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FACT SHEET REGARDING DIOXIN CLEANUP RESULTS OF NEIGHBORHOOD SAMPLING
APRIL 2003 NCBC GULFPORT MS
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Fact Sheet

Seabee Base Dioxin Cleanup Results of Neighborhood Sampling April 2003

History of Dioxin at the Gulfport Seabee Base

During the Vietnam War, drums of Herbicide Orange were stored by the Air Force on the Seabee Base. In the late 1970s the herbicide was emptied from the drums into tanker cars then transported to a specialized incinerator ship where it was taken out to sea and burned. Following removal of the drums, the Air Force studied the site and determined the amount of dioxin-contaminated soil on the site. Dioxin was a byproduct that was created during the manufacturing of Herbicide Orange.

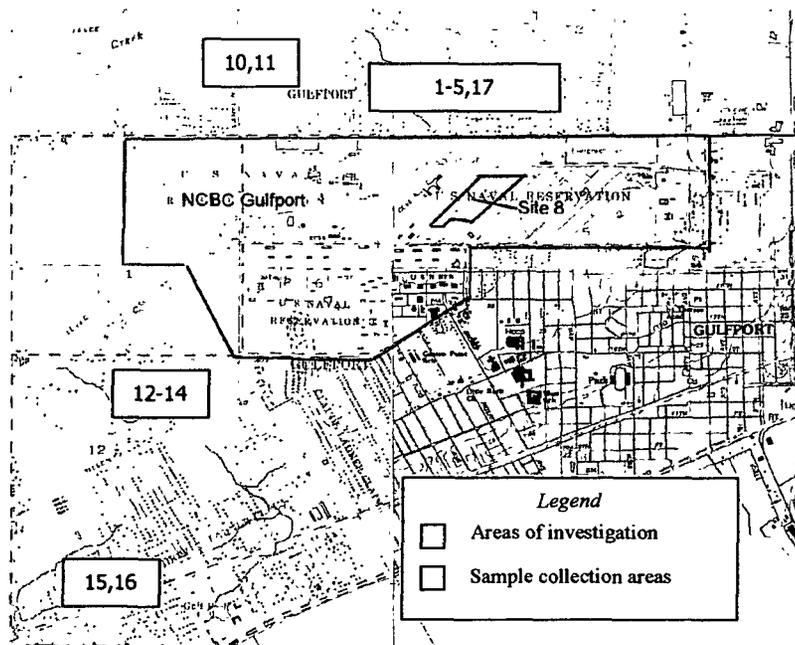
In the late 1980s the Air Force cleaned up the dioxin-contaminated soil to the standards of the time. In recent years more has been learned about the potential health effects caused by dioxin. In response, Mississippi set a stricter cleanup standard for dioxin. This caused the previous cleanup and many of the earlier studies to be reassessed.

In 1995 the Navy collected samples on and around the Seabee Base to evaluate the need for additional

environmental cleanup. Some of the samples showed that dioxin had moved off of the base and into ditches to the north at concentrations higher than the newly established standard. These findings triggered an extensive sampling program.

Results of this sampling program were used to determine the extent of dioxin contamination both on and off of the base and to develop a proposal for cleanup. This Proposed Plan was presented to the public during the public comment period that began in April of 2002. During the comment period community members shared new information that showed the need for additional sampling. This fact sheet presents the results of the samples that were taken in response to these new concerns.

The data is presented here as Toxicity Equivalency Quotients, or TEQs, as described in the box below. The Mississippi Department of Environmental Quality has established a dioxin TEQ of 15 parts per trillion as the maximum safe level in residential areas for this project.



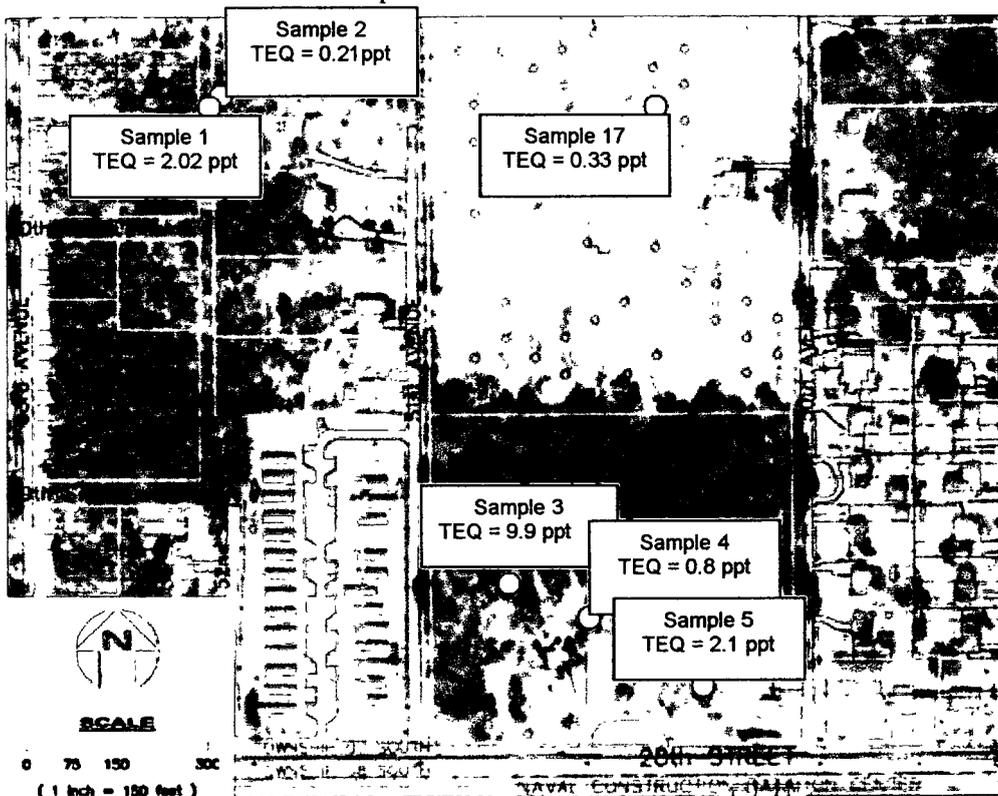
Map showing the neighborhoods where additional samples were collected. The sample numbers are shown in the green boxes.

How is dioxin reported?

Dioxin is a common name given to a group of 210 different compounds collectively referred to as dioxins and furans. The most toxic of these compounds is **2,3,7,8-tetrachlorodibenzo-p-dioxin**, also known as **TCDD**. The other 209 dioxin and furan compounds are less toxic than TCDD. For this reason, dioxin concentrations are presented as a computed value that takes into account all of the dioxin compounds that are present in the sample and the relative toxicity of each of these compounds as compared to TCDD (called a TCDD-equivalent). The amount of dioxin in a given sample is reported as the sum of the concentration of TCDD and the TCDD-equivalents. This value is called the **Toxic Equivalency Quotient, or TEQ**. TCDD, the contaminant found in Herbicide Orange, may not be present or could be only a fraction of the TEQ value.

The Seabee Base is going to clean contaminated soil and sediment using a TEQ of 15 parts per trillion (ppt) as their current allowable level of dioxin in soil in residential areas and 38 ppt in industrial areas.

Samples 1 – 5 and 17

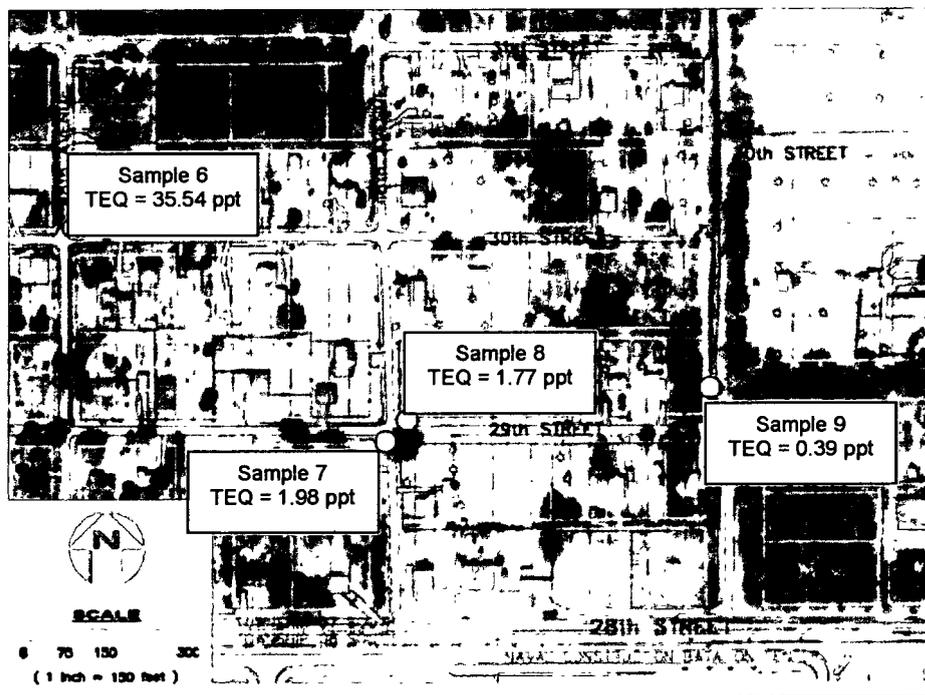


Dioxin concentrations in Samples 1 through 5 and 17 were all within the levels considered safe by the MDEQ and EPA.

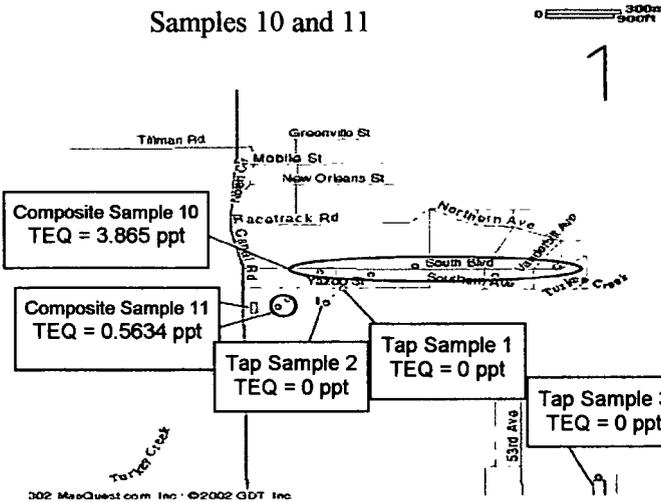
Samples 6 – 9

The concentration of dioxin in Sample 6 was higher than the MDEQ allows. However, this sample did not contain any of the dioxin found in Herbicide Orange (TCDD).

Samples 7 – 9 had dioxin levels that are considered safe by the MDEQ and EPA.



Samples 10 and 11

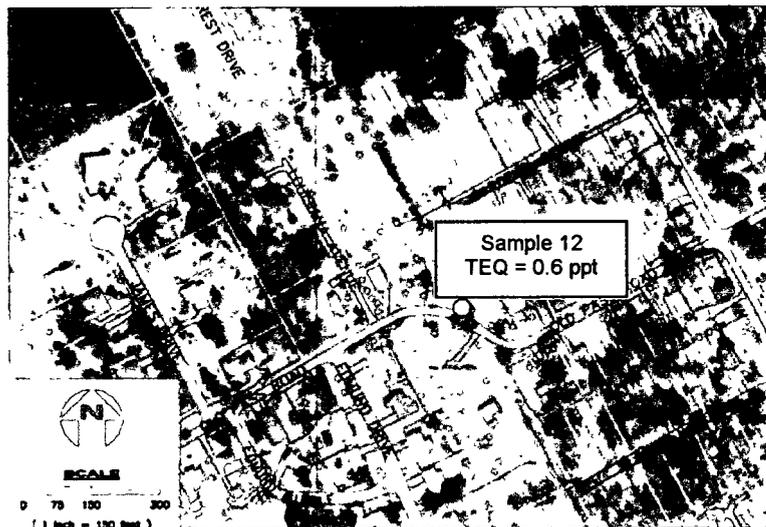


Sample 10 was a five-part composite collected along South Boulevard. Sample 11 was collected in a swale where sediment would typically collect. Both samples contain concentrations considered safe by the MDEQ and EPA.

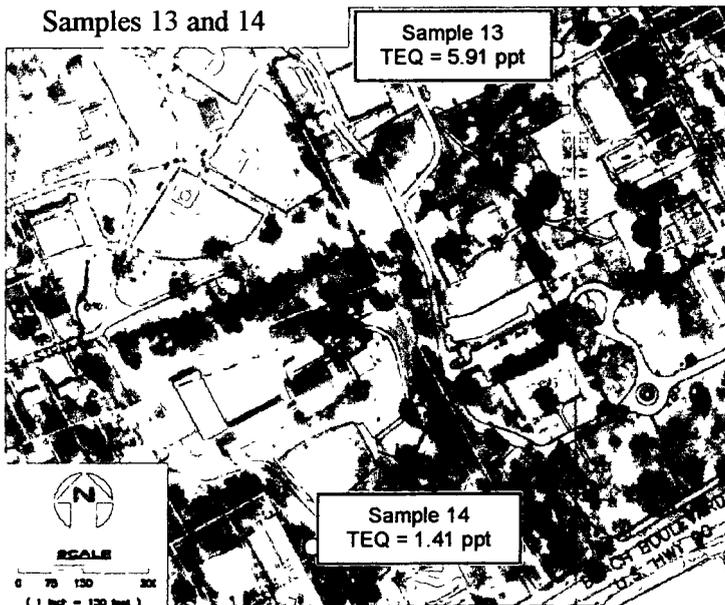
In addition, three tap water samples were collected. Dioxin concentrations measured in tap water were within United States Safe Drinking Water Standards.

Samples 12

Sample 12 was collected in Bear Creek. The measured concentration was within the level considered safe by MDEQ and EPA.

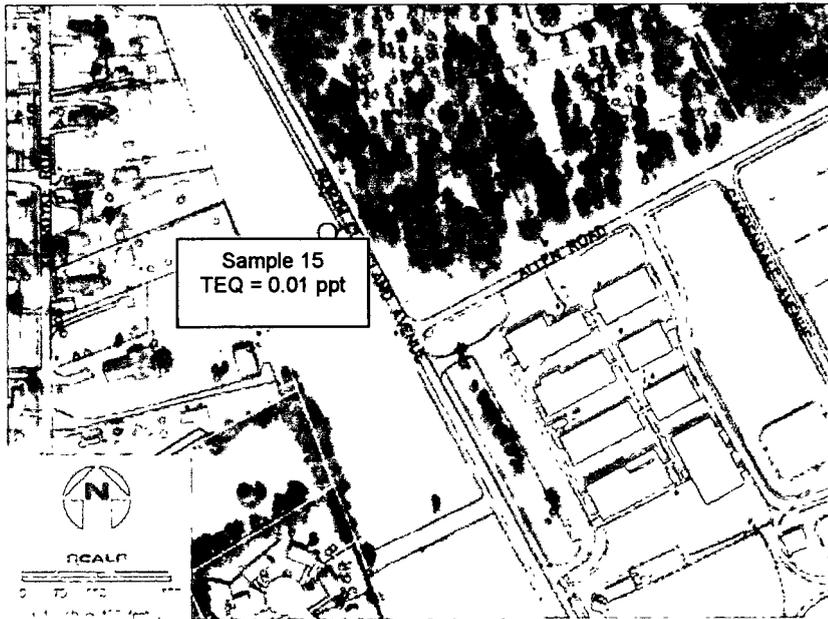


Samples 13 and 14



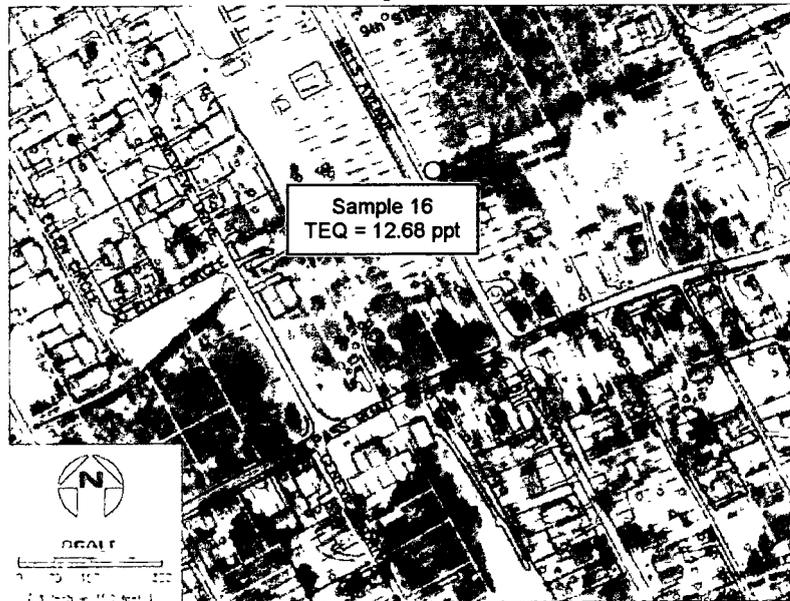
Samples 13 and 14 were collected in Long Beach. Sample 13 contained low concentrations of TCDD, the dioxin found in Herbicide Orange. However, these concentrations are both considered safe by the MDEQ and EPA.

Sample 15



The dioxin concentration in Sample 15 was well within the safe levels established by MDEQ and EPA.

Sample 16



The concentration found in Sample 16 was within the safe levels established by the MDEQ and EPA. There was no TCDD found in this sample. The dioxin found here is most likely the result of industrial activities.

Summary

In response to information and concerns voiced by community members, 20 samples (17 sediment or soil and three tap samples) were collected and analyzed. One sample collected north of the base (Sample 6) had a concentration higher than the 15 ppt limit set by the MDEQ. However, laboratory results confirm that this elevated concentration is not the result of Herbicide Orange contamination. Dioxin concentrations in all other samples were within the levels considered safe by the MDEQ and EPA.