

MINUTES  
NAVAL WEAPONS STATION (NAVWPNSTA) SEAL BEACH  
RESTORATION ADVISORY BOARD (RAB)  
AND COMMUNITY MEETING  
Naval Weapons Station Seal Beach Site Tour  
July 26, 2017

Participants:

Beaty, Hal/Community Member  
Bettencourt, Philip/RAB Community Co-Chair  
Brower, Robert/Community Member  
Buck, Slader/US Fish and Wildlife Service  
Caragan, Lynn/APTIM  
Cummings, Esther/Community Member  
Grinyer, Walt/Community Member  
Masseti, Nick/RAB Member  
Niou, Stephen/California Department of Toxic Substances Control (DTSC)  
Nye, Rick/ US Fish and Wildlife Service  
Pierce, Jim/ACTenviro  
Reese, Brenda/ Remedial Project Manager (RPM), Naval Facilities Engineering Command  
Southwest  
Sisk, Della/Community Member  
Sisk, Leland/Community Member  
Smith, Gregg/Public Affairs Officer, NAVWPNSTA Seal Beach  
Tamashiro, Pei-Fen/RAB Navy Co-Chair, NAVWPNSTA Seal Beach  
Vance, Caroline/Community Member  
Zimmerman, Christine/Community Member

WELCOME

Pei-Fen Tamashiro welcomed attendees to the Site Tour at 6:00 pm at the main gate parking lot, NAVWPNSTA Seal Beach. Attendees were asked to sign in. P. Tamashiro introduced Gregg Smith (NAVWPNSTA Seal Beach Public Affairs Officer) and Brenda Reese (Remedial Project Manager). P. Tamashiro explained that the facility is a weapons station and there are rules to adhere to: turn off cell phones, do not take any pictures or videos, no smoking, and stay with the group, especially at Munitions Response Program (MRP) sites. Gregg Smith will take pictures if needed. Philip Bettencourt was introduced as the RAB Community Co-Chair. A map was provided to show the locations of the sites on the tour. The tour then proceeded to the following sites:

- *RT&E Area – IRP Site 70.*
- *Locomotive Building (B. 240) – IRP Site 40.*
- *Small Arms Range – Adjacent to IRP Site 74.*
- *7<sup>th</sup> Street Pond – UXO1 and AOC2 MRP Sites.*
- *Former Station Landfill – IRP Site 7.*

- *Westminster St – IRP Site 75 and UXO6 (drive-by only).*
- *Return to main gate parking lot.*

Questions and answers discussed during the site tour are summarized below.

Note: The following contains only questions and answers discussed at formal stops along the tour. Informal discussions were not recorded, including those held while viewing sites from within the vehicle and during travel between sites.

**IRP SITE 70 - RESEARCH, TESTING, AND EVALUATION AREA**

*Personnel were on hand for a sampling demonstration. P. Tamashiro described the site with groundwater contamination, which was originated from the activities that were part of the NASA's Apollo Program in the 1960s and 1970s. We are at the source area of a ¾ mile long and ½ mile wide plume. The source area is the shallowest part of the plume, which dips down to about 170 feet at the farthest downgradient end of the plume. More than 200 wells have been installed to monitor and treat the contaminants in the groundwater. Sampling personnel demonstrated low-flow procedures and explained that the water in the well was not drawn out too fast to prevent dewatering the well and to preserve the integrity of the samples..*

**Question:** Is the building nearby in use?

**Answer:** It is used as a storage warehouse only, and it is empty most of the time.

**Question:** How long until the contamination goes away?

**Answer:** The remedial activities are anticipated to last 50 years. We are almost 10 years into it. Of that, 16 years is considered active treatment, and the remainders are for monitoring. Emulsified vegetable oil (EVO) is injected into the ground, augmented by an organism, to dechlorinate the solvents. The primary contaminant is trichloroethylene (TCE).

**Question:** Were the trees or plants in the area tested?

**Answer:** No, the plume is deep beneath the tree roots at 35 to 60 feet below ground surface. Field personnel said the test parameters are volatile organic compounds (VOC), alkalinity, and anions. Results will be available in a couple weeks.

**Question:** What is the flow rate?

**Answer:** The flow rate is 400 milliliters (ml) per minute. The rate will be lowered if the water level in the well goes down too much and too fast. Low flow is performed so the volatile chemicals are not lost and so there is no air in the sample.

**Question:** Are there potable water production wells nearby?

**Answer:** There are no production wells in the vicinity of the site. The contaminated zone is not a drinking water source. The Navy is trying to clean up the contamination before it reaches the drinking water aquifer. There has been a significant reduction in TCE; more than 90% of TCE has been degenerated.

**Question:** Are these the treatment wells?

**Answer:** Yes. The line of wells from here all the way to there (showing the source area biobarrier wells), is a biobarrier formed by injection wells. EVO was injected into the wells to form the biobarrier. Groundwater gets treated passively with natural flow as the contaminated groundwater flows thru the barrier. Next to the barriers are the monitoring wells.

**Question:** What is used: corn oil, palm oil?

**Answer:** It's a proprietary blend of vegetable oil with additives.

**Comment:** During sampling, preservatives, such as hydrochloric acid (HCl), are used in the sample. The bottles used for VOC samples need to be filled without bubbles in the bottles.

**Question:** How many wells are sampled?

**Answer:** A total of 75 wells are included in this sampling round.

**Comment:** Sampling starts with VOCs first to minimize volatilization, then other samples, such as anions, are collected.

**Comment:** Measurements are made to ensure the chemistry of the water is suitable for degradation.

**Comment:** We are not sampling for microbials this time, but once a year groundwater is sampled for the concentrations of cells of organisms that are responsible for the degradation.

**Question:** What is the frequency of sampling?

**Answer:** We currently sample twice a year, but different parameters and different sets of wells are tested in each of the two sampling events.

#### **IRP SITE 40 Locomotive Building**

*P. Tamashiro said this site has recently achieved closure. The contamination was related to degreasing during locomotive operations. In the old days there were no regulations, and it wasn't until the 1970s before hazardous waste regulations were established. The primary contamination is tetrachloroethylene (PCE). PCE is difficult to treat. At this site, sodium lactate and the same bugs as the ones used at IRP Site 70 were used to treat PCE. We did run into a problem with the inhomogeneous geology at the site, where sodium lactate was unevenly*

*distributed in the contaminated aquifer. The sandy zone received most of the injection. Then a Hydrogen Release Compound (HRC) was injected into the aquifer in this area to allow even distribution. The contamination was then reduced to mostly ethane with trace amount of residual dichloroethylene (DCE) and vinyl chloride (VC). Indoor air monitoring was also performed for the safety of workers in and around these buildings. It took about 11 to 12 years of work, and the site was closed in May.*

**Question:** Did you test in the contaminated area or further?

**Answer:** We delineated the plume early in the process.

**Question:** How deep?

**Answer:** The plume is no more than 65 feet below ground surface. It was also not as expansive as Site 70.

**Question:** What was the contamination here, oil?

**Answer:** It is primarily PCE, a chlorinated solvent.

**Question:** Do you still use rail to move weapons?

**Answer:** No, it is more efficient and environmentally friendly to use trucks that are equipped with the latest environmentally friendly equipment.

#### **IRP SITE 74 Small Arms Range**

*P. Tamashiro displayed 2 jars with bullet fragments in them. Although new bullet fragments were still observed behind the range, the number and the size has reduced significantly. The range also prohibits the use of the shotgun range side, which we believe generates the majority amount of ricochets. The Navy will continue to monitor the area along Case Road that is behind the impact zone of the small arms range..*

**Question:** What types of improvements were made?

**Answer:** Before there was just a dirt berm with a wooden brow at an angle to stop ricochet. The two bays on the right are pistol ranges, and the third is a shotgun range. After the improvements, both pistol ranges have rubber backing on every wall for absorbing impacts. There are also vertical baffles to stop 99.99% of bullets from leaving the range as long as the shooter stays behind the firing line. The back wall is also covered with rubber intended for the bullets to impact and then fall. There is still a potential for bullets or fragments to leave the range, if the bullets strike the target retrieval rails at unusual spots. That may be the reason why we still find bullet fragments outside the range during the last survey. The first jar has large slugs, which were from rifles. These were mostly used by police, so the Navy stopped outside agencies from using the range. The shotgun range doesn't have a full baffle, so at this time our Commanding Office (CO) ordered that this

range not be used until additional improvement could be made. Since then there has been a significant improvement. Data was compared: .114% of items expended at the range were found outside the berm in December. In July .038% of items used in the range were found outside. A few projects are being planned. First, the bullets on the surface of the old berm will be cleared out. These old bullets may be the source of secondary ricochet. Second, the Navy is evaluating whether it is necessary to revise Feasibility Study (FS) for IRP Site 74 to consider other alternatives for remediation. The location of the active range must be considered for future remediation. We will continue to monitor the Case Road ricochet to see if a revised FS is necessary. Third, we are contemplating having a third party, the Army, to make some recommendations for the re-design or improvement of the range. Based on the recommendation, we can seek additional funding. If additional requirements arise, such as a new tenant needs a larger range, then we will consider a military construction project to build a new range.

**Question:** Has the CO said the range is only for military?

**Answer:** Yes, CO instructed us to use the range on the military mission-essential training only at this time.

**Question:** What is the acreage in question? Will this command provide acreage to replace acreage?

**Answer:** It depends on the size. If we lose a portion of the wetland, we will need to discuss the ratio of mitigation. We may also propose to use the three acres of wetlands created at IRP Site 5 as a credit that we have never claimed.

**Question:** How long is the range?

**Answer:** 40 Meters.

*P. Tamashiro noted that there is a drainage system to the retaining pond to prevent anything in surface water from escaping. Storm water in the range is collected in the sump at the toe of the impact zone and pumped to the retention pond. The pond is netted, so no wildlife can get into the retention pond. Last winter the pond was full and we had to dewater. The water was tested before dewatering.*

**Question:** Is there any Coastal Commission approval required for remediation construction?

**Answer:** Only for new construction, this is an improvement. We haven't had to seek Coastal Commission approval for cleanup projects.

**Answer:** It is not a requirement to seek Coastal Commission's approval for the range construction project, but we still tried to get their concurrence.

**Question:** Is there wildlife here?

**Answer:** Gophers and rabbits.

### **UXO1 and AOC2 MRP Sites**

*P. Tamashiro stated the white shed building in the distance is in the vicinity of MRP Site UXO1. The fenced-in area was used for munitions processing. Excess or obsolete munitions were stockpiled and recycled or disposed of. A small portion of the site was also used for primer loading/reloading. The pond was dug in the early 1990s for a Port of Long Beach mitigation project. Digging was stopped when munitions were found. The excavated dirt from the pond is deposited at an area now known as UXO6. Some locations in the pond were used by Explosive Ordnance Disposal (EOD) for safety demonstrations. At low tide, munitions items are visible in the northwest corner of the pond. The study will include a geophysical survey.*

*The tower near the southern tip of the pond is the drop test tower, where AOC2 is located. The Friends of Seal Beach National Wildlife Refuge would like to see the tower removed due to concerns for perching by predator birds. Small arms munitions were dropped from the top of the tower and monitored at the bottom to see how they functioned. It is currently not safe to demolish the structure at this time until we can characterize the site and clean up the site, if necessary.*

**Question:** You are going to do all three sites at once. Can you promise to do the drop tower first?

**Answer:** I will talk to the contractor this week about the schedule. We will evaluate the area around the drop test tower as early as we can.

**Comment:** I can give stats for the terns. We counted 140 nests, 200 eggs, banded 128 chicks, and only 3 fledglings survived. We only got 3 birds due to the peregrine falcons and hawks roosting on the drop test tower.

**Question:** Can you cover it with Nixalite spike strips? We have good data; the loss of the tern colony is due to that structure.

**Answer:** We will do our best to move up the schedule for the investigation, but safety is the number one priority.

**Question:** Is the tower completely unsafe?

**Answer:** We don't know at this time, but there are certain restrictions due to the history of the site. We have to go through the investigation and present the findings to the regulators to determine whether we can close this site. Prior to the site closure, we are not allowed to touch the structure on the site.

**Question:** Are the magazines part of it?

**Answer:** No, the magazines are not part of the site. Some of the magazines are scheduled for demolition.

**IRP Site 7 - Former Station Landfill**

*P. Tamashiro says this is IRP Site 7. The removal action was in 2003. It is being monitored so there are no erosion issues. The waste in the ground is inundated with water. Back in the 1970s there was no fence, and neighbors would dump their general trash here. We have been monitoring vegetation for 14 years since the completion of the removal action, and have tried different ways to re-vegetate. There has been some marginal success with vegetation covers at this site.*

**IRP Site 75 and MRP Site UXO6**

*After driving by IRP Site 75 and UXO 6, the tour ends at the parking lot outside of the main gate.*

*ANNOUNCEMENTS*

P. Tamashiro thanked everyone for coming and announced that the next RAB meeting would be in January 2018.

*ADJOURNMENT*

P. Tamashiro adjourned the meeting at approximately 8:00 p.m.

Note: This is a meeting summary, not an actual transcript.