



July 2015 Fact Sheet

Cleaning up fuel contamination: Kotzebue's former Indian Health Service hospital and Bureau of Indian Affairs school

A brief history of the contamination and current status of the cleanup

Ten acres of land in the area of the former Indian Health Service hospital and Bureau of Indian Affairs school is contaminated with petroleum – in this case, diesel – from large fuel releases from the 1950s until 1980, when it was reported to the Alaska Department of Environmental Conservation. Oil had been discovered in the Kotzebue Elementary School basement in 1970. The historical releases most likely came from a combination of fuel storage tank leaks, a damaged fuel distribution line, fuel storage tank overfills and possibly other sources.

DEC recovered much of the fuel, and conducted some studies between 1980 and 1990. In 1989, DEC installed a 435-foot beach barrier with fuel recovery wells to slow down the migration of fuel into Kotzebue Sound.

A large part of a cleanup is investigating the extent of the contamination. The cleanup process has five steps: (1) Site Discovery, (2) Interim Removal (immediate removal or isolation of the contamination to protect people and the environment from high levels of contamination), (3) Investigation, (4) Remedial Action (the cleanup), and (5) Site Closure. However, the 2012 sea wall construction along Kotzebue Sound to the immediate northwest of the area of concern may be preventing any further movement of contamination into the sound

Where we are now

The cleanup project is in the third step of the cleanup process – the investigation phase. Current land use of the property includes residential (Lot 3), school/playground (Tract 4A), pedestrian and



Workers bore a hole and then take test samples.

public usage (Lot 4 and portions of Lot 5), and a fenced light industrial area (portion of Lot 5). DEC restarted the investigation with groundwater and soil sampling from 2008 to 2009 and recently completed further site characterization work in August of 2014 (see map on page 3). That work included drilling 45 soil borings over the property, of which 10 were converted to groundwater monitoring wells. Samples were then taken from soil and groundwater along the School Utility Road behind Shore Avenue and the areas around the schools. Additional sampling occurred near the Ferguson Building, Manilaq housing, and Building 314 on the map, along with the rest of the site for the old 1961 hospital (southwest of Building 314).

2014 Sampling Results

The results of this investigation reinforced findings from previous investigations in terms of both contaminant levels and locations. In general, sampling locations in soil and groundwater that indicated

contamination levels that are higher than what is allowed under state regulations were along the former pipeline corridor on Tract 4A and in the right-of-way area northwest of Building 314 and the Ferguson Building. In all instances, the contamination is related to the petroleum that leaked from the pipeline, other above or below-ground petroleum storage sources or surface spills. The following information summarizes the investigation results for each area:

Lot 3: This is a partially paved residential area with frequent pedestrian and vehicle traffic with no samples above cleanup levels.

Lot 4: Work in this area produced one soil sample that exceeded cleanup levels for petroleum. The presence of business and community service offices located in the Ferguson Building causes this to be an area of concern for potential exposure.

Lot 5: One soil and one groundwater sample in the northwest portion of this area exceeded cleanup levels for petroleum contamination. While inside a fenced-in industrial area, the sample locations are adjacent to the elementary school playground. Several soil samples taken northwest of Building 314 (the old hospital service wing) and Ferguson Building exceeded petroleum cleanup levels. There is an unfenced portion of the lot with significant pedestrian and vehicle traffic, and includes a utility right-of-way as well as portions of residential backyards.

Tract 4A: This area includes the elementary, middle and high schools as well as Northwest Arctic Borough School District offices. It encompasses the route of the former pipeline from its origin at the tank farm to the school and former hospital sites and contains petroleum contamination both above and below cleanup levels. The existence of subsurface petroleum contamination is a concern for workers completing recurring and essential utilities work along the former pipeline corridor. The unpaved schoolyard, while not containing soil or groundwater samples that exceed cleanup levels, nonetheless contain elevated levels of petroleum contamination.

The Way Ahead

The investigation phase of site cleanup is nearly complete so PRPs and the State of Alaska must now shift focus to the means by which the area will be cleaned up in order to safeguard human health for all foreseeable current and future land uses, to include recurring utility work, school operations, pedestrian and vehicle transit, and further residential or commercial development. Cleanup and remedial work for the area can include, but is not necessarily limited to:

- Removal of contaminated soil and associated materials where regulatory soil cleanup levels are exceeded;
- Long-term groundwater and surface water (Kotzebue Sound) monitoring;
- Remedial action to preclude health risks to children in the school playground;
- Establishment of institutional controls for all utility work required in subsurface areas of contamination. For example, such controls would call for: Worker protection when operating in contaminated areas; Sampling, analysis and removal as necessary of contaminated soil when undertaking utility repair work; Restricted use of groundwater; Formal planning and approval procedures prior to any disturbance of the soil in the area.

The State of Alaska has identified multiple PRPs due to property ownership issues for the area: the Indian Health Service, Bureau of Indian Affairs, Alaska Department of Education & Early Development, Northwest Arctic Borough School District and Kikiktagruk Inupiat Corporation. The City of Kotzebue is not a PRP, but it is taking part as a member of the cleanup team.

For more information

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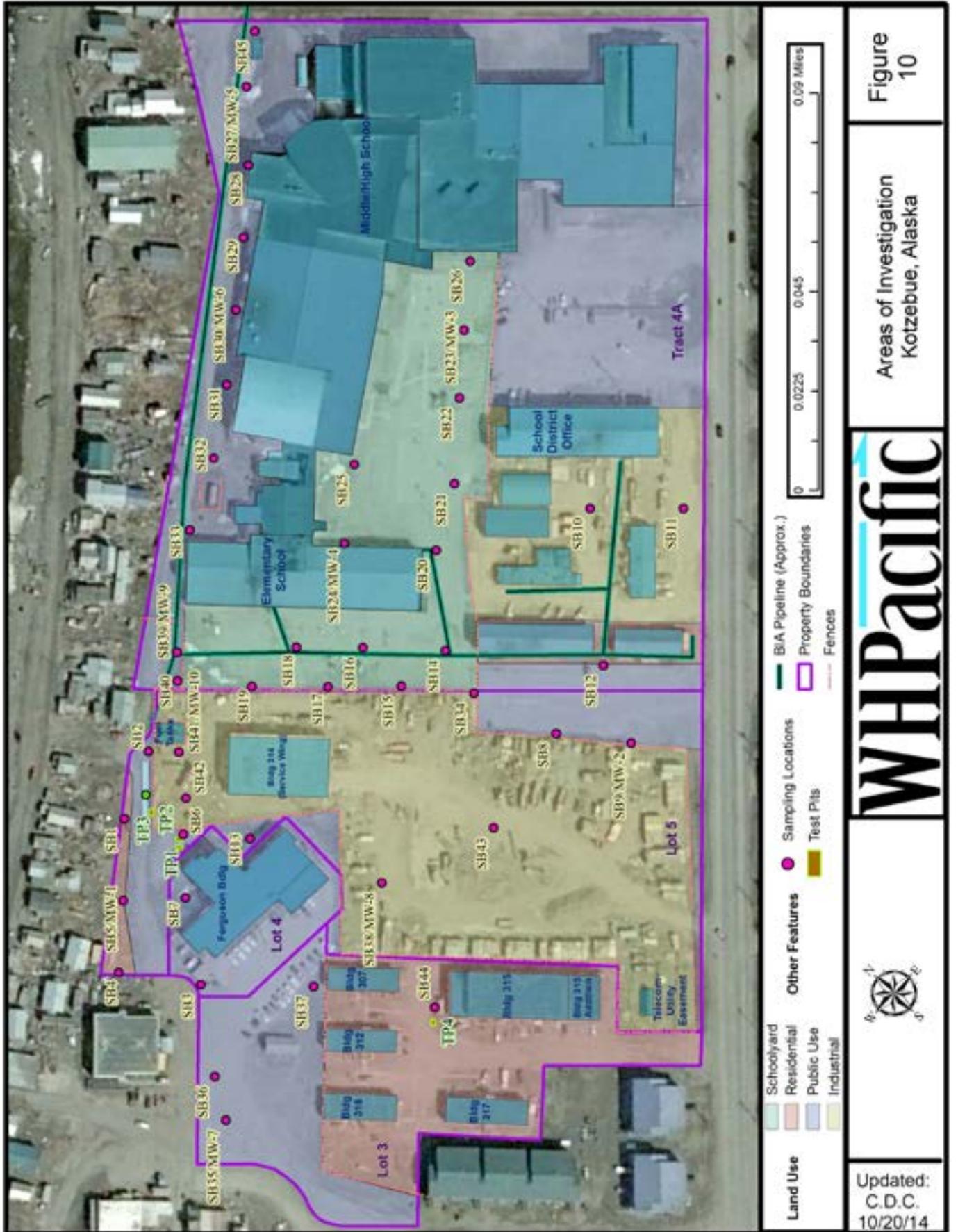


Figure 10

Areas of Investigation
Kotzebue, Alaska

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