert Morgan; Victor Quintell; Dale Smith; Jane Sullwold; Jim Sweeney; Michael John Torrey

### **Community Members/Public Attendees**

Irene Dieter; Trish Spencer, Mayor of Alameda; John Warmerdam

### **Regulatory Agencies and City**

James Fyfe, California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC); Yemia Hashimoto, San Francisco Bay Regional Water Quality Control Board (Water Board); Peter Russell, Russell Resources (for City of Alameda), Xuan-Mai Tran, U.S. Environmental Protection Agency (US EPA)

### **U. S. Navy**

Tahirih Linz, Contracted Project Manager; Bill McGinnis, Lead Remedial Project Manager

### **Contractors**

Yashekia Evans, Tetra Tech, Inc.; Tommie Jean Valmassy, Tetra Tech, Inc.

## **MEETING SUMMARY**

### **I. Welcome and Introductions**

Cecily Sabedra (RAB Navy Co-Chair) called the November 2015 RAB meeting to order and initiated a round of introductions. The agenda is included as [Attachment A](#).

## II. Co-Chair Announcements

Susan Galleymore (RAB Community Co-chair) said Kurt Peterson (RAB member) has an excused absence. Ms. Sabedra noted that yesterday was Veteran's Day and thanked all of the RAB members who are veterans; she thanked them for their service to our country, as well as their valuable contributions to the RAB.

Ms. Sabedra asked the RAB members to consider presentation topics they would like to see included on future RAB agendas. They should share that information with Ms. Galleymore, who will discuss it with Ms. Sabedra. Dale Smith (RAB member) said a calendar of upcoming documents presented on a 2-month basis would be helpful in order to request relevant and timely presentation topics. Ms. Sabedra said she will distribute such a calendar at future RAB meetings.

Ms. Sabedra provided responses to some of the action items listed in the September 2015 meeting minutes. Action item 3: *Provide information about the tanks near Site 14 (seen during the tour with a tree growing out of the middle). Specifically, what material and contaminants are in them and at what levels, and what the future plans are for the tanks?* Ms. Sabedra said she did some research and found the following: the tanks at Site 14 held water to support fire suppression activities. The tanks were investigated in 2001 and found to pose no risk. The results of that data gaps sampling can be found in the Final Remedial Investigation for Sites 14 and 15. The tanks were closed in place by filling them with soil. The Navy has no plans to remove those tanks, but there are no institutional controls to prevent the City of Alameda (City) from removing them in the future. There is a Record of Decision (ROD) in place for Site 14 that calls for no action for soil and monitoring of groundwater. Ms. Smith asked about treatment at the site. Bill McGinnis (Navy) said that in-situ chemical oxidation (ISCO) had been implemented at the site prior to the ROD.

Action item 4: *Provide information about the area west of Building 360 that has bentonite, arsenic and antimony. What are the levels, and what did a human health risk assessment say, if one was done?* Ms. Sabedra said there was an investigation of the bentonite layer in 2013, and there were no detections of arsenic and antimony above background. Bentonite is a natural clay layer, and is not, itself, considered a hazard. Ms. Smith said she recalls Anna-Marie Cook of EPA requesting that area be remediated. Xuan-Mai Tran (EPA) said she is not familiar with that request. Mr. Humphreys asked why that area was of interest for environmental investigation. Mr. McGinnis said he does not recall.

Action item 5: *Provide information whether any of the stockpiled soil at OU2B was tested and found suitable for backfill.* Ms. Sabedra said soil was sampled in accordance with the Site 3 remedial action workplan. In total, fewer than 250 cubic yards of soil were found suitable for use as backfill. The rest of the soil was properly disposed of off-site; typically, lead was the primary contaminant. The Draft Remedial Action Completion Report for OU2B soil was recently issued and more information can be found there. Ms. Smith asked where the soil in the stockpiles originated. Mr. McGinnis said he does not recall; he added that any soil used as backfill must go through a testing process. The 250 cubic yards of soil mentioned above was used as backfill for Site 3; additional backfill had to be brought in. Jane Sullwold (RAB member) said, as a point of interest, that the City brought in approximately 800,000 cubic yards of soil for the golf complex over the last year. None of the soil went to Site 1.

## III. Community and RAB Comment Period

Ms. Galleymore opened the comment period. Mr. Humphreys said that last year the RAB wrote a letter about the Site 1 workplan. The letter expressed concern for control of burrowing animals at

the landfill, and requested that poisons not be used because they could affect raptors, dogs, and other wildlife. The operations and maintenance (O&M) plan was supposed to be issued in May 2015, and Mr. Humphreys would like a copy. Ms. Sabedra said that the O&M plan is still being prepared. Ms. Smith asked if there are any rodent controls currently in place. Currently, there is a remedial action contractor on site taking care of the Site 1 landfill cover. That contractor will continue to maintain the cover until an O&M contract is in place.

Mr. Humphreys said he is particularly concerned about burrowing owls, because their burrows can be as deep as 7 feet. At the same time, the plan is to have “critters” make this their natural habitat. Mr. Bangert said he has been concerned about the landfill cover ever since it was announced there would not be a mesh barrier to exclude burrowing animals, like the one at Site 2. He said he assumes the O&M plan will require rodent control, but may not say how. Once the City takes ownership of the landfill, he assumes the RAB can tell the City they should not use rodenticides.

Mr. McGinnis confirmed the Navy received the letter from the RAB that Mr. Humphreys referred to, concerning the Site 1 workplan. He said the California Department of Fish and Wildlife made similar comments about rodent control. Mr. McGinnis said he does not know the specific rodent control methods in the O&M plan that is being prepared, but he believes trapping may be a preferred method. Ms. Galleymore asked how long the O&M will take place. Ms. Sabedra said that the Navy’s O&M responsibilities will be maintained in perpetuity, until they are transferred to a future land owner.

#### **IV. Site 1 and 2 Cover Vegetation**

Ms. Sabedra introduced Tahirih Linz (Navy) to present the update for Sites 1 and 2 ([Attachment B](#)). The remedial action soil cover for Site 2 was completed last year. The remedial action soil cover for Site 1 was completed this summer. This presentation covers the vegetation for both of those covers.

Ms. Linz said the photographs on slide 2 were all taken within a few days of each other. The top photograph shows gypsum and potassium sulfate being added to the soil. The second photograph shows the soil after it was rototilled. The third photograph shows the area after hydromulch was applied. Hydromulch was used to enhance seed germination and erosion control. Mr. McGinnis noted that grasses are used in the seed mix because they grow quickly and have shallow roots that help prevent surface erosion. Ms. D. Smith asked how deeply the seeds were planted. Ms. Linz said about 1-2 inches below the surface, and then they were covered with soil. Ms. Smith said native seeds do not like 2 inches of cover and should be covered with just a half inch of soil. Ms. Sabedra said the contractor recommended the planting procedures based on the seed mix.

Mr. Bangert asked for a list of the specific seeds that were used for the Site 1 cover. Mr. McGinnis said that information is in the workplan, and the Navy will also send the list to Mr. Bangert. Mr. Bangert asked what the lowest elevation of the landfill cover is. Mr. McGinnis said it varies because the cover is approximately two acres in size.

During the review of slide 6, Ms. Linz said the contractor is using straw for erosion control. Ms. Smith asked what kind of straw is being used, and noted that it may be introducing non-native seed into the site. Ms. Linz said she will look into the issue of non-native seed being present in straw and thanked Ms. Smith for bringing that to her attention.

During the review of slide 7, Ms. Linz said tree tobacco (a non-native invasive weed) had been a problem at Site 2. That weed was cut down to ground level, and herbicide was applied. Currently nothing is growing, indicating the herbicide is working. Sometime in November the entire site will be reseeded, similar to the way Site 1 was recently seeded. The left photograph on the slide

was taken before the herbicide was applied, so you can see the weeds growing. The right hand photograph was taken in June just after herbicide application.

During the review of slide 8 Ms. Linz discussed the swale that was built at Site 2 to prevent water collection. Ms. Smith asked why puddling needs to be prevented at Site 2, and noted there is a puddle at Site 1. Mr. McGinnis said the O&M procedures for the cover allow only minimal ponding.

Ms. Linz showed photographs of the Site 2 drainage repair on slide 9. The bottom photograph is taken from the top of the swale, and, though it is difficult to tell, the drainage flows west towards San Francisco.

Ms. Galleymore asked about the effect of sea-level rise in relation to ponding over the landfill covers. Mr. McGinnis said the cover design considers sea-level rise. However, if sea-level rise is greater than anticipated, then the protectiveness of the remedy will be evaluated as part of the five-year review process, and adjustments may have to be made. Ms. Galleymore said the City has indicated plans to build levees to create wetland areas. Mr. McGinnis said that plan does not include the Site 2 landfill cover area.

Ms. Smith inquired if the Water Board has concerns about the Navy covering these landfills rather than fully remediating them. Yemia Hashimoto (Water Board) said that the Water Board is concerned about constituents in groundwater reaching the bay or a receptor; however, that is why there are measures in place intended to be protective of, or to monitor for, that concern. She said examples of these measures include a waste isolation barrier between the waste and the bay and monitoring wells, which are appropriately placed and monitored for landfills with waste left in place. Peter Russell (Russell Resources) noted the Sites 1 and 2 landfills were uncontrolled landfills for decades. The covers are not meant to be impermeable; it is satisfactory for them to touch water, and the rip-rap will protect against large waves. Ms. Smith said her recollection is that during previous trenching at Sites 1 and 2, the Navy saw oil sheens and identified petroleum products and volatile organic compounds. She said the south pond at Site 2 was never fully characterized to her satisfaction. Ms. Hashimoto said there is no dispute that there is waste present, and that is why they are being maintained as landfills. Mr. McGinnis said the cover does not prohibit percolation of groundwater; there is already groundwater in the waste.

The photograph on slide 10 is the Site 1 landfill cover with the seed mixture applied. Ms. Linz noted that it is exceptionally green because it was wet when the photograph was taken. The seeding at Site 2 will take place within a week (mid-November).

## **V. Petroleum Program Update**

Mr. McGinnis presented an update on the petroleum program ([Attachment C](#)). He thanked the Water Board for its extensive work on the numerous closures and other work since the update to the RAB last year.

During the review of slide 2, Mr. McGinnis clarified that the count of 323 sites in the petroleum program does not mean there are 323 sites that are or were contaminated. The count means that 323 sites were investigated in some manner. The sites that are listed as “removed” are not in the Water Board database because they did not require a closure letter.

Mr. McGinnis said some of the sites are called corrective action areas (CAA), which are similar to operable units in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) program. CAAs can include aboveground storage tanks (AST), underground storage tanks (UST), oil-water separators (OWS), and areas of concern, such as a historical spill or release.

Ms. Smith noted numerous tanks have been removed. Mr. McGinnis clarified that all of the USTs have been physically removed; some former tank locations remained in the program because they released petroleum products. Where ASTs were removed one can see a cement “cradle” that used to hold the tank. Many of the “cradles” were left in place.

Regarding the tanks at Site 14 that Ms. Sabedra discussed earlier, Mr. Humphreys said his notes from 2002 indicated that the soil used to fill the tanks was petroleum contaminated. Ms. Sabedra said she spoke to several people familiar with the history of that project, and she did not find any specific information about the closure of the tanks. However, soil used for backfill has to meet clean soil acceptance criteria, which includes clearance for petroleum products.

Mr. McGinnis said some of the petroleum sites currently in the program were previously investigated under CERCLA for other possible contamination; when it was determined that there was no risk posed by hazardous substances regulated under CERCLA, the sites were closed under CERCLA, then moved into the petroleum program. Ms. Sullwold asked about the 168 sites listed as “closed” and whether they were investigated. Mr. McGinnis said the sites listed as closed were investigated. The sites listed as “removed” were not investigated because the historical review of activities at these sites discovered there was no reason for them to be included in the petroleum program.

The initial approach to the petroleum program was two-pronged. First the Navy addressed sites where it was known that cleanup would be required. Second, some soil or groundwater was sampled at other suspected sites. That initial data may have been enough to close a site, or a corrective action plan may have been needed to address petroleum contamination. Mr. McGinnis thanked Ms. Hashimoto and Ross Steenson (not present) of the Water Board for their help in reviewing the existing data to determine if additional investigation or remediation was necessary.

During the review of slide 4, Mr. McGinnis discussed the map showing the petroleum sites with current activities. He noted ASTs 398 and 173 are not part of this presentation, and added that they are part of the City’s Site A redevelopment area. Ms. Smith asked if those ASTs are located near the gas station; Mr. McGinnis said they are close to the base entrance, near the realty office.

Ms. Smith asked what Building 397 was used for. Dr. Russell said it was an engine test facility. A valve left open over a weekend resulted in a large petroleum release. He added that the Navy has removed most of the spill and just has minor work to do now. Dr. Russell said the Navy prioritized work at sites with large releases or imminent threats to the environment. Now they are addressing the smaller sites to get them all closed.

Mr. McGinnis said the Navy is about 90 percent done with the work at CAA3. CAA 3A is complete. There are some residual soil gas concerns at CAA 3B and 3C that are still being addressed.

During the review of slide 6, Mr. Torrey asked if CAA 4C is near the soccer field; Mr. McGinnis confirmed that it is. Mr. McGinnis said the white pipes visible in the photograph are part of the in-situ bioremediation (ISB) treatment system. Ms. Smith asked Mr. McGinnis why this site has been so persistent when ISB worked well elsewhere. Mr. McGinnis said the sites being addressed by ISB are not heterogeneous. One site may be original land while another is fill, and a geologic difference can mean the ISB processes underground work differently. Mr. McGinnis said CAA 4C began with in-situ chemical oxidation (ISCO) before the treatment transitioned to ISB. ISCO can rapidly treat petroleum contaminants, but because it relies on direct contact between the reagents and the contaminants, it may not reach the nooks and crannies of the underground environment, so it is followed with ISB.

During the review of slide 7 Ms. Smith asked how long ago pump and treat remediation was conducted at CAA 5B. Mr. McGinnis said the cleanup could better be characterized as pump and haul, and that phase of remediation took place approximately two years ago. The heart of the plume is now gone, and the Navy continues to work on the edges. The path forward for this site will include a corrective action plan.

Ms. Smith asked about the path forward for Building 5. Mr. McGinnis said Building 5 is part of OU 2C, which has a total of seven areas that are being addressed under CERCLA; the OU 2C areas are not associated with the petroleum program. OU 2C has a signed ROD, and a remedial design work plan is being prepared.

During the review of slide 9, Mr. McGinnis explained that Area 37 is a tank farm designation; it is not related to Installation Restoration Site 27. Ms. Smith asked if the rail line in this area has been tested and if it is a possible source of petroleum contamination. Mr. McGinnis said the area has been tested; testing included both soil and groundwater. Mr. Bangert asked if a corrective action plan will be prepared for CAA 11, or if the Navy already has one. Mr. McGinnis said a new/updated corrective action plan is being prepared. Ms. Sullwold asked about the estimated closure date. Ms. Sabedra said the corrective action plan will determine the timeline to closure; however, it will not be a 10-15 year project. The Navy is hoping to transfer that land around 2020. Carol Gottstein (RAB member) asked if the developer will have to wait on that corrective action before beginning work. Mr. McGinnis said the developer would not necessarily have to wait for the corrective action to be completed; however, the Navy would like to have it done before transfer. Ms. Sullwold asked if this area is part of the Area B redevelopment, and Dr. Russell confirmed that it is.

During the review of slide 11, Mr. McGinnis discussed the plans for the petroleum program in 2016. Dr. Russell said the City made requests for prioritization, and the Navy has been accommodating those requests. Mr. McGinnis said if the Navy, working with the Water Board and the City, can keep up with the rate of 40 closures per year, the petroleum program will be complete within four years. Ms. Smith asked if all of the sites will be closed with unrestricted reuse. Dr. Russell said that unrestricted reuse is preferred when feasible, and the Water Board and Navy are aiming to have as few restricted reuse areas as possible. Dr. Russell said that of all the petroleum closures, there are only three sites that have any restrictions at all, and those are not in residential reuse areas.

Mr. Bangert asked which four CAAs will be investigated in 2016. Mr. McGinnis said the project manager, David Darrow, has a priority list. However, the work has not been contracted yet, so the sites are subject to change.

## **VI. RAB Co-Chair Election**

Ms. Sabedra said Ms. Galleymore is the only nominee for RAB Community Co-Chair, and Ms. Sullwold is the only nominee for RAB Community Vice Co-Chair. Ms. Sabedra asked if there were additional nominations. There were none, so ballots were passed out and the votes were tallied. Nine community RAB members were present to vote. Ms. Galleymore and Ms. Sullwold were re-elected. The new term begins in January 2016.

## **VII. Approval of Meeting Minutes and Action Items**

It was noted there were a couple of small edits submitted by Ms. Smith that were not received before the draft final minutes were distributed. Ms. Smith presented the following edits:

Page 3, 4<sup>th</sup> paragraph under section IV: change Ms. D. Smith to Bill Smith (RAB member).

Page 4, 3rd full paragraph: based on the edit above, correct identification of the speaker from “Bill Smith (RAB member)” to “Mr. B. Smith”.

Page 3, 5<sup>th</sup> paragraph under section IV, 6<sup>th</sup> line: strike “while treatment of the plume is ongoing.” So the sentence reads: Controls will be in place, such as prohibiting first-floor residential use. [Change submitted by Mr. Humphreys]

The September 2015 RAB minutes were approved as final with the changes above approved.

Ms. Sabedra reviewed the action item table to get clarification on outstanding items, including future RAB meeting presentations. See the updated action item table, below.

The next RAB meeting will be held on Thursday, January 14, 2016. The meeting adjourned at 7:58 p.m.

<b>Action Items:</b>	<b>Action Item Status/ Action Item Due Date:</b>	<b>Initiated by:</b>	<b>Responsible Person:</b>
1. Request for Presentations: a. OU-2A Tarry Refinery Waste b. General information about the rail line area	Pending	Mr. Humphreys	Ms. Sabedra
2. Provide the Site 1 O&M plan when completed.	New	Mr. Humphreys	Ms. Sabedra
Follow-up on no-fly zone over least terns.	Complete	Mr. Peterson	Ms. Sabedra
Provide information about the tanks near Site 14 (seen during the tour with a tree growing out of the middle). Specifically, what material and contaminants are in them and at what levels, and what the future plans are for the tanks?	Complete	Mr. Humphreys	Ms. Sabedra
Provide information about the area west of Building 360 that has bentonite, arsenic and antimony. What are the levels, and what did a human health risk assessment say, if one was done?	Complete	Mr. Humphreys	Ms. Sabedra
Provide information whether any of the stockpiled soil at OU2B was tested and found suitable for backfill.	Complete	Ms. D. Smith	Ms. Sabedra

## **ATTACHMENTS**

### **NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD MEETING ATTACHMENTS**

- A. Naval Air Station Alameda Restoration Advisory Board Meeting Agenda, November 12, 2015 (1 page)
- B. IR Sites 1 and 2 Landfill Cover Vegetation (10 slides)
- C. Petroleum Program Update (11 slides)

# ***RESTORATION ADVISORY BOARD***

***NAVAL AIR STATION, ALAMEDA***

## ***AGENDA***

**NOVEMBER 12, 2015, 6:30 PM**

**ALAMEDA POINT – 950 WEST MALL SQUARE, ALAMEDA CITY HALL WEST  
SUITE 140/COMMUNITY CONFERENCE ROOM  
(FROM PARKING LOT ON W. MIDWAY AVENUE, ENTER THROUGH MIDDLE WING)**

<b><u>TIME</u></b>	<b><u>SUBJECT</u></b>	<b><u>PRESENTER</u></b>
6:30 – 6:35	Welcome and Introductions	Community and RAB
6:35 – 6:45	Co-Chair Announcements	Co-Chairs
6:45 – 7:15	Community and RAB Comment Period*	Community and RAB
7:15 – 7:40	Site 1 and 2 Cover Vegetation	Navy representative
7:40 – 8:00	Petroleum Program Update	Navy representative
8:00 – 8:15	RAB Co-Chair Elections	RAB
8:15 – 8:30	Approval of Minutes	RAB
8:30	RAB Meeting Adjournment	

\* If there is time at the end of the agenda, additional comments will be taken.



Welcome



## Installation Restoration Sites 1 & 2

Landfill Cover Vegetation

**Restoration Advisory Board (RAB) Meeting  
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Site 1 Wetland



2



## Site 1 Cover Vegetation



- Drill-seeded cover w/ amendments & seed in multiple passes ✓
- Amended wetland area w/ gypsum & potassium sulfate ✓
- Habitat structures in wetland ✓
- Applied hydromulch/tackifier in multiple passes over entire site ✓
- Inspections & maintenance – **On-going**

3



## Site 1 Seeding



4



## Site 2 Operations & Maintenance



- Annual biological survey
- Weekly inspections
- Weed control
- Erosion repair (as needed)
- Drainage enhancement
- Stormwater best management practices (silt fences, wattles, hay bales)



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## Site 2 Erosion Repair





## Site 2 Cover Vegetation



- Weed control (April) ✓
- Herbicide application (May & June) ✓
- Dead vegetation removal & re-seeding of 80 acres - **November**
- Inspections & maintenance - **On-going**



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## Site 2 Cover Drainage Repair



- Objective: reduce water collection in the flat area and divert collected rainwater to the swale



- Repair oval-shaped ponding area (100'x 60') and the associated turf-reinforced swale ✓

8



## Site 2 Drainage Repair



**Comments?**





## Welcome



# Petroleum Program Update Former NAS Alameda

Restoration Advisory Board (RAB) Meeting  
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1



## Program Summary



- 323 Sites Included in the Petroleum Program
  - 129 Open sites
    - Known or potential petroleum release to be investigated and cleaned up (if necessary)
  - 194 Fully Evaluated Sites (since 1999)
    - 168 Closed Sites - investigated and closed-out
    - 26 Removed Sites - investigated and removed

2



## Program Summary-cont'd



- Navy and Water Board (WB) working together to complete investigation, cleanup, and closures for petroleum sites.
- Review existing site data to determine if additional investigation and/or remediation is necessary.
- Areas with Current activities:
  - CAA 3
  - CAA 4C,
  - CAA 5B West & 5C
  - CAA 7,
  - CAA 11,
  - CAA 13 (Building 397).

3



## Petroleum Sites with Current Actions



4



### Corrective Action Area 3 (Site 3)



- Fuel releases from fuel storage tanks and fueling operations
- Three subareas 3A, 3B, and 3C
- Remediation 2007 to 2010. CAA 3A suitable for closure. Residual contamination at CAA 3B and 3C being investigated
- 2014 Destruction of remaining wells and system components
- 2014 and 2015 Additional investigation (soil vapor and groundwater)



Jack hammering to install soil vapor sample point at CAA 3



Hand augering to install soil vapor sample point at CAA 3



Soil vapor sample point prior to being installed at CAA 3



Installing soil vapor well at CAA 3



Complete soil vapor well at CAA 3

5



### Corrective Action Area 4C (IR Site 22)



- Former gas station and car wash (1971-1980)
- All facilities removed (1994-1995)
- Remedial action for gasoline release in 1999, 2004-2006, and 2013-2014.
- Insitu Chemical Oxidation (ISCO) combined with Insitu Bioremediation (ISB)



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## Corrective Action Areas 5B West and 5C (IR Sites 5 and 10)



- CAA5B West adjacent to former wastewater treatment plant (1973-95)
- 2011-2012 Free product removal, ISCO treatment
- CAA 5C adjacent Bldg 400 and in the vicinity of UST 400-1
- Samples collected during UST removal exceeded cleanup criteria
- Investigation in 2015 to evaluate current conditions and prepare a comprehensive Corrective Action Plan



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## Corrective Action Area 7 (IR Site 7)



- Former gas station (1951-1997)
- Various remedial actions between 1996 and 2013.
- Ongoing Insitu Bioremediation to remove petroleum compounds in groundwater.



8



### Corrective Action Area 11 (IR Sites 11, 21, and 27)



- Building 14 and the "fuel tank farm" (Area 37)
- 45 petroleum features (USTs, ASTs, fuel lines, and misc.)
- Remedial Actions in 2003-2006
- Investigation in 2015 to evaluate current conditions and prepare a comprehensive Corrective Action Plan
- Numerous features can be closed without further remediation



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### Corrective Action Area 13 Building 397 (Engine Test Cell)



- Jet fuel release and excavation of impacted soil in 1991
- Remediation Action 2003 to 2006
- Investigation in 2011 identified residual contamination
- Investigation in 2015 to evaluate current conditions and prepare a comprehensive Corrective Action Plan



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## 2016 Plans



- Investigate 4 more CAAs
- Investigate 25 petroleum USTs, ASTs, and/or Areas of Concern
- Submit 40 additional closure requests