



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

CERTIFIED MAIL: 7003 3110 0006 1998 5845
RETURN RECEIPT REQUESTED

AUG 20 2015

Mr. Robert Brown
Lost Lake Resort
42500 North Highway 95
Blythe, California 92225

Subject: Termination of the Consent Agreement and Final Order
Pursuant to 40 C.F.R. §§ 22.13 and 22.18
Lost Lake Resort (EPA ID No. CRIT-041)
Docket No. RCRA-09-2008-0011

Dear Mr. Brown:

Pursuant to Section V, Paragraph 124 on page 33 of the above-referenced Consent Agreement and Final Order ("CAFO") with Mr. Robert Brown doing business as Lost Lake Resort ("Respondent"), the U.S. Environmental Protection Agency ("EPA") hereby issues this letter documenting that Respondent has completed to EPA's satisfaction the Work required under Section E of the CAFO, has paid the civil penalty required under Sections D and Q of the CAFO in accordance with Section Q of the CAFO, and the CAFO is now terminated. The enclosure to this letter provides EPA's justification for terminating the CAFO.

Please note that this letter also documents EPA's determination that no further action is required for the Site at this time. However, if additional information becomes available in the future regarding contamination in soil and/or groundwater at the Site, or the planned use of the Site changes, EPA may reopen the Site and require additional site assessment and/or corrective action. If you have any questions regarding this letter or the enclosure, please contact me at (415) 972-3311, or Steven Linder of my staff at (415) 972-3369.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Scott", written over a horizontal line.

Jeff Scott, Director
Land Division

Enclosure

Cc (w/enclosure): Dennis Patch, Chairman, Colorado River Indian Tribes ("CRIT")
Fatima Abbas, Deputy Attorney General, CRIT
Wilfred Nabahe, Environmental Director, CRIT EPO

Justification for terminating the Consent Agreement and Final Order ("CAFO"),
Lost Lake Resort Leaking UST Facility ("Facility")
(EPA ID# CRIT-041)

Background on EPA's CAFO with the Facility that was filed on May 7, 2008

EPA's CAFO cited the following seven counts (violations) for failing to:

- 1) Provide any cathodic protection for metal piping,
- 2) Install a properly designed cathodic protection system,
- 3) Report suspected releases to the implementing agency within 24 hours,
- 4) Equip pressurized piping with automatic line leak detectors,
- 5) Perform monthly monitoring on pressured piping,
- 6) Maintain every record of release detection monitoring, and
- 7) Maintain copies of the financial responsibility mechanism.

The CAFO noted that these violations were observed during EPA's inspections at the Facility on April 27, 2006 and March 1, 2007. The CAFO included a penalty of \$55,076, and required the Facility to:

- Conduct a Phase II Site Assessment of the lateral and vertical extent of hydrocarbon contamination in soil, surface water and groundwater (starts on Line 57 of the CAFO),
- Prepare an Exposure Assessment Report (starts on Line 62 of the CAFO), and
- Submit and implement a Corrective Action Plan ("CAP") (starts on Line 65 of the CAFO).

In addition, Line 70 of the CAFO required the CAP to be public noticed. Lost Lake paid the \$55,076 penalty on May 13, 2008. The Facility's responses to the violations listed above, as well as the required site assessment and corrective action work are discussed below. EPA subsequently required the Facility to remove several 55-gallon drums of soil for proper disposal, and the Facility removed these drums on February 10, 2011 (disposal manifests were provided).

The Facility's responses to the violations listed in the CAFO regarding the operating UST system

The current UST system was installed on April 1, 1999 and consists of a single STI-P3 UST with three separate compartments for super and regular gasoline, and AVGAS for boats. The industry standard was for STI-P3 USTs to have three methods of cathodic (i.e., corrosion) protection, which included sacrificial anodes, dielectric bushings and synthetic coatings on the steel surfaces. Following EPA's issuance of the CAFO, the Facility addressed the violations pertaining to its operating UST system by having the system tested by licensed contractors, and improving its operation and management procedures for the UST system. The Facility's corrections of the violations for the operating UST system were documented during EPA's inspections of the Facility on May 2, 2008, November 19, 2008, May 31, 2011 and February 26, 2013. In addition, the Facility's contractor conducted passing cathodic protection tests on the Facility's UST system in March 2013, which are due every three years, and passing tank tightness tests on June 5, 2014.

The Facility's responses to the site assessment work required by the CAFO

On February 20, 2008, Wagner Martin Associates Inc. ("WMA") submitted its Phase II Site Investigation Report for the Site ("Report"), which also included the results of the earlier Phase I site investigation work. The combined site investigation work included the following: 1) removing former UST system #2 (500 gallon gasoline) and sampling soil, 2) drilling and sampling 10 soil borings, 3) installing and sampling five groundwater monitoring wells, and 4) installing and sampling two "water sampling stations" ("WSS") on the western bank of

the cut-off Colorado River meander. The CAFO required the RP's contractor to use the San Francisco Regional Water Quality Control Board's Environmental Screening Levels ("ESLs") for screening the analytical results for soil, surface water and groundwater during the Phase II Site Assessment.

The soil and groundwater samples collected in January 2008 were analyzed for volatile organic compounds ("VOCs") by EPA Method 8260, polynuclear aromatic hydrocarbons ("PAHs") by EPA Method 8310, total petroleum hydrocarbons ("TPH") by EPA Method 8015, and lead and cadmium by EPA Method 6010. For the soil samples, the analytical results showed no concentrations above the ESLs or EPA's Regional Screening Levels ("RSLs") for residential areas except for the localized area around borings LL-4 and LL-9, at 11.5 feet below ground surface ("bgs"). At 11.5 feet bgs, the highest naphthalene concentration was 78 mg/kg, which was above EPA's 3.8 mg/kg RSL for naphthalene in residential soil. In addition, the highest lead concentration at this same depth was 410 mg/kg, which was above EPA's 400 mg/kg RSL for lead in residential soil. However, the depth of this residual contamination represents an incomplete exposure pathway for ingestion or inhalation of the contaminants.

For the groundwater samples from the five monitoring wells, only downgradient well LLW-1 had concentrations above EPA's Maximum Contaminant Levels ("MCLs"), and these concentrations were: 110 µg/l benzene (MCL = 5 µg/l) and 1,600 µg/l toluene (MCL = 1,000 µg/l). The water samples from the two WSS samples showed no detections for VOCs or TPH.

On April 25, 2008, WMA submitted two pages of amendments to the Report, which included WMA stating that: 1) all known hydrocarbon source areas had been addressed and that the current UST system was not leaking based on passing tank tightness tests, 2) a hydrocarbon smear zone probably existed above the water table in the vicinity of LLW-1 and possibly LLW-5, and 3) it would evaluate remedial alternatives for the Site such as bioremediation, soil vapor extraction and air sparging.

The Facility's Exposure Assessment Report

On August 18, 2008, WMA completed its Exposure Assessment Report ("EAR"). In summary, the EAR concluded that direct contact with contaminants in soil was unlikely based on the approximate 11.5 foot depth of residual contamination (i.e., the naphthalene and lead concentrations were above EPA's residential RSLs in one boring), and that vapor intrusion was unlikely based on no current residential structures being directly over the contaminated area (a mobile home is located about 20 feet north of the impacted soil borings and has a crawl space approximately three feet high). In addition, the EAR concluded that potential ingestion of contaminated groundwater was the only potentially complete exposure pathway. However, the shallow groundwater in the area of the residual soil contamination at 11.5 feet bgs is not used for drinking water. In addition, the primary and secondary drinking water wells at the Facility have shown no VOC detections since monitoring began in 1996, as noted below. Following the Facility's response to comments, EPA approved the EAR on October 22, 2008.

Corrective action conducted by the Facility

On February 8, 2011, the Facility's contractor, BioResources, Inc. ("BioResources") began injecting oxygen into the groundwater at the Facility in order to enhance the natural biodegradation of the residual hydrocarbons. In summary, "medical grade oxygen" was injected into each of the five monitoring wells at the Facility during 10 separate events through February 2014. This remedial work was documented in Appendix B of BioResources' Groundwater Monitoring Report ("GMR"), dated December 3, 2014. Based on the GMR, approximately 22,500 cubic feet of oxygen was injected into groundwater during this four year time period. The GMR also noted that

dissolved oxygen ("DO") in groundwater was monitored in the field and bacterial plate count measurements were conducted for evaluating bacterial populations. The GMR concluded that the DO and bacterial plate count measurements documented the enhanced, natural biodegradation of the residual hydrocarbons in groundwater. The GMR's conclusion is supported by groundwater monitoring at the Facility, which has shown steady declines in the hydrocarbon concentrations that have been below the MCLs since early 2011.

Groundwater monitoring by the Facility

Although WMA's groundwater monitoring in 2008, noted above, documented benzene and toluene concentrations above EPA's MCLs, five subsequent groundwater monitoring events since early 2011 have shown no concentrations above EPA's MCLs. These monitoring events occurred on January 28, 2011, April 13, 2011, June 28, 2011, May 10, 2012 and July 28, 2014. During the June 28, 2011 monitoring event, the U.S. Army Corps of Engineers ("ACE") collected split groundwater samples at EPA's request, and these samples showed no concentrations above EPA's MCLs. In addition, the ACE's analyses of water from the two drinking water wells at the Facility showed no detections for VOCs or semi-volatile organic compounds ("SVOCs"). The ACE's Split Sampling Report, dated August 1, 2011, noted that the ACE had also conducted an audit of the sampling techniques used by BioResources and found no problem areas that would affect the quality of the analytical data.

Drinking water well sampling and analysis by the Facility and the ACE

The primary drinking water well is approximately 100 feet deep according to the 2013 well survey, and is located approximately 525 feet west-northwest of the operating UST system. The secondary drinking water well (a back-up well) is approximately 89 feet deep, and is located approximately 200 feet west-southwest of the operating UST system. EPA Region 9's Drinking Water Office has required the Facility to regularly sample its two drinking water wells and there were no VOC detections at these wells in 1996, 2003, 2006, 2009 and 2012. As noted previously in this document, the analytical data for the two drinking water wells that were generated by the Facility's consultants and the ACE have shown no VOC or SVOC detections.

The Facility's CAP

The Facility's CAP, dated February 24, 2015, briefly summarizes the work described above, as well as the analytical results for soil and groundwater. Based on the analytical data for the Facility, Section 4.3 of the CAP recommends that EPA close the Site.