ERAS Environmental,Inc.
1533 B Street, Hayward, CA 94541
Phone (510) 247-9885 Fax (510) 886-5399

Environmental Real Estate Newsletter

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Introduction

ERAS Environmental, Inc. (ERAS) publishes this Newsletter from time to time to discuss developing environmental issues. It is distributed for the benefit of the clients of and other interested persons. Its' focus is on environmental issues pertaining to due diligence for environmental assessment of commercial real estate. Many of these issues come up regularly during our business interactions.

Special Phase 2 issue

- **Phase 2 without a Phase 1?**
- **Phase 1/2 and Former Gasoline Stations**
- **Minimum Costs for Phase 2 projects**
- **PG Requirements for Phase 2 projects**

Phase 2 Without a Phase 1?

KEY CONCLUSION: The main goal and purpose of a Phase 1 assessment is to determine the necessity of and the scope for a possible future Phase 2 subsurface investigation. Read more in this article.

Phase 2 investigation refers to any subsurface or other sampling work that exceeds the scope of a Phase 1 ESA project. The ESA is simply an evaluation of environmental conditions based on available agency and other printed documents. A Phase 2 project may be needed to assess subsurface environmental conditions at a particular Property. This may be because of a known "pre-existing" condition such as the presence of an underground storage tank (UST), a sump (oil/water separators and clarifiers are types of sumps) used for chemicals, hydraulic lift or because the Property or an adjacent or up-gradient site is already a known leak case.

ERAS is sometimes asked to skip the Phase 1 process and perform a Phase 2 investigation. The basic purpose of a Phase 1 is to determine the need for a Phase 2 and ERAS believes the Phase 1 Environmental Site Assessment (ESA), or at least the historical research that would be performed for an ESA, **is absolutely essential** prior to conducting Phase 2 work for the following reasons:

- The research may determine other environmental issues that could be present that could be addressed at the same time, resulting in lower overall project cost.
- Details, such as construction specifications pertaining to the issue of concern, such as for USTs or sumps, may be found.
- Historical research may indicate the uses of the Property, which includes the specific or likely chemicals that may have been used. These chemicals would therefore be the target for investigation and reduce the cost of laboratory testing for "everything under the sun".
- Phase 1 information provides defensible information regarding the need for and the scope of the Phase 2 investigation.

The effects of a Phase 1 or historical research **are more likely to decrease than to increase the cost of a Phase 2** investigation. At the least, it provides data that can be used as legally defensible information to justify the scope and analyses that were performed for the Phase 2.

Phase 1 and Former Gasoline Stations

KEY CONCLUSION: The possible environmental impact from operations at gasoline stations can always be evaluated regardless of the subsequent history of uses or new building construction. Read more in this article.

A large number of gasoline service stations have historically operated in the United States. The largest number of stations may have been present in the 1950s when gasoline hungry cars became more popular and numerous. In addition, there were many smaller independent oil companies that were competing for consumers at that time.

Leaks from gasoline stations may be the most common type of contamination site and costs for cleanup have exceeded $1-2 millions dollars in some cases. Proposed Phase 2 investigations may be complicated if the stations was removed a long time ago because quality records may not be available, may have been lost or not well preserved. The investigation may be further complicated if the property has been redeveloped with new construction.

Regardless of the circumstances and present configuration, it is necessary to evaluate subsurface environmental conditions at these sites.

Based on historical research, maps, plans or drawings may be available indicating the layout of the USTs and pumps. This is a significant argument for conducting a Phase 1 (see **Phase 2 Without a Phase 1** in this newsletter).

The history of use and development will determine the scope and cost of the required Phase 2 investigation. If scaled maps or plans are not available, the only possible method to determine the former station layout is through historical aerial photographs from the year or years the station is known to have been present on the site. Despite what some may believe, Sanborn Maps do not indicate the complete layout of the gasoline stations, only where the buildings were located.

On some properties the layout of the station cannot be determined from historical sources or the appropriate sample locations may be obscured and covered by newer buildings. In this case, the only practical way to assess subsurface environmental conditions is to determine the groundwater flow direction in the area of the Property. This is also often determined through a Phase 1 ESA but with new on-line resources, it may only require only a quick review of nearby leak site groundwater information. Borings can then be drilled down-gradient of the former USTs, pumps and auto repair facilities and groundwater samples collected for appropriate analyses.

Minimum Costs for Phase 2 Projects

KEY CONCLUSION: Basic minimum costs apply for all Phase 2 subsurface investigations. Read more in this article.

Our clients are sometimes surprised at the cost of even the "simplest" Phase 2 investigation involving only 1 or 2 soil borings. This is due to what is commonly known as "economies of scale". In this way, the cost of drilling 6 soil borings may only be 10-20% higher than the cost of drilling two, depending on the depth of the borings and laboratory analyses required.

As an example, for the drilling of one 15 foot boring in or near the Bay Area using a licensed driller, current costs are approximately as follows:

Drilling subcontractor	$1,150
Locating subcontractor	350
Project setup/coordination	400
Drilling permits	300
Field equipment	300
Field Labor	600
Laboratory subcontractor	100
Report preparation	800

The total minimum cost of this simple investigation is approximately $4,000. Many of these costs would be the same or only slightly more for 1 boring or 4 for example (depending on the depth). Additional costs may apply if 1) the site is out of town; 2) if permit fees are higher; 3) if concrete cutting is required; 4) a workplan is necessary prior to conducting the work; or 5) additional laboratory analyses or a larger number of samples is required.

A Phase 2 must also be overseen and certified by a Professional Geologist (PG), adding to the cost. **See next article.**

PG Requirements for Phase 2 Projects

KEY CONCLUSION: Phase 2 soil and groundwater investigations must be overseen and certified by a Professional Geologist (PG).

Under the state of California Business and Professions Code, any subsurface investigation where conclusions and recommendations are made must be overseen by a PG. Historically, lenders and real estate brokers have asked for a quick Phase 2 investigation for due diligence just to see if there is an obvious problem. This approach has become a problem for a number of reasons as follows:

- Most drilling contractors will not drill without an approved regulatory agency drilling permit. This means that is many cases, the agency will expect a report to be submitted, certified by a PG..
- Should concentrations of chemicals be detected above regulatory levels, the owner of the property has a legal requirement to officially report it to the appropriate agency within 30 days. The use of a non-legal professional could be a further issue.
- The need to conduct an "informal" Phase 2 investigation may result in incomplete or substandard geological work being performed by unqualified individuals.

ERAS employs Registered Environmental Assessors (REA) both Class 1 and 2, a Professional Geologist and a Certified Asbestos Consultant (CAC).

If you have any questions regarding the information in this newsletter, ERAS services, or if you have a subject you would like to read about in a future newsletter, please call David Siegel at 510.247.9885 (ex. 304) or email us at info@eras.biz

Website: **www.eras.biz**