

# Hytec and Bordeaux Landfill Remediation

## CALIBRE

Our Success Follows Yours

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### About CALIBRE

CALIBRE Systems, Inc. is an employee-owned management consulting and information technology solutions company supporting government and industry.

CALIBRE is committed to the success of our customers and delivers enduring solutions that solve management, technology, and program challenges.

### Solutions That Make a Difference

We work in multidisciplinary teams, partnering with you to deliver practical, timely, best value solutions that solve your management, technology, and program challenges and help you achieve your business objectives. This collaborative work style helps produce the results you seek – today and where you want to be tomorrow.

### Project Scope

>> *CALIBRE Systems, Inc. (CALIBRE) was tasked with the site investigation and ultimately the excavation and removal of all debris within the Bordeaux and Hytec landfills located in a residential development. The landfills were excavated and the land restored in rapid sequence to reduce impacts to the area residents. Site groundwater monitoring has verified that the remedial action performance standards have been met. Impacts to roads, vegetation, utilities, and property improvements were minimal.*

### Benefits to the Customer

>> *CALIBRE remediation teams completed excavation of two former landfills in the midst of a residential development without causing major disruptions to local residences. The site officially has closed (No Further Action by the Washington Department of Ecology) and local residents openly praised the manner in which the work was completed.*

### PROJECT SUMMARY

The Hytec and Bordeaux landfills required a Remedial Investigation/Feasibility Study (RI/FS) under an order issued by the Washington State Department of Ecology. Prior investigations had indicated elevated concentrations of metals and semi-volatile organic compounds in local well water. The RI/FS identified two discrete landfills present on the site: the Bordeaux dump used for household wastes and the Hytec landfill used for the disposal of fiberglass debris.

The RI/FS was planned using a Data Quality Objectives (DQO) process to clearly identify the key risk assessment and remedial action decisions and corresponding data requirements. During the RI/FS, CALIBRE was able to: 1) Locate buried drum areas within the landfill using a geophysical survey; 2) Characterize the extent of the landfill; and 3) Provide waste profile characteristics to establish suitable disposal options. Area background samples were taken from the surrounding areas to establish naturally occurring background levels of selected metals (arsenic cadmium and lead). The measured distribution of naturally occurring metals established the site cleanup levels based on the 90th percentile of the background distribution.

CALIBRE prepared a Cleanup Action Plan (CAP) after regulatory acceptance of the RI/FS and then met with local property owners to identify work practices and implementation plans to minimize the impact to their schedules and properties before beginning excavation of landfill wastes. A portion of the site was heavily wooded with mature timber and CALIBRE was able to selectively harvest specific areas for staging and stockpiling of wastes.



*Excavated materials being loaded for transport to licensed facility.*

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*Backfilled area being prepared for surface contouring and reseeding.*



*On-site segregation of regulated wastes, allowing for significant transport and disposal cost savings.*



*Temporary roadway providing continued access for local residents during construction activities.*

Field screening of removed wastes and on-site waste segregation (separating regulated versus non-regulated wastes) resulted in significant cost savings in reduced transport and disposal fees for all non-regulated wastes. In total, 4,900 cubic yards of waste were removed from the two landfills and only 80 cubic yards required disposal as a regulated waste.

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**The expedited lab analysis allowed CALIBRE to quickly certify full removal of the waste and backfilling was initiated in a compressed timeline.**

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CALIBRE used expedited laboratory analysis of conformational sampling from the excavation areas. The expedited lab analysis allowed CALIBRE to quickly certify full removal of the waste and backfilling was initiated in a compressed timeline. Additionally, a nearby borrow pit for backfill material was used to minimize the time that excavated areas were open. CALIBRE completed the site remedial actions achieving clean closure (No Further Action) on time and under budget allowing the landowner to complete residential development of the site.