BUISIER ENGINEERING
A Tradition of Excellence and Hard Work

Enviromental Site Assesment (ESA) Studies

The ESA study is a sophisticated technical review confirming and mapping the property studied, facilities and infrastructure, identification of potential human and environmental receptors among the site, and documenting the presence of oil and/or hazardous material (OHM) impacts from previous operations. Buisier Engineering conducts ESA studies according to ASTM standards. We use a sequence of pre-determined investigative measures to determine whether or not the storage, use or disposal of any OHM during the ESA process has occurred throughout the history of the property unit's operations.

The Environmental Site Assessment (ESA) sequence is outlined in internationally recognized technical guidance standards such as those established by the American Society for Testing Materials (ASTM) in their Standard Practice for Environmental Site Assessments. The ESA ASTM standards include, "Phase I Environmental Site Assessment Process (ASTM Publication E1527 – 05, 2005)" and "Phase II Environmental Site Assessment Process (ASTM Publication E1903-11, 2011)".

The versatility of this process can include substantial modifications in the depth and sophistication of the assessment process, or limits thereof, to reflect the individual needs of any given property. For example, a presence of Hydrocarbons or Hazardous Material identified during the ESA of a petroleum facility should lead to more in depth investigation. If the presence of Hydrocarbons or Hazardous Material is not found during the ESA of a petroleum facility the investigation should end.

Through adherence to these recognized standards, entities in the United States have been able to obtain liability protection as a purchaser or new owner by conducting the appropriate ESA processes. If, through these ESA processes, it can be demonstrated that the entity's due diligence meets "all appropriate inquiry" standards – meaning that the process of conducting a thorough and complete ESA complies entirely with the recognized standard, in this case, those published by ASTM- then the liability protection can be obtained by the entity.

If the ESA process indicates that OHM storage, use, or disposal has occurred among the geographic boundaries of the "study area", the next sequential phase of the investigatory process should be initiated to confirm if OHM remains physically present in media within the study area.

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When historical or current OHM storage, use, or disposal practices exist, or likely existed based on the information obtained during Phase I, then Phase II activities are typically initiated to determine if OHM has affected site media such as soil, groundwater, air, surface water, or other areas. The ensuing Phase II activities involve identification of the Areas of Concern (AOCs) and Potential Areas of Concern (PAOCs) where OHM may have been stored, used, and/or potentially released to the environment based on the records and information obtained during Phase I. These AOC's and PAOC's may then be investigated to determine if OHM or OHM by-products have actually been released to, or persist in, the environment.

This phased approach of the ESA process is repeated to develop a Conceptual Site Model (CSM) for the study area. Next, the Conceptual Site Model is refined and presented in the Site Assessment Report based on interviews, gathered information, the associated data review and reduction during Phase I and Phase II sampling, chemical testing and software simulation.

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