

Summer 1990

## Advice from Environmental Consultants: How to Achieve Competent, Comprehensive and Understandable Results from Environmental Audits

Gary C. Ribblett

Kris H. Turschmid

Follow this and additional works at: <https://scholarcommons.sc.edu/sclr>



Part of the [Law Commons](#)

---

### Recommended Citation

Ribblett, Gary C. and Turschmid, Kris H. (1990) "Advice from Environmental Consultants: How to Achieve Competent, Comprehensive and Understandable Results from Environmental Audits," *South Carolina Law Review*. Vol. 41 : Iss. 4 , Article 10.

Available at: <https://scholarcommons.sc.edu/sclr/vol41/iss4/10>

This Article is brought to you by the Law Reviews and Journals at Scholar Commons. It has been accepted for inclusion in South Carolina Law Review by an authorized editor of Scholar Commons. For more information, please contact [dillarda@mailbox.sc.edu](mailto:dillarda@mailbox.sc.edu).

# **ADVICE FROM ENVIRONMENTAL CONSULTANTS: HOW TO ACHIEVE COMPETENT, COMPREHENSIVE AND UNDERSTANDABLE RESULTS FROM ENVIRONMENTAL AUDITS**

GARY C. RIBBLETT, P.E.\*  
KRIS H. TURSCHMID, P.E.\*\*

## I. INTRODUCTION

Environmental audits are being used so frequently to assess liabilities associated with environmental compliance and property history that it is easy to lose sight of the real reasons for conducting the audit. Environmental audits are most frequently performed when there is a change in ownership of industrial or commercial property. In these cases, the buyer wants to know the financial liability connected with both the property and the business activities conducted there. Insurance companies and financial institutions also conduct environmental audits of properties before underwriting a business activity or financing a transaction.

The most common mistake auditors make when conducting an environmental audit is limiting the scope of the audit to an examination for compliance with environmental regulations. The environmental liabilities associated with a particular property cannot be defined simply by evaluating a property's history to determine if activities conducted on the property are or have been in compliance with environmental regulations. Because environmental regulations are constantly changing, liability also depends upon the amount of information available at the time a particular activity takes place and the current status of our knowledge regarding the impact of the particular activity on human health and the environment. Basically, an activity in compliance with current regulations and considered safe today may not be acceptable tomorrow. Therefore, liability may exist even in a case of apparent full

---

\* Vice President, National Environmental Technologies, Inc., Charlotte, North Carolina. B.S., Civil Engineering, University of Pittsburgh, 1976; M.S., Environmental Pollution Control, Pennsylvania State University, 1983.

\*\* President, National Environmental Technologies, Inc., Charlotte, North Carolina. B.S., Sanitary Engineering, Polytechnical University of Cracow, Poland, 1970; M.S., Sanitary Engineering, Polytechnical University of Cracow, Poland, 1971.

environmental compliance.

Accordingly, a successful environmental audit can be achieved only if the retained consultants possess not only a legislative and regulatory understanding of environmental issues, but also a strong technical and scientific understanding of industrial processes. When working with environmental consultants, following the few basic rules set forth in this Article will improve one's ability to ensure that the technical information one seeks is precisely the information one receives when the environmental audit is completed.

## II. SELECTION OF AN ENVIRONMENTAL CONSULTANT

The use of environmental audits in real estate transactions is increasing at an extraordinary rate. In some states, such as New Jersey, an environmental audit may even be legally required for certain property transactions.<sup>1</sup> Perhaps not surprisingly, this phenomenon has resulted in a great number of consultants offering audit services.

Consultants offering these services range from one person operations to large organizations. Generally, the most critical point to consider in selecting a consultant is the specific experience of the individual or individuals who actually will perform the audit. Accordingly consultants should be asked to provide resumes of the specific personnel assigned to the audit team. Key members of the audit team should have direct experience in performing environmental audits as well as significant related environmental experience. Recent experience in environmental activities other than audits is important because it provides the audit team with the "real world" knowledge necessary to make meaningful assessments and recommendations.

One hiring a consultant also should try to select from those with experience in auditing facilities similar in nature to the facility or facilities in question. Direct experience with a particular industry, for example, may alert the auditor to search for disposal records for a specific chemical waste typically associated with that industry. Furthermore, a consultant's specific expertise and level of experience should be considered in light of the specific subject of the audit. For example, in an industrial plant audit, emphasis should be placed on the consultant's environmental engineering and industrial process expertise. If, however, the audit is of an old disposal area, more emphasis should be placed on the consultant's environmental engineering and geology/hydrogeology expertise.<sup>2</sup>

---

1. See New Jersey Environmental Cleanup Responsibility Act, N.J. STAT. ANN. §§ 13:1k-6 to -14 (West Supp. 1989).

2. Turschmid, *Environmental Audits*, FIRST ANNUAL NORTH CAROLINA AND SOUTH

Table 1<sup>3</sup> provides a guide to areas of expertise to consider in the selection of an audit team. The table relates the areas of expertise required for a successful, complete audit to seven basic types of property typically requiring audits. These property types include:

- undeveloped land, such as farmland being considered for development or construction;
- properties formerly used for industrial activity but which currently do not have industrial equipment and operations on site;
- existing and continuing industrial operations;
- commercial properties other than dry cleaners, service stations and other commercial operations that typically exhibit environmental problems similar to industrial facilities;
- former waste disposal areas;
- properties currently used for waste disposal;
- properties in urban areas located in very close proximity to other facilities likely to affect the environment.

Of course, an environmental audit should always be conducted by an independent third party. If the seller in a transaction selects the consultant, a prospective buyer may insist on an audit by a consultant of the buyer's own choosing, which results in greater expense and duplication of effort.

The final point to be considered in the selection of a consultant involves the type of information to be included in an audit report. Even the most experienced consultant performing an audit with meticulous detail can never be absolutely certain that a site is free from contamination and, thus, potential liability. Therefore, a reputable consultant will not certify a site as "clean." One should be wary of those that will!<sup>4</sup> The consultant, however, should be expected to provide a monetary estimate of liabilities associated with the site. Although analytical data and other information may be inadequate to ensure the accuracy of the estimate, the consultant should make some effort to estimate the magnitude of potential liabilities.

### III. SELECTION OF TOPICS OF CONCERN

Consultants often perform environmental audits utilizing a specific questionnaire designed to cover all environmental exposures and liabilities. The purpose of the questionnaire is to organize the work of the auditor, but it also serves as a quality control check list to ensure that

---

CAROLINA ENVIRONMENTAL LICENSING AND PERMITTING SCHOOL (1988).

3. See *infra* p. 845.

4. Varney, *Environmental Audits Can Protect You*, POLLUTION ENG'G, 108, 109 (January 1989).

nothing is omitted during the course of the auditor's work.

Topics of concern in environmental audits are often numerous and may vary with the site.<sup>5</sup> Of course, it is not necessary to consider all topics of concern in every audit investigation. For example, while the potential for problems related to underground storage tanks can exist on any type of property, situations in which liabilities may exist as a result of air emissions are quite limited. Thus, before hiring a consultant, one should anticipate the general scope of the environmental audit by considering the types of topics that need to be investigated. This could result in significant cost savings to those financially responsible for the audit and, more importantly, help to ensure that an important topic is not deleted from an audit.

Table 2<sup>6</sup> recommends consideration of topics typically of concern for the various types of properties described above. Additional concerns arise when the financial transaction in question involves the purchase of a company. This situation may expose the new owner to liability beyond liability for the contaminated property, since the new owner also takes on responsibility for injuries to former employees or neighbors which may have occurred prior to the transaction. In this case, the audit must give more attention to topics such as workplace safety and right-to-know reporting.

#### IV. EXAMPLES OF FORMAT USAGE

The attorney representing the party requesting the audit normally is the first member of the audit team, and is responsible for establishing the technical team for the audit. To assist in evaluating consultants to provide the audit, the attorney should formulate a preliminary plan for the selection of the audit team and the selection of the topics of concern. Based on this plan, the attorney can determine which of the

---

5. Points of concern in environmental audits may include any of the following:

- air emissions;
- wastewater treatment and discharge;
- spill prevention facilities and history;
- toxic substances;
- workplace safety;
- right-to-know reporting;
- SARA release reporting;
- solid waste;
- groundwater contamination potential;
- hazardous waste compliance;
- hazardous waste history;
- underground storage tanks; and
- history of property use.

6. See *infra* p. 896.

consultants' proposals actually meet the requirements of the audit. Although general information about the property and perhaps a rough sketch showing its layout and location may be all that is available when the audit team is selected, a plan may still be formulated. Consider the following examples.

*A. Example #1: Purchase of Formerly Used Farmland for Development*

Suppose a buyer is interested in a ten acre tract of rural land for commercial or residential development. The property is currently owned by a family that formerly used the land to operate a small family farm. The property includes several buildings—an old farmhouse, a barn, a farm equipment garage, and several small storage buildings. Information from the seller indicates that the property has not been actively farmed for approximately five years.

As indicated in Table 1 and Table 2, an audit of this type of undeveloped property requires several specific areas of technical expertise and attention to certain topics. Soil and groundwater contamination are distinct possibilities, even though the site appears innocuous. Aerial photographs from state and county mapping offices or the Soil Conservation Service can help to construct a history of site usage. A review of these photographs and maps by environmental scientists, geologists, or hydrogeologists also can give preliminary indications of potential contaminant sources and the direction of surface water flow and groundwater migration. Garages and storage buildings are often sites of occasional disposal of oils, paints, and other common chemicals that could find their way into the groundwater. Additionally, off-site groundwater contamination migrating onto the property in question may be a source of potential liability. In this example, liabilities related to past on-site wastewater treatment practices are very unlikely, and thus a "wastewater expert" probably is not needed on the audit team. This determination, however, must rest on a careful review of the property's prior usage, and possible surface water contamination from pesticide or herbicide mismanagement should be considered. Solid and hazardous waste management are major concerns for auditors conducting environmental audits of farmland. Farm property rarely is free of refuse dump areas. These waste piles may have resulted from on-site construction or demolition, in which case environmental liabilities are likely to be small. It is equally likely, however, that illegal disposal from off-site sources onto existing dump areas may have occurred, even without the owner's knowledge.

Underground storage tanks (UST) for fuel oils, which may be subject to UST regulations, also may exist on this type of property. The audit team should provide the expertise to make this judgment. And as

always, the team should include personnel capable of providing a monetary estimate of the liabilities found by the technical team.

### *B. Example #2: Purchase of a Small Industrial Company and Property*

Suppose a buyer is interested in purchasing of a small industrial company with a currently-operating manufacturing facility that is ten to twenty years old. This situation obviously will require more extensive investigation and additional areas of expertise. In addition to threats of soil and groundwater contamination, inadequate provisions for wastewater treatment could force the buyer to make a significant additional investment to ensure that the facility complies with current environmental regulations. Inadequate provisions for controlling air emissions, ensuring plant health and safety, and complying with employee and community right-to-know requirements also could result in additional costs to the buyer who must correct these inadequacies. The purchased company's current compliance status with respect to the above-stated issues will determine the purchaser's liabilities.

The most significant difference between this example and Example #1 is the potential liability related to hazardous waste compliance. Considerable care and expertise should be employed in evaluating past and current hazardous waste activities of both the particular manufacturing facility for sale and the entire company being purchased. Not only must buyers be concerned with hazardous waste that is on-site, but they also must be concerned with hazardous waste that has been generated on-site and disposed of off-site. Often the current owner-operator may be unaware that the waste material is hazardous. Therefore, the audit team's knowledge of hazardous waste compliance requirements, as well as its insight into likely scenarios that might lead to hazardous waste liabilities for the new owner, are extremely important.

## V. LEVEL OF DETAIL

The level of detail required when an environmental audit is conducted should reflect the purpose for which the audit is being performed. Everyone involved must understand the level of detail planned for an audit before it is actually performed. Environmental audits frequently are categorized by the following three levels of detail:

*Level I*—Visual inspection of the site, search of historical property usage, interviews with persons with knowledge of site activity, and check of records with appropriate regulatory agencies;

*Level II*—Same as Level I with the addition of some limited sampling and a more detailed site survey;

*Level III*—Same as Level II, but with extensive drilling and broad-scale sampling.<sup>7</sup>

A clear separation does not always exist among Level I, II, and III audits. Most audits are a combination of levels and are dependent on specific site characteristics. A good consultant, in cooperation with the attorneys involved, should be able to define the level of detail required for an audit and fully explain the findings to the responsible parties.

## VI. CONTENT OF AN AUDIT REPORT

Although environmental consultants utilize various formats for environmental audit reports, several basic components should be present in nearly every audit report. First, the report should contain some sort of "Executive Summary" or "Recommendations" section summarizing the significant findings. This component is important because many persons reading the audit report find the regulatory and technical details uninteresting and often difficult to follow. These persons are, however, interested in the findings of the report because they are ultimately responsible for making decisions regarding the property transaction.

Second, the report should include a detailed description of each topic investigated in order to document completed evaluations and assist in preparations for any additional assessment work to be done on the site. The descriptions should include pertinent physical appearances, regulatory findings, and analytical results.

Third, the report should identify monetary liabilities associated with each topic investigated during the audit. The liability estimates should be prepared using sound engineering estimates and should be based on the consultant's experience, judgment, and any other information available at the time the report is prepared. Although in some cases the "unknowns" may exceed the "knowns," the report should provide some range of remediation costs required to meet the objectives of the audit.

Finally, the report should include copies of all environmental permits, site photographs, relevant field notes taken by the auditors, and other documents collected during the audit.

## VII. SUMMARY

Unlike a detailed technical design project normally prepared by environmental consultants, an environmental audit report may present a more difficult task to one trying to determine whether the material

---

7. See Varney, *supra* note 4, at 109.



prepared by the consultant is adequate. Even one experienced with audit reports will discover that it takes many years to recognize potential liabilities that often go unconsidered.

The purpose of an environmental audit is to provide persons involved in property transactions with information necessary to the decision-making process. Within such a process, environmental liabilities are a reality which cannot be avoided completely. In some cases the potential liabilities are phenomenal, while in others they are considered acceptable and can even result in property bargains. Thus, the importance of selecting a qualified environmental consultant is clear: only through the successful completion of an environmental audit, with a properly defined and understood scope, will one know the true environmental status of property that could be financially beneficial or financially disastrous.

**TABLE 1  
ENVIRONMENTAL AUDITS  
AUDIT TEAM SELECTION**

- TYPES OF PROPERTY TO BE AUDITED:** A. Undeveloped  
 B. Former Industrial Operations  
 C. Existing and Continuing Industrial Operations  
 D. Commercial Property (does not include Dry Cleaners, Service Stations, etc.)  
 E. Property Formerly Used for Waste Disposal  
 F. Property Currently Used for Waste Disposal  
 G. Urban Areas

AREAS OF EXPERTISE	TYPE OF PROPERTY						
	A	B	C	D	E	F	G
Soil and Groundwater Contamination	X	X	X	X	X	X	X
Wastewater Treatment		X	X		X	X	
Surface Water Contamination	X		X		X	X	
Air Emissions Assessment and Control			X		X	X	
Health and Safety			X	X		X	
Solid and Hazardous Waste Management	X	X	X		X	X	X
Compliance Standards	X	X	X	X	X	X	X
Cost Estimating	X	X	X	X	X	X	X
Environmental and Real Estate Law	X	X	X	X	X	X	X

**TABLE 2**  
**ENVIRONMENTAL AUDITS**  
**SELECTION OF TOPICS OF CONCERN**

**TYPES OF PROPERTY TO BE AUDITED:** A. Undeveloped  
 B. Former Industrial Operations  
 C. Existing and Continuing Industrial Operations  
 D. Commercial Property (does not include Dry Cleaners, Service Stations, etc.)  
 E. Property Formerly Used for Waste Disposal  
 F. Property Currently Used for Waste Disposal  
 G. Urban Areas

TOPICS	TYPE OF PROPERTY						
	A	B	C	D	E	F	G
Air Emissions (CAA)			X		X	X	
Wastewater Treatment and Discharge (CWA)		X	X		X	X	
Spill Prevention and History		X	X			X	
Toxic Substances (TSCA)			X				
Workplace Safety (OSHA)			X	X		X	
Right-to-Know Reporting (OSHA & SARA)			X			X	
SARA Release Reporting			X			X	
Solid Waste Disposal	X	X	X		X	X	X
Groundwater Contamination Potential	X	X	X	X	X	X	X
Hazardous Waste Compliance (RCRA)			X		X	X	
Hazardous Waste History (CERCLA)	X	X	X		X	X	X
Underground Storage Tanks (UST)	X	X	X	X	X	X	X