

## **Buffer Zone Sampling and Analysis Plan Wind Site Issue**

### **Issue**

The draft Buffer Zone Sampling and Analysis Plan (BZSAP), as with all environmental restoration planning for closure of RFETS, incorporates the Site boundary defined in RFCA. In the formal comment period for the draft BZSAP, the U.S. EPA took exception to the exclusion of the 280-acre Wind Site from the document.

The EPA comment is as follows:

This document does not include the 280 acre Wind Site southeast of the Highways 128 and 93 intersection on any of the maps or schedules presented, and therefore, apparently no further sampling of this area is contemplated by DOE. EPA believes that this area must be assessed in the same manner as other areas in the outer buffer zone, as per the methodology presented in this document. Previous sampling has been conducted in this area, and as a starting point, the data derived from this sampling should be assessed in the same manner as data that has been previously collected in other portions of the buffer zone. After this has been accomplished, further sampling will also be necessary to characterize the area for eventual inclusion in the Comprehensive Risk Assessment and with the rest of the site.

DOE's draft response to the EPA comment was as follows:

The Wind Site is not considered part of RFETS and will not be sampled as part of Buffer Zone characterization. RFETS is defined in RFCA as "the property owned by the United States Government, formerly known as the Rocky Flats Plant or Rocky Flats Site, and now known as the Rocky Flats Environmental Technology Site, including the Buffer Zone, as identified in the map in Attachment 2. RFETS does not include contaminated areas beyond the facility property boundary."

During follow-up consultations with both EPA and CDPHE, EPA took the position that our response was not acceptable. Although CDPHE did not comment originally on the Wind Site, they agreed with EPA and said that CDPHE would probably "fall on its sword on this one".

### **Background**

The Wind Site is located adjacent to the border in the north Buffer Zone of RFETS. The Wind Site consisted of 400 acres prior to 1993 but 280 acres were transferred to DOE's National Renewable Energy Laboratory (NREL) in late 1993. The 280 acres that were transferred contained two buildings used to house data collection equipment, trailers and above-ground gasoline storage tanks for fueling site vehicles. The site also contained a 1200 ft well that pumped potable groundwater from 800 ft. Following employee complaints of bad water, sampling determined that the water contained several volatile organics that may have been a result of the chlorination process. These compounds included chloroform and dibromochloromethane in concentrations above Tier II.

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In 1992, a site assessment was performed to investigate the Wind Site's potable water contamination. Three additional ground water wells were constructed and groundwater samples were collected and analyzed. These wells were constructed in the alluvial aquifer and do not monitor the same aquifer as the potable water well. Only cadmium was found to exceed the Tier II action level for groundwater in only a single ground water monitoring well. Soil samples were collected during construction of the wells and only methylene chloride, a common laboratory contaminant, was detected above Tier II subsurface soil action levels.

The site assessment report concluded that contaminants found indicate the potential for multiple small sources west of the new alluvial wells. Contamination may or may not have contributed to the contaminants in the portable water supply.

### **Current Situation**

The technical situation with the Wind Site is not certain. Since we do not have regulatory agency agreement on the size of the exposure units in the BZ, the number of surface soil samples required for characterization can not be determined. Of course, detection of contaminants above action level would require additional sampling and, perhaps, remediation. Since there were operations activities at the site, the potential exists for contamination. If additional wells are required to measure groundwater contamination, the expense could be considerable.

The Wind Site status is the last BZSAP issue to be resolved. From a Kaiser-Hill (K-H) perspective, the site is not within the RFCA boundary of RFETS and, therefore might be a contract issue. While DOE might have the same opinion that it should not be considered a part of RFETS, it might be hard for them to argue that the site is not part of the area pertaining to the National Priorities Listing of RFETS, similar to OU-3 (Standley Lake, etc.). Usually, NPL listing includes all contaminant release areas relevant to the site.

If DOE refuses to include the Wind Site in the BZSAP, it will likely not get approved. If DOE agrees to include the site, K-H needs to decide whether it is within their contract scope. If not, an equitable adjustment may be in order. Because of the uncertainty of the condition of the site, the adjustment might have to come after the fact. At any rate, it is important to address the issue immediately.

**TABLE 5-1**  
**SUMMARY OF ALLUVIAL ANALYTICAL RESULTS**

Boring	Depth	Analyte	Level	Unit
Boring 45091 +	0.5-2.0ft	Cd	17.3	mg/kg
		Co	15.8*	mg/kg
Boring 45191	1.0-1.5ft	2-Butanone	11	µg/kg
		Toluene	660	µg/kg
		Al	20,600*	mg/kg
		As	8.2*	mg/kg
		Ba	115*	mg/kg
		Cd	3.4	mg/kg
		Fe	22,300*	mg/kg
		Pb	15.8*	mg/kg
		Mg	2550*	mg/kg
		Ni	23.2*	mg/kg
	K	2470*	mg/kg	
	V	41.9*	mg/kg	
	9.0-9.5ft	Toluene	.045	µg/kg
	20.0-20.5ft	Toluene	.075	µg/kg
	25.0-25.5ft	Toluene	.020	µg/kg
	28.0-28.5ft	2-Butanone	.025	µg/kg
		Toluene	.990	µg/kg
Boring 45291	1.5-2.0	2-Butanone	.025	µg/kg
		Toluene	.560	µg/kg
		As	5.1	mg/kg
	6.5-7.0	Toluene	.46	µg/kg
	13-13.5	Toluene	26	µg/kg
		Xylenes	5 <sup>†</sup>	µg/kg
	19-19.5	Toluene	8	µg/kg
	24.0-24.5	Methylene Chloride	9	µg/kg
		Toluene	120	µg/kg
	29.0-29.5	Methylene Chloride	7	µg/kg
Toluene		120	µg/kg	
Trichloroethene		6	µg/kg	

Notes: † = No volatiles data reported to Woodward-Clyde  
 \* = Between mean or upper tolerance limit and maximum background levels reported  
 ‡ = Estimated value below reporting limit

No detections with possible blank contamination are listed in Table. All available data is presented in Appendix E.

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