

ESCI-497—Environmental Assessment-Phase 1

Syllabus

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Office: S-262
Hours: Daily 10–11

Text: Socha, T.M. (2001) A Technical Guide for Performing and Writing Phase I Environmental Site Assessments. San Jose:Writer's Press Club. (This book is only about \$20 something)

Course Description: Practical experience in preparing Phase I Environmental Site Assessments. 3-sh
Instructional Method: Students conduct Phase I Environmental Site Assessments and write the final reports.

Class Meets: Officially: MWF 11:00–11:50, Room 211
Class will actually meet only once. You must then conduct your own investigations.

Evaluation: Students must submit two properly completed Phase I Environmental Site Assessments. Grades will depend on:

1. Quality and thoroughness of the investigation
2. Quality and thoroughness of the ESA reports.

Basic Rule: To make an "A" in this course, you must have the first report turned in by October 19 at the absolute latest. Later than that the most you can make on the first report is a "C". The second report must be turned in the Friday before finals week to make an A on it. If turned in during finals week, the most you can make on the second report is a "C".

Why Phase I Environmental Site Assessments?

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or "Superfund") provides for the cleanup and containment of abandoned hazardous waste sites. When an abandoned hazardous waste site is found, the responsible parties are required to clean up the site or to finance the clean up. This may mean many millions of dollars.

Responsible parties (RPs), or potentially responsible parties (PRPs) include:

- (1) The present owner or operator of the site
- (2) Anyone in the chain of ownership of the property from the time of disposal to the present.
- (3) The generator of the hazardous waste
- (4) Anyone who arranged for the hazardous substances' disposal or treatment
- (5) Anyone who accepted the hazardous substance for transport to disposal or treatment facilities, incineration vessels, or sites selected by such person.

In many or most instances, the present owner of a property may have had absolutely nothing to do with emplacement of a hazardous waste on a property, but because he owns the property, he can still be held financially responsible for cleanup. This law is not known for being fair. There is an out, however. The law says that if the owner of a property, prior to assuming ownership, has made "all appropriate inquiries", or "due diligence" (due diligence is a buzz word in Phase 1 ESAs) to determine whether the site has the potential to be identified as an abandoned hazardous waste site, and finds that it does not, the owner is considered an "innocent landowner" if such waste is later discovered. As such, the owner will not be held as liable as other previous owners.

It is common practice, therefore, for any commercial enterprise that is seeking to purchase a property to hire an environmental consulting company to investigate the site to determine its potential as a hazardous waste site. This investigation is called a Phase I Environmental Site Assessment. Many environmental consulting companies earn their primary bread and butter doing Phase I Environmental Site Assessments. The experience you will gain by successfully completing this course will make you extremely marketable in the environmental job market.

How To Proceed in this Course:

1. Read the text — cover-to-cover. It will give you the proper format for doing a Phase I Environmental Site Assessments and defines the requirement of the final report. (You'll need to ignore the fact they didn't proof-read this book before they printed it).
2. You will be assigned two sites to investigate during the semester. You will have approximately half a semester to do each one. These investigations take time and can not be completed in one week. Do not procrastinate—you can't afford it. You must get on it right away. If you live in Commerce, I will assign you your sites. If you live in another town and wish to do your investigations there, you may suggest sites, but they must be approved by your instructor. Sites are typically abandoned commercial operations, such as old gas stations, restaurants, laundries, convenience stores, etc.
3. **Get permission** from the site owner, operator, manager, or managing real estate company to do the investigation. Get this in writing before you begin. Turn this in to me before you start. We don't want any owners upset with us, and we don't want any students shot, dismantled, or otherwise abused as a result of this course. Completely explain to the appropriate person why you are doing this investigation: You are an environmental science major at the university and are taking a class that requires you to conduct Phase I Environmental Site Assessments. You will not use any of the findings in any sort of legal procedures, nor is there any financial interest involved. It is strictly for a class assignment. Any owners/operators who wish to talk to me about this, have them call or e-mail me. My office number is 903-886-5442.

If you run into trouble getting permission, tell me immediately—now—right away—and get a different assignment. You do not have time to wait for three weeks for signed permission.

4. The purpose of your investigation is to determine all of the past uses of the property, all the past owners, any hazardous chemicals that were used or may have been used on the property or on adjacent properties, and the potential for such contaminants to migrate within the subsurface of the property. Here is a partial list of what your investigation and report should include (when possible):
 - (a) A title search (if this doesn't work, at least make the attempt. Usually this is done at the Greenville county court house)
 - (b) Interviews with the owner, with owners of adjacent properties, and with people who have lived in the area long enough to know something of the history of the site.
 - (c) Visits to places, such as the fire department and city offices, that may have record of any hazardous chemicals used on the property or on adjacent properties.
 - (d) A topographic map and aerial photos of the site.
 - (e) A description of the site's geology and hydrology (well drillers are a good source)
 - (f) A description of the site's soil (use the county soil survey available from the U.S. Dept. Of Agriculture. They used to be located in the basement of the Greenville courthouse, but I haven't been there in a few years. The soil surveys are free, so if anyone wants to charge you, don't buy it.)
 - (g) Site photographs
 - (f) Complete description of your site visits. There are many things to look for, depending on the nature of your site. Soil stains, areas where grass doesn't grow because of chemical pollution, drain pipes sticking out the back of buildings, gullies on the property, dead critters lying about, pipes sticking out of the ground, underground storage tank covers like you see at gas stations, stained curbs around the property, such things at adjacent properties (and you should know from the hydrology which direction both groundwater and surface water flow relative to your site.), hauled-in dirt or gravel, mounds where something may be buried, or any other unusual or unnatural features you might observe.
5. Document everything you do and turn it in with your report. Keep a log book and document exactly when and where you do all of the above, who you talk to, a summary of the info, or if it failed to reveal any info, any expenses incurred (in real life you would get reimbursed—but not for this course).
6. Turn in a professional-looking final report for each of your two investigations. Follow the guidelines of the text. I'm the client who has hired you to do these ESAs. Your reports must look absolutely professional. Something you would turn in to your client, and be paid big bucks for. No shoddy looking reports allowed in this class.

Here is a good web site to read thru that apply to this course:

<http://www.edrnet.com/>

There are several other web sites you will use to gather information for your project. For example both TCEQ and the EPA have numerous data bases that contain information you will

need.

Caveats Box

Disabilities — Requests from students with disabilities for reasonable accommodations must go through the Academic Support Committee. For more information, please contact the office of Advisement Services, BA 314, 903-886-5133.

Behavior — All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. Students who are disruptive to class activities will be dropped from the class and may face further disciplinary action.

Plagiarism — Plagiarism is a criminal activity. You must cite all sources of information. Unreferenced copying of material, whether parts of sentences, whole sentences, paragraphs, or entire articles can result in a score of zero for your assignment and may result in further disciplinary action.