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# HUNTERS POINT NAVAL SHIPYARD PARCEL A-1
# SUPPLEMENTAL RADIOLOGICAL SURVEY ADDENDUM
# AUGUST 6, 2019

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## BACKGROUND

During the data quality review conducted in November, CDPH noticed an unusual spectrum that had been collected on August 22, 2018, containing an elevated reading near the lowest energy range of the Inspector 1000 approximately at the 60 KeV energy range. These radiation readings were barely detectable and only slightly above baseline counts. The location was on a southwest hillside not considered accessible to the general public, and this anomaly was not accompanied by a significantly increased count rate.

In accordance with the survey workplan, CDPH-RHB took a supplementary Inspector 1000 spectrum reading on December 3, 2018 after discovering the anomaly during the data quality review phase. That reading failed to replicate the original anomaly. To confirm that the water content of the soil did not interfere with or dampen the reading, CDPH-RHB committed to collecting additional measurements in 2019 after the ground had dried sufficiently from the winter rain and to publishing the findings in an addendum report.

On May 28 to 30, 2019, CDPH-RHB re-surveyed this “low-energy peak” location at Parcel A-1.

## METHODOLOGY

CDPH-RHB calibrated the radiation monitor scaler ratemeters (Model Ludlum 2221s), which are paired to the Ludlum 44-10 2”x2” sodium-iodide (NaI) scintillation detectors, to be specifically sensitive to the energy detected in the unusual spectrum. Specifically, the energy threshold was set to 55 keV with a 10 keV window, which set the detector to only report measurements from 55 keV to 65 keV. This calibration allowed the detector to exclude natural variations in lithology and hone in on any possible contamination.

Staff travelled to the area where the original low energy peak (anomaly) was found. Two teams of surveyors scanned an area approximately 250 feet wide (lateral to the anomaly) and 100 feet long (downhill from the anomaly) (see figure 1). The area uphill from the anomaly was considered impassible in 2018 due to dense vegetation. This condition still remains, so it is not included in this supplementary survey. Staff methodically traversed the designated area at a slow and deliberate pace taking care to cover the entire space using their specially calibrated sodium-iodide detectors. In addition, after covering the designated area, staff carefully performed a spectrum analysis at the location of the low energy anomaly point of interest using the highly sensitive Canberra Inspector 1000 radionuclide identifier.

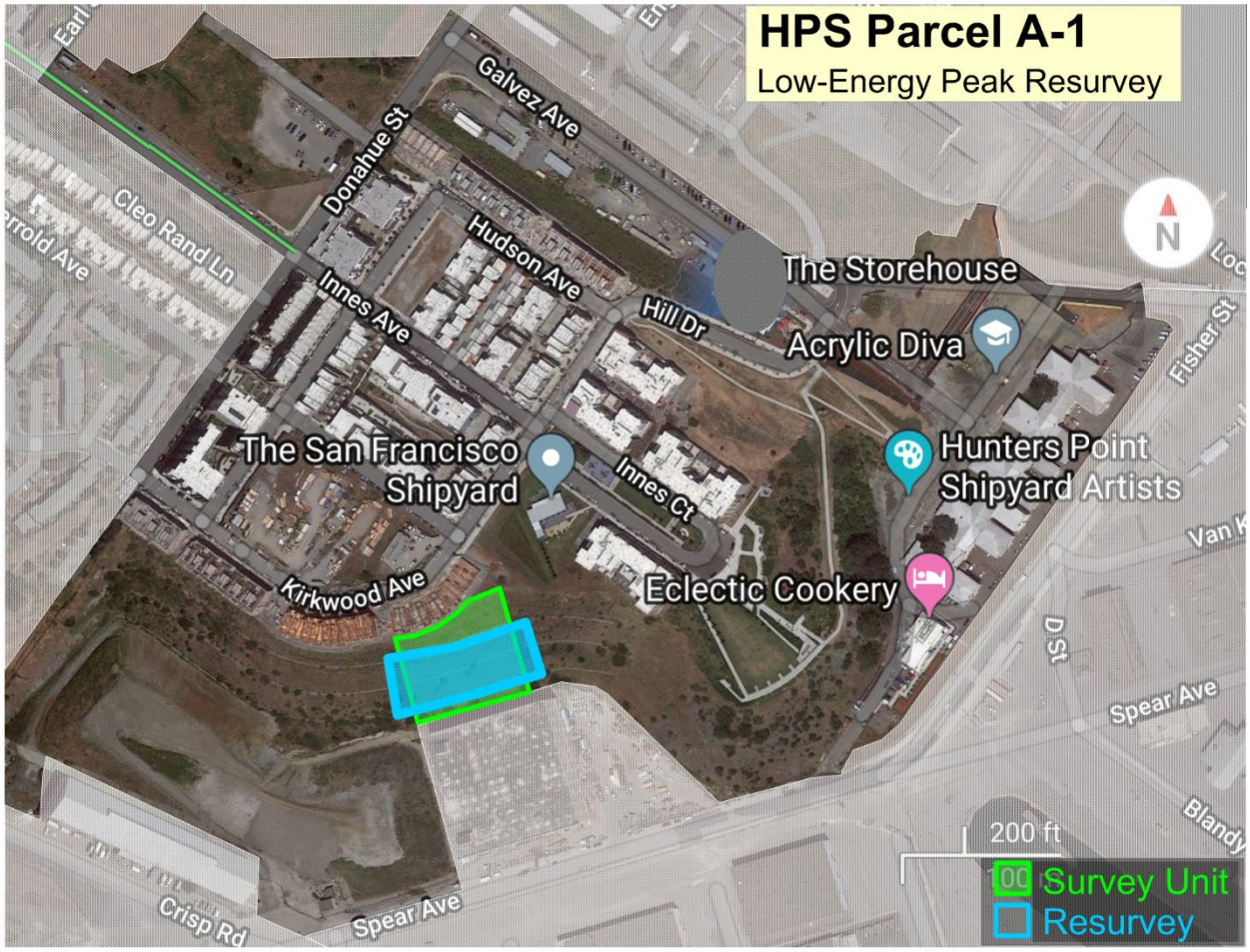
**RESULTS**

All walkover survey readings with the Ludlum instruments failed to replicate the anomaly. The additional Inspector 1000 reading collected at the original anomaly location also failed to replicate the low energy peak (see figure 2 spectrum). In addition, this supplemental survey found no elevated radiation readings that could jeopardize public health and safety.

In summary, the final Parcel A-1 report noted that a low energy anomaly, just barely detectable, was identified during data quality review and that this anomaly did not pose a radiation health or safety hazard to the residents of Parcel A-1. The re-survey of that location, described in this addendum, did not replicate that anomaly, confirming that there is no risk to public health and safety.

## FIGURES

### Figure 1: Total Area Scanned



## Figure 2: Spectrum of Resurveyed Low Energy Peak Location