



Site remediation process

Your preferred partner on the journey
towards a cleaner tomorrow

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Lamor's site remediation process

In today's world, we're facing unprecedented challenges, from the climate crisis and decreasing biodiversity to the rapid depletion of resources. At Lamor, we're working hard to address these problems by safeguarding our planet from pollution and fostering a cleaner, more sustainable future for all. This ambition is reflected in our mission statement, "Let's clean the world"

Environmental remediation needs often arise when waste materials have been improperly discarded or left to deteriorate without appropriate treatment. Drawing from our wealth of experience, we're confident that every contaminated site can be restored to safe, healthy condition. To accomplish this, we employ a comprehensive approach that addresses both soil and groundwater contamination.



1. Site Assessment and characterization:

The environmental site assessment is performed to determine the location of the contamination, its extent, volume and characteristics of the contaminant present at the site. The study begins with a historical review of the available information followed by a site visit to define the site characterization plan necessary to determine the extension of the contamination, contaminated volumes and the level and type of contamination present at the site. The samples collected are sent to approved laboratories and processed by our team of environmental experts and engineers.

2. Risk Assessment:

It is necessary to consider multidisciplinary approaches that use models for predictive risk assessment as a result of human short- and long-term exposure. Defining the conceptual model of the site is the first step to assess the risks coming from the exposure to the contaminants and determine the remediation targets to ensure no harm to human or the environment.

3. Remedial Action Plan (RAP) Development:

Based on the findings from the site and risk assessment, a Remedial Action Plan (RAP) is developed. This plan outlines the proposed approach for remediating the contaminated site and achieving the desired site-specific target levels (SSTL). It considers factors like the type of contaminants, site conditions, budget, timeline, and potential impact on nearby communities and ecosystems.

The selection of the remediation methodology takes into account several aspects of the site that will determine whether the solution has to be in situ or ex situ, the technology or train of technologies to be implemented, the duration of the remediation and the necessary monitoring plan to be put in place. It is also part of this phase to establish all safety measures to ensure a safe working environment.

In order to determine the best approach for this specific problem we conducted two different optimization studies for the most promising methodologies, one for Bioremediation and another one for the Soil Washing technology. These studies helped us to define the best way to implement both techniques in the full scale so that the objectives are met in a cost and timely manner.

4. Regulatory Approval:

Before implementing the Remedial Action Plan (RAP), the project team must obtain necessary regulatory approvals and permits from relevant environmental agencies. This ensures that the proposed remediation methods comply with local and national environmental regulations and safety standards. A comprehensive Environmental and Social Impact Assessment study was conducted and submitted to the local environmental authorities together with the Environmental Monitoring Program to be carried out throughout the life cycle of the project.

5. Design, Construction and Commissioning of the proposed solution:

A proper design of the remediation system must be in place prior to initiate with the construction and commissioning of the remediation facility. Before going to full scale the system must be tested and adjust to the project operational needs.

Typically heavy equipment such as dump trucks, loaders, excavators, graders or rollers have been deployed for this activity. The correct management of the fleet allows us to conduct this work minimizing the impact on the environment and the region.

Once the remediation starts we are using different equipment such as windrow turners to till and irrigate the piles, bioreactors to produce our own bacterial inoculum and other earth moving equipment used to transport the soil from one location to another. We can use Soil Washing plants capable to treat the more contaminated soil.

6. Monitoring and Sampling:

After the start-up of the remediation system and throughout the remediation process, continuous monitoring and sampling are performed to assess the progress of the cleanup and ensure that the chosen remediation techniques are effective. This step also helps identify any potential risks or modifications needed to the Remedial Action Plan (RAP).

For monitoring and sampling purposes we typically install a laboratory in our treatment center to analyse the different parameters of interest to evaluate the progress of the remediation. Among other parameters in our lab we are measuring the moisture content of the piles, TPH level, bacterial counts or CO₂ readings that helps us understanding the bacterial activity happening in the soils.

7. Completion and Final Assessment:

Once the remediation activities are completed, a final assessment is conducted to determine whether the site meets the specified cleanup criteria and regulatory standards. If the site is deemed clean, it can be safely returned to its intended use.

8. Long-Term Monitoring and Maintenance:

In some cases, long-term monitoring and maintenance may be required to ensure that the contaminants do not re-emerge or migrate to other areas. This step is crucial to verify the success and sustainability of the site remediation project over time.

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Let's clean the world

Lamor in brief

Lamor is one of the world's leading providers of environmental solutions. For four decades, we have worked to clean up and prevent environmental incidents on land and at sea.

Environmental protection, soil remediation and material recycling: Our innovative technologies, services and tailored solutions, ranging from oil spill response, waste management and water treatment to soil remediation and plastic recycling, benefit customers and environments all over the world.

We are capable of vast and fast operations thanks to our connected ecosystem of local partners, steered by our experts. Lamor's share is listed on the Nasdaq Helsinki (ticker: LAMOR). Further information: www.lamor.com