CASE HISTORY: Meinert Ranch (Texas) Spill Response (hydrocarbon contamination)

Rapid Remediation of Oil Spill at Production Site

Background:

A production site faced contamination due to an oil spill caused by the failure of a relief valve on the production separator. This event led to the spread of hydrocarbon contamination in the surrounding soil. In response to the incident, Centex Remediation Services was engaged to address the contamination by removing both the hydrocarbons and the visible oil stains, ensuring the site met regulatory and operational standards.

Solution:

To effectively remediate the site, Centex Remediation Services collaborated with X4 Environmental Inc., which supplied their advanced chemical solution, X4JH2000. This synergistic, concentrated, blended chemical was designed to aid in the rapid degradation and removal of petroleum-based hydrocarbons from contaminated environments.

Centex began the remediation process by applying the X4JH2000 chemical, mixed with water, using a power washer. This chemical-washing technique not only aimed to clean the oil-stained soil but also focused on reducing the Total Petroleum Hydrocarbon (TPH) levels to acceptable standards.

Process:

1. **Initial Analysis:** Before commencing the remediation, a TPH analysis was conducted on the contaminated soil. The results indicated an alarming TPH level of 78,000 ppm, well above the acceptable threshold for safe operation.
2. **Application of X4JH2000:** Within 2 ½ hours of receiving the call, Centex applied the initial batch of the X4JH2000 chemical. A total of six 5-gallon buckets of X4JH2000 concentrate, diluted with 725 gallons of water, were used to treat approximately 138 cubic yards of contaminated soil.
3. **Remediation Process:** Using the chemical solution combined with a power-washing method, Centex immediately observed substantial improvements. The typical oil odor was eliminated, and the stained soil began to show noticeable signs of cleaning. The soil was not only visibly cleaner, but the immediate results were evident in the significant reduction of the hydrocarbon contamination.
4. **Follow-up Analysis:** Within seven hours of completing the initial treatment, a second TPH analysis was performed. The TPH level had dropped dramatically from 78,000 ppm to 7,350 ppm—an impressive reduction of over 90%.

Results:

- **Reduction in TPH Levels:** The most notable outcome was the significant decrease in the TPH concentration, from 78,000 ppm to 7,350 ppm, within just seven hours of applying X4JH2000.
- **Cost and Time Efficiency:** The remediation was completed swiftly and effectively, with only a single application of X4JH2000 needed. The production company was not only impressed with the speed and efficacy of the chemical solution but also found the cost of this method to be highly competitive compared to traditional remediation approaches.
- **Improved Site Condition:** Beyond the TPH reduction, the site saw a visible improvement in the appearance and condition of the soil, with the oil stain nearly removed, enhancing both the site's environmental quality and operational functionality.

Conclusion:

The use of X4JH2000 provided an efficient, cost-effective, and environmentally responsible solution for the production site's hydrocarbon contamination. With only one application, Centex Remediation Services successfully reduced the TPH levels by over 90%, exceeding the client's expectations. The production company was not only satisfied with the immediate remediation results but also pleased with the overall cost savings when compared to their traditional remediation methods. This case highlights the effectiveness of using advanced chemical solutions, like X4JH2000, in handling environmental contamination swiftly and efficiently.