



February 1999

**National Guard Bureau
Environmental Programs Directorate
Installation Restoration Program Team
NGB-ARE-P, Building E4430/1st Floor
Aberdeen Proving Ground, Maryland 21010-5420**

ENVIRONMENTAL BASELINE STUDY (EBS)
STANDARD OPERATING PROCEDURES (SOP)

1. REFERENCES: See Appendix G.

2. APPLICABILITY: To establish guidelines for the review and distribution of Environmental Baseline Studies at National Guard facilities.

Army Regulation 200-1, page 1, Applicability, states that the regulation applies to the Army National Guard (ARNG). Army Regulation 200-1, Section 12-5 and Appendix B state that an EBS will be conducted for all real property transactions. These EBSs show due diligence on the part of the Army National Guard to conduct the necessary steps to prevent future environmental liability.

3. PURPOSE:

The main purpose of this SOP is to provide definitive ARNG guidance for a proper EBS. The secondary objective is to provide a user-friendly process to complete and contract EBSs.

The AR 200-1 states that an EBS is not mandatory for an Army to Army transfer. However when there is a transfer from active Army to the ARNG where there may be a change in liability, an EBS or an EBS type document should be done.

The EBS guidance presented is provided as a tool to conduct a comprehensive records search and site inspection as stated in the Preliminary Assessment Screening (PAS) guidance of past. The purpose is to provide guidance, standardize the process, and protect the NGB, TAG, ARNG SESs, etc.

This document will attempt to pool many resources together and acquire a comprehensive guideline that is user friendly in its guidance whether a state is conducting its own EBS on "virgin" property or scoping and reviewing an EBS from a contractor on property suspected of having environmental contamination.

An EBS or EBS type activity will be performed for all real estate transactions of acquisition, closure, or realignment. The EBS is used to determine the need for additional data, including sampling and analysis. A previously completed EBS can be updated to reflect the changes in activities and can be used in any other required environmental documentation. The American Society for Testing and Materials (ASTM) guidance states that Environmental Assessments (EBSs) should be less than one year old. This ensures that the EBS reflects the current environmental condition of the property.

In the case where a full-blown EBS may not be needed there is still the need to document the due diligence efforts by an EBS done in house. The EBS checklist may suffice in the event where:

- There is no reason to believe hazardous materials have been stored/spilled on the site in question.
- The condition of the property will not create health and safety risks when used as intended.
- The allowable activities will not introduce hazardous materials or petroleum products onto the property.
- No material alteration or change in the physical condition of the property will be required or will occur while the property is held by the ARNG, such that the ARNG could be deemed the owner or operator under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Example: when the ARNG is utilizing an impact range on an active military installation. Briefly, the term owner or operator means any person owning, operating, or in control of activities at a facility.

Transactions in which the EBS may be waived by NGB include, but shall not be limited to, the following:

- Renewal of a temporary interest in real property if no change in the leased, licensed, or permitted premises.

- Lease, license, or permit of administrative space within an existing building where there is no known presence of asbestos, lead, or radon.
- Acquisition of Explosive Quantity Distance easements.
- Rights of entry for surveys, inspections, or tests where there will be no introduction of hazardous materials or petroleum products on the property.
- Other actions determined on a case by case basis.

The purposes for conducting environmental due diligence for real estate transactions are to: (a) establish a baseline to support the assertion of the Innocent Landowner Defense; (b) determine environmental risks associated with the transaction; (c) evaluate the potential costs associated with management of those risks; and (d) integrate this information into the decision-making process on whether to continue with the acquisition/disposal action, reassess the value of the acquisition or cost of disposal, or accurately allocate the responsibility by naming the parties to the transaction.

There are only three ways to claim innocent landowner defense under CERCLA. The first two, Act of War and Act of God, a proponent has no control over. The third defense is to show due diligence when conducting a real estate transaction. The EBS satisfies the requirement of "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice...where the defendant establishes . . . evidence that he exercised due care . . ." with respect to knowledge of a release of hazardous substance on the land parcel. (CERCLA 107(b) 3)

The CERCLA liability is "strict" (without regard to fault) and "joint and several" (one party may have to pay all cleanup costs despite the contribution of many parties to the problem.) All associated parties are liable for environmental clean up whether or not the individuals actually caused the hazardous substance release.

The CERCLA makes four categories of persons liable for cleanup costs associated with property contaminated with hazardous substances: present owners or operators of the contaminated facility; owners or operators of the facility at the time of the disposal of hazardous substances; persons that arranged for the disposal or treatment of a hazardous substance; and certain transporters of hazardous substances (CERCLA 107(a)).

The State ARNG may be listed as a potential responsible party (PRP) and PRPs are liable for:

- all costs of removal or remedial action incurred.
- any other necessary costs of response incurred by any other person or regulatory agency.
- damages for injury to, destruction of, or loss of natural resources.
- the costs of any health assessment or health effects study.

The Innocent Landowner Defense provides that a defendant may avoid liability by establishing that the defendant acquired the property after the disposal or placement of the hazardous substance at the facility. The defendant also establishes one or more of the following circumstances by a preponderance of the evidence:

- At the time the defendant acquired the facility the defendant did not know and had no reason to know that any hazardous substance, which is the subject of the release or threatened release, was disposed of on, in, or at the facility.
- The defendant is a government entity, which acquired the facility by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation.
- The defendant acquired the facility by inheritance or bequest.

The innocent landowner defense provides to establish that the defendant had no reason to know, and the defendant must have undertaken, at the time of acquisition, all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice in an effort to minimize liability.

No environmental assessment can completely eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a piece of property. The performance of an EBS is intended to reduce such uncertainty. Not every property will warrant the same level of assessment. The type of property being assessed should guide the appropriate level of assessment, and the information developed in the course of the inquiry.

When environmental conditions for the installation change due to either improvement from completed remedial actions or other factors, the site-wide EBS shall be updated to reflect such changes. The EBS is intended to be a living document and should be updated as conditions change.

The EBS for the disposal of property should accompany the property when the parcel is given up. This allows the new owners to utilize the information when they decide to sell. This also applies to ARNG activities that are leasing the property and at the time of termination the owner will receive the information gathered for the EBS. The information is the property of the owner and any public affairs actions are at the discretion of the owner. The contamination caused by the ARNG should be remedied prior to termination of the lease.

The cost of remediation for known contamination can be estimated from the EBS and should be factored into the price the Army National Guard pays for the property acquisition. This is not the case with the BRAC process where if the property stays federal, DERA or OMARNG must pick up the funding. If the property reverts to state or private land, BRAC program pays for clean up or closure. The EBS also identifies contamination on properties being disposed of to other parties, and allows remediation now instead of in the future. The EBS can also protect the Army National Guard when property is transferred to another agent by documenting a "baseline" of known environmental concerns with respect to the property.

The seven Environmental Condition of Property Type categories, as defined by the Department of Defense, are as follows:

- Area Type 1 – Areas where no storage, release, or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).
- Area Type 2 – Areas where only storage of hazardous substances or petroleum products has occurred (but no release, disposal, or migration from adjacent areas has occurred).
- Area Type 3 – Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but at concentrations that do not require a removal or remedial action.
- Area Type 4 – Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, and all remedial actions necessary to protect human health and the environment have been taken.
- Area Type 5 – Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, removal and/or remedial actions are under way, but all required remedial actions have not yet been taken.
- Area Type 6 – Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but required response actions have not yet been implemented.
- Area Type 7 – Areas that are unevaluated or require additional evaluation.

Individual areas can be addressed independently within the EBS when appropriate.

EBSs done for "self evaluation" in an attempt to ensure compliance with regulatory requirements may not be a releasable public document. (Webb v. Westinghouse Electric Corporation, 81 F.R.D. 431 (E.D. Pa. 1978)). However, some information is releasable under the requirements of CERCLA, Section 103 and the Emergency Planning and Community Right to Know Act, Section 304

Many states are considering environmental clearance requirements similar to New Jersey's Environmental Cleanup Responsibility Act (ECRA) which requires state clearance before selling, transferring or terminating operations at "industrial establishments." These types of facilities may include many ARNG facilities depending on how the State Regulators classify Army Guard operations.

Some ARNG organizations have expressed a desire to acquire contaminated property with provisions written into the real estate documentation of the losing agency. No contractual provision, including one of indemnification, can effectively relieve a responsible party from liability to the government or third persons claiming under CERCLA (Section 107(e)(1)).

On the basis of the results of the EBS, the ARNG decision-maker can assess the risky portions and either renegotiate the acquisition or exclude the parcels. There is always a possibility of fencing off of the contaminated property.

The replacement of the EBS program with the PAS in 1991 was intended to reduce confusion and incorporate the EBS program into existing Army programs, and generally focus and simplify the intent of the EBS. A typical PAS of past does not protect the proponent of a real estate transaction. However, Army Regulation 200-1 is currently under revision, and draft copies of the regulation indicate that the Army will return to using the EBS process.

4. POINTS OF CONTACT:

- a. NGB-ARE-PR, EBS Coordinator (Mr. Coulters), DSN 584-1825, Installation Restoration Program (IRP) Team, Environmental Programs Directorate, Bldg. E4430/First Floor, NGB, Aberdeen Proving Ground, MD 21010-5420
- b. NGB-ARE-C (Conservation), NEPA Coordinator (Mr. Anderson), DSN 327-7968, 111 South George Mason Drive, Arlington, VA 22204-1382.
- c. NGB-ARI (Real Estate), Real Estate Coordinator, DSN 327-7902, 111 South George Mason Drive, Arlington, VA 22204-1382.
- d. NGB-JAV (Judge Advocate), Environmental Counsel, DSN 224-6231, 2500 Army Pentagon, Washington, DC 20310-2500

5. DUTIES AND RESPONSIBILITIES:

- a. State Army National Guard Adjutant General
 - Ensure actions to meet mission requirements are planned and carried out in a manner consistent with this SOP.
 - Ensure the survey process is initiated at the earliest practicable time and that the survey report or waiver is available for decision makers at key decision points in the real estate transaction.
- b. ARNG Proponent
 - The ARNG proponent is the ARNG STARC (FMO or O&T/Training Administrator); installation, unit or other component that has the requirement of the proposed real estate transaction and will identify proposed real estate transactions early and assure completion of the survey process.
 - Contract survey efforts.

- Ensure the survey process is initiated at the earliest practicable time and that the survey report or waiver is available for decision makers at key decision points in the real estate transaction.
- Budgeting and funding for contract survey effort.
- A non-ARNG party may request the ARNG to undertake an action involving a real estate transaction that primarily benefits the requester rather than the ARNG. In this instance, the ARNG Office of Primary Responsibility for the proposed action will fulfill the responsibilities of the ARNG proponent. Where none has been specifically designated, typically the host will fulfill the responsibilities of the ARNG proponent.
- Refer to the latest version of EPR (A-106) Guidance Handbook for current guidance for EPR projects for EBSs. The FMO can incorporate the cost of an EBS into the contract to acquire the property or build on the property much like the spill plans or safety plans. The proponent can incorporate the cost within the EA or EIS contracting. The EBS should be paid for utilizing the 515856.83 AMSCO because it is a CERCLA and AR 200-1 requirement.

Note: An EA/EIS may not always need an EBS and an EBS may not require an EA/EIS. Therefore; the EBS should be written as a stand-alone document.

c. State Army National Guard Environmental Offices

- Identify activities requiring EBSs, obtain funding, or request the proponent of the real estate transaction complete the study.
- Notify the Regulatory agencies, *if required*, at the initiation of the EBS and notify the regulators immediately if contamination is found. The process/development will be designed to provide the regulators ample time for response.
- Review the document for all activities to determine the potential for contamination.
- Budget for the anticipated contract workload based on projections by the real estate function.
- Integrate the EBS, by reference in the following documents: The Record of Environmental Consideration (REC), Environmental Assessment (EA), or Environmental Impact Statement (EIS), one of which is required for all real property transactions under NEPA.
- After consolidating comments, the SES will ensure contractor receives all comments.
- The SES will ensure the EBS goes to NGB-ARI, NGB-ARE-C, and NGB-ARE-P.
- Ensure that the JAG Office within the state ARNG organization is involved with the real estate transaction EBS document review, paying particular attention to CERCLA liability.
- The report must contain a summary statement of the environmental condition of the property and a concurrence of survey results by the SES or appropriate equivalent.

d. Contractor

- The contractor will complete a draft EBS following this SOP, AR 200-1, and CERCLA.
- After the contractor receives all comments from the draft EBS review, a final report will be completed within the time frames of the contract.
- The contractor will not strictly use the EBS Checklist. The checklist is only to aid the proponent or the ARNG Environmental Office in contracting and ensure that all areas have been addressed. The EBS Checklist will accompany the EBS as Appendix C.
- The final EBS and all copies will be sent to the ARNG State Environmental Office for final coordination and distribution.
- The EBS Information Search Checklist will accompany the EBS document as Appendix E.

e. NGB-ARE-P (IRP Team)

- NGB will review the EBS document and furnish additional guidance as needed or requested by the SES.
- The IRP Team may decide, based on historical knowledge, current workload, personnel availability,

and SES input, whether a NGB representative will accompany the contractor during the EBS site visit.

- The NGB-ARE-P will review the document for all federal actions or federally supported facilities. The IRP Team will also review other EBSs at the request of the State Environmental Offices.
- NGB-ARE-P or the State ARNG Environmental Office will review the document for all federal actions or federally supported facilities to determine the portion of property which is uncontaminated.
- The NGB-ARE-P will review EBS documentation submitted by the State Environmental Offices and document the adequacy in memorandum format to the State Environmental Offices, copy furnished NGB-ARE-C and NGB-ARI.

f. NGB-ARE-C (Conservation)

- The NGB-ARE-C will transmit the delivered EBS to NGB-ARE-P for adequacy review. The EBS may be part of the NEPA documentation per AR 200-1.
- The NGB-ARE-C will include the review of the EBS from NGB-ARE-P in the document to the State Environmental Office showing either that the environmental documentation is sufficient or non-sufficient.

g. NGB-JAV

- The Judge Advocate Office, NGB, (JAG) is responsible for coordinating key issues with the State Judge Advocate Office, *if required*.

h. Regulatory Agencies

- The State or Federal Regulatory Agencies may be requested to review the EBS documentation if contamination problems exist. In the case of regulatory involvement, other branches of NGB-ARE may get involved depending on nature and magnitude of contamination.

i. NGB-PAE

- The Public Affairs Office, NGB, (PAE) is responsible for coordinating public releases with the State Public Affairs Office, *if required*.

6. PROCEDURES:

Usually, the due diligence will be performed in phases. Phase I will consist of less than a full-blown analysis of circumstances at the facility but will be structured to ascertain and evaluate all publicly available sources of information about the facility. Generally, a Phase I audit, through a records review and site walk-through, seeks to determine whether and to what extent environmental liabilities may exist. AR 200-1 states that when there is suspected or potential contamination the proponent will proceed to a Phase II EBS.

Phase II will include whatever sampling is necessary to delineate the extent to which this practice has caused presently existing hazards, such as soil or groundwater contamination.

Phase III develops a remedial alternative for identified contamination, such as extracting and treating groundwater, and corresponding cost estimates (Appendix F). Such information could be used by the parties to adjust the purchase price or negotiate appropriate indemnities.

A copy of the EBS will be sent to NGB-ARE-P and a copy will be sent as an appendix within the NEPA documentation to NGB-ARE-P (IRP Team) for review. The response/comments will be sent directly to the State ARNG Environmental Office. The NGB-ARI will receive the completed NEPA documentation, along

with the EBS Appendix section with the real estate submittal.

The data in the EBS should be included in the completed land acquisition proposal/paper work/form cost analysis of alternatives section. The cost analysis of Phase II data provided in Appendix F is provided as a guide/frame work for the EBS.

The information provided by the EBS will be integrated and documented, by reference in the following documents. The Record of Environmental Consideration (REC), Environmental Assessment (EA), or

Environmental Impact Statement (EIS), one of which is required for all real property transactions under NEPA.

An EBS is approached in three phases. Phase I of the EBS process includes: (1) a comprehensive records search; (2) a site inspection to determine if potential contamination exists on property considered for acquisition or transfer, lease, sale, or any other disposition; (3) interviews with current owners and occupants of the property; and (4) the production of a report which includes an evaluation of the environmental condition of the subject property will be conducted. A thorough walk-through inspection of the parcel must be conducted during the Phase I Assessment. If potential for contamination exists, then a Phase II Assessment that would require testing of the soil and/or water must be completed. Phase III is the remediation phase.

Phase I site assessment can be standardized but the Phase II cannot. The Phase II site investigation is variable in nature depending on the hazardous release, environmental relationships at the site, type of contamination, type of real estate transaction, amount of available funding, etc.

Appendix A outlines the sequence of events that are common with the EBS process. It is separated into the three phases commonly associated with the EBS process. Page A-1 shows the thought process of the Phase I EBS. Most EBSs will end at this phase because any known contamination should already have site investigative work completed and this data will be included in the Phase I EBS report.

If there is any contamination that has not been investigated then the Phase II EBS will take place (page A-2). Any site investigative work done separately of the EBS should be referenced and accompany the submission to NGB. Any site investigative work done in conjunction with the EBS should be included within the report or added as a separate appendix.

Page A-3 shows the process for a Phase III EBS. The most important aspect of this phase is the determination of funding source. Contact the NGB-ARE-P (IRP Team) for funding guidance.

Appendix B is a list of data sources that may be used to complete a record search. This is the most time consuming part of completing the Phase I EBS. If there is limited amount of funding for the completion on an EBS then this is the place where the biggest bang for the buck takes place. The cost, approximately \$1,500, is money well spent.

Appendix C is the EBS Questionnaire. This will aid in ensuring all areas of consideration are covered and will become Appendix C in the EBS. The questionnaire is not intended to be all the proponent will complete to satisfy the EBS requirement. There is no substitution for sound judgement when making a determination on how much is enough.

The questionnaire may be used by the SES in acquiring information from the losing agency by providing it to them to fill out. The EBS can have as many EBS Questionnaires in Appendix C as needed and is designed to have page C-5 act as a documentation of persons filling out the form. The author of the report has the option to include only one EBS Questionnaire and as many page C-5s as needed if the data on the questionnaires are the same.

The EBS Questionnaire and Outline is designed to cover any data gaps or data failures and to assist in writing the scope of work should the proponent decide to contract the EBS process. Either the contractor or the State Environmental Office must write a narrative about any "YES" or "UNK" answers in more detail within the document. For N/A type answers will be interpreted as the type of information is not applicable to the EBS (i.e. asbestos information when there are no buildings on the property).

The contractor for the EBS should not only fill out the EBS Questionnaire and provide the information in Appendix C but will also do an EBS document to cover the areas within the SOW done by the Environmental Office. The questionnaire's main purpose is for the use by the State Environmental Staff to characterize the site by showing due diligence. An environmental firm should be used to gather data in more depth than the EBS Questionnaire does.

Appendix D is the Environmental Baseline Study Outline to be used as a guide for both writing and review of the report done by a contractor. This is again provided to standardize the EBS documents and aid in the contracting process. Take note that all sections may or may not have available data. The report should state the current condition within the proper outline place within the report to show due diligence. Every EBS submittal will have an Executive Summary.

Appendix E is the Information Search Checklist to give the writer and reader of the EBS an idea of how extensive the search was. This will become Appendix E to the report and should have as many items marked as possible to show due diligence. Any information items that were searched for but not found to exist would also have an "X" next to it. The Information Search Checklist is designed to be included in report whether the proponent is the gaining or losing agency. An interactive Questionnaire is provided on the 3.5 inch floppy as Word file Quest.EBS.

Appendix F is a cost estimate for the EBS process. It includes Phase I, Phase II, and Remediation parts of the EBS. This Detailed Cost Estimate Sheet is provided to assist the SES during the EBS process, and can also be used for other project cost estimates within the State ARNG Environmental Offices. This data has not been provided in the past and can now be used to project funding and EPR submissions. Any additions or modifications should be submitted to NGB-ARE-P (IRP Team) with cost estimates. A model for an interactive cost estimate is provided as Excel file Cost.EBS.

Remember that these figures are a guide and should be used as such and not as a firm price. Regional variations, and variations in type and extent of the project could cause changes to the cost estimates.

Appendix G is the Reference list for this document.

7. CERTIFICATION STATEMENTS:

Certification statements are designed to satisfy the requirements set forth in AR 200-1 and the guidelines from the U.S. Army Corps of Engineers. These applicable statements should be provided in the transmittal memorandum and the Executive Summary of the EBS document.

"Clean" Site Certification

The (preparer) has conducted this EBS on behalf of the ARNG. The (preparer) has reviewed all appropriate records made available, and conducted visual site inspections of the selected facilities following an analysis of information obtained during the record search. The Information contained within the survey report is based on records made available and, to the best of the (preparer's) knowledge, is correct and current as of (date).

This excess real property contains no known hazardous substances as that term is defined in the Comprehensive Environmental Response, Compensation, and Liability Act (42 USC 9601), as amended, or other contamination as specified by the Resource Conservation and Recovery Act of 1976. the

implementing Environmental Protection Agency regulations (40 CFR 261, 262, 263, and 761), and the Federal Property Management Regulations (41 CFR 101-47). A complete search of agency files revealed that no hazardous substance has been stored for more than one year, known to have been released, or disposed of on the ARNG-controlled real property described below.

Certification of Contamination

A complete search of agency files has revealed that hazardous substances as that term is defined in the CERCLA (42 USC 9601) as amended, were stored for one year or more on the ARNG-controlled real property described below.

"This property contained known hazardous substances as that term is defined in the Comprehensive Environmental Response, Compensation and Liability Act (42 USC 9601) as amended."

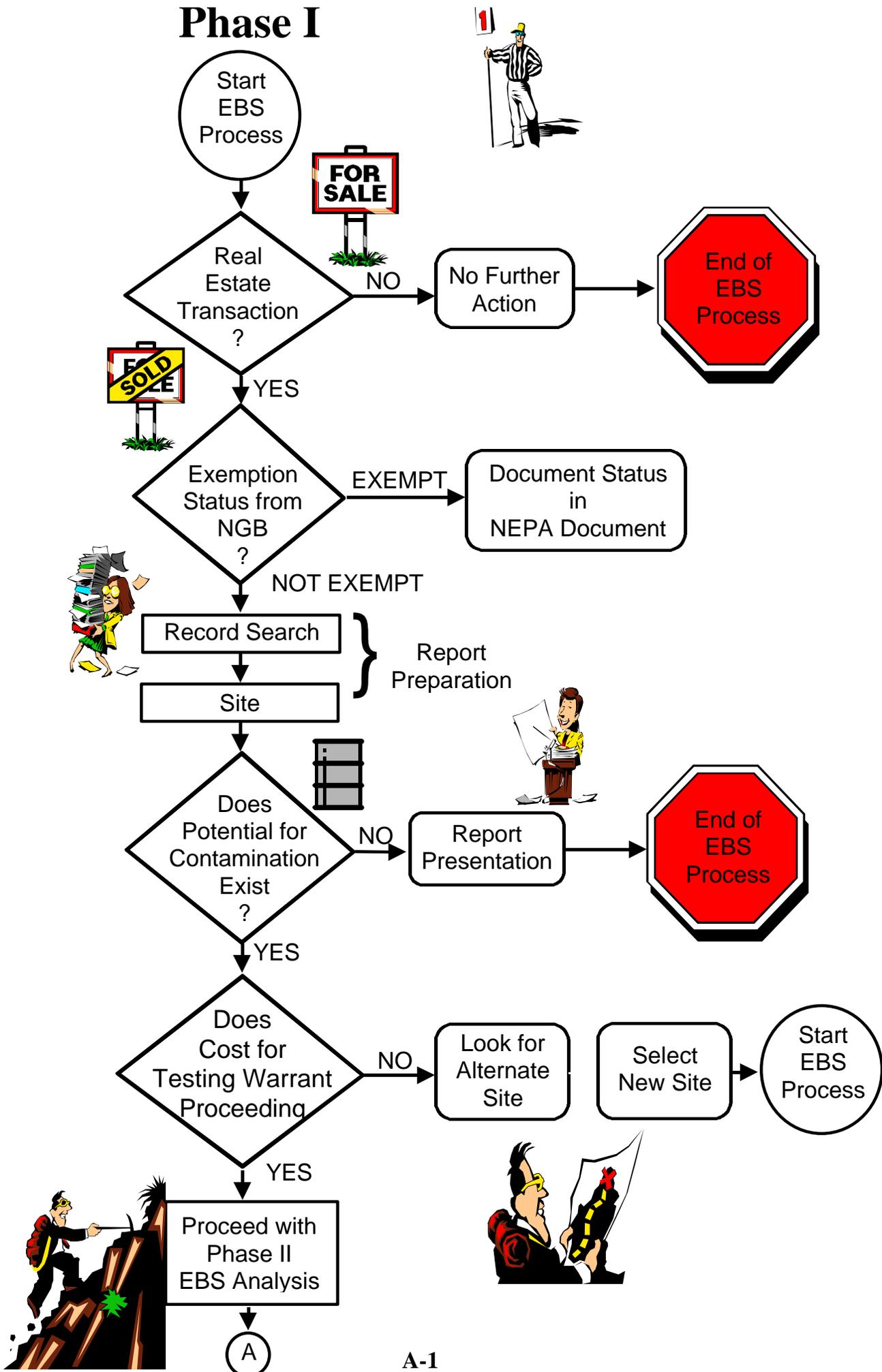
The AR 200-1 indicates that a statement that summarizes the environmental status of real property is needed within the EBS. A statement similar or fashioned after: "The survey phase of this study has identified little or no potential for environmental contamination or disruption from past, present or proposed activities."

8. ADDITIONAL GUIDELINES:

Additional guidelines for conducting an EBS can be found in the American Society for Testing and Materials (ASTM) standards: Standard Practice for Environmental Site Assessments: Transaction Screen Process, ASTM Designation E 1528-93, and Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM Designation E 1527-93. Copies of the ASTM practices may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103 for approximately \$50 each.

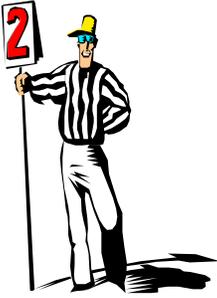
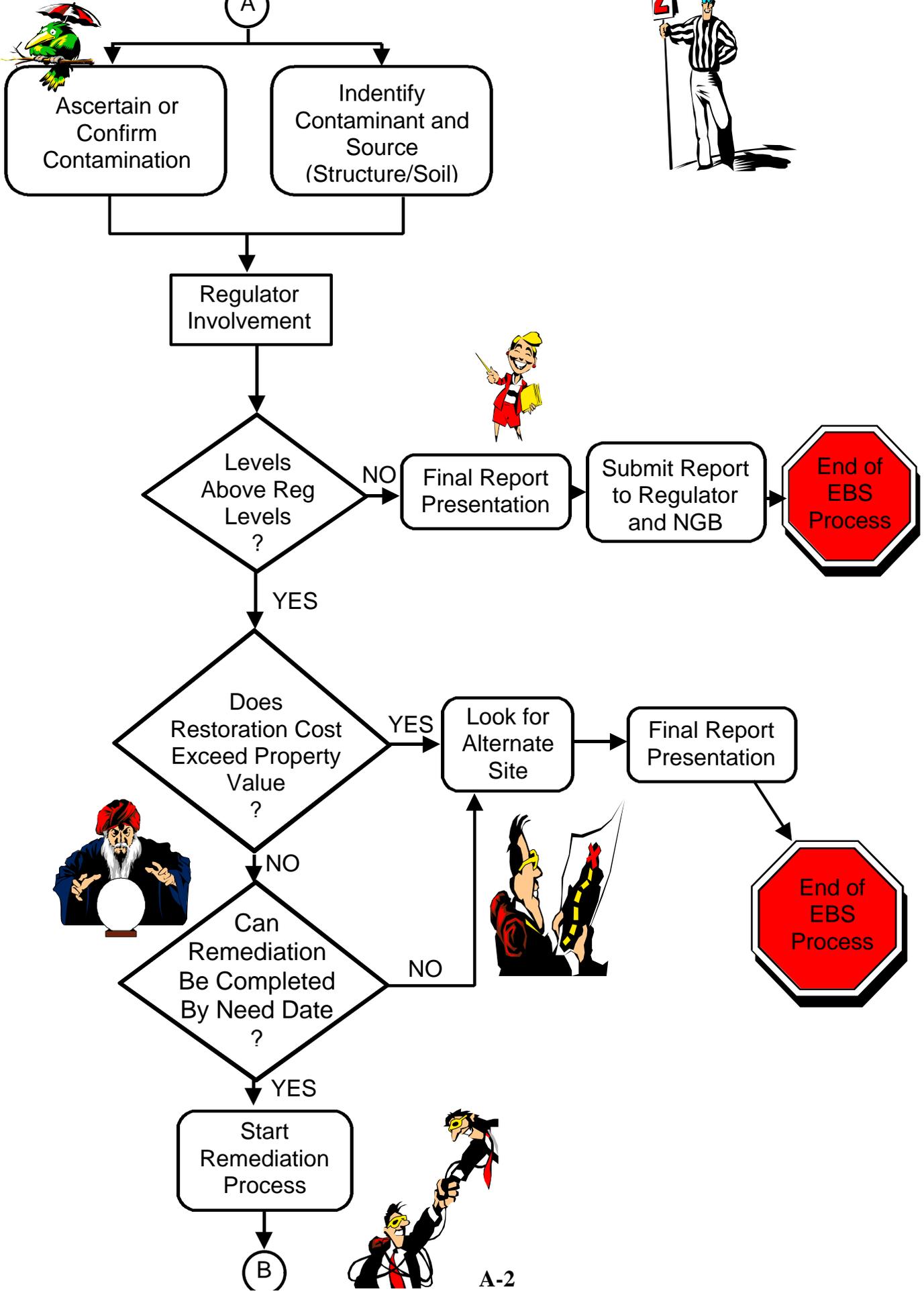
APPENDIX A

Phase I



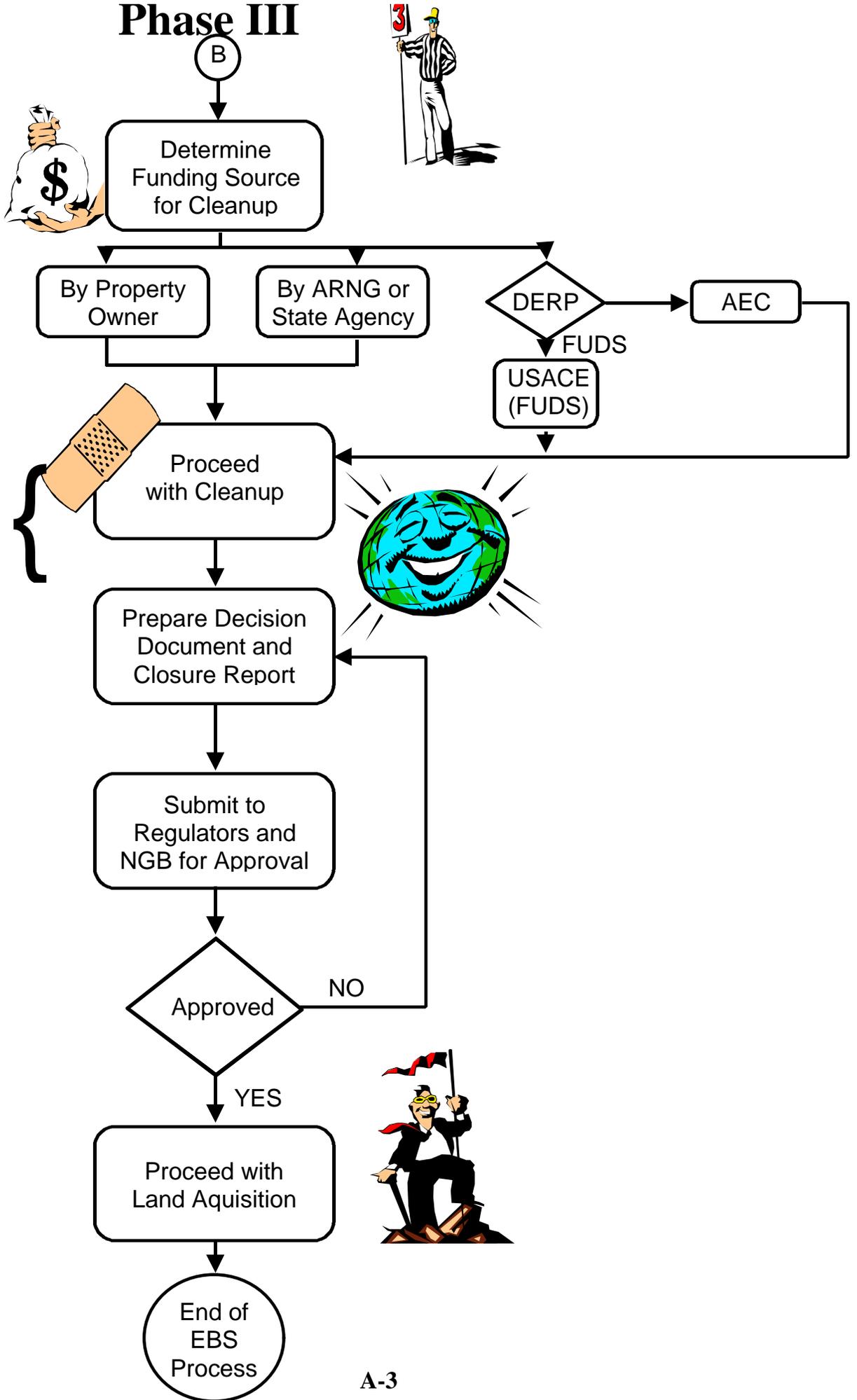
Phase II

(A)



Phase III

(B)



APPENDIX B

Data Sources

Telephone Hotlines

U.S. EPA and some other agencies maintain a number of hotlines that can be called for technical information and/or leads to further information:

Asbestos in Schools (only).....	(800) 835-6700
CERCLIS Information	(703) 603-9025
Hazardous Materials Transportation	(800) 752-6367
(Illinois only)	(800) 367-9592
National Response Center.....	(800) 424-8802
Pesticides.....	(800) 858-7378
EPA Publications and Information Center.....	(513) 569-7980
RCRA/Superfund/UST	(800) 424-9346
Safe Drinking Water	(800) 426-4791
SARA Title III (EPCRA)	(800) 535-0202
Storm Water Permitting	(703) 821-4660
TSCA and Asbestos Information.....	(202) 554-1404
TSCA Assistance Information Service	(202) 554-1404
Wetland Information.....	(800) 832-7828

Databases

The following databases are required or recommended sources of information regarding the history and status of the property under the ASTM Standard Practices:

Database	Description
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ASTM-Required

Federal

CERCLIS	CERCLA Information System, EPA's listing of abandoned, inactive, or uncontrolled hazardous waste sites being reviewed for potential inclusion in the NPL
NPL	Subset of CERCLIS; contains sites identified for priority cleanup under Superfund

RCRA-TSD	RCRA-regulated hazardous waste treatment, storage, or disposal facilities
RCRA-Generators	RCRA-regulated hazardous waste generators
ERNS	Emergency Response Notification System: recorded releases of oil and hazardous waste as reported to EPA and the U.S. Coast Guard

State

State HW Sites or SPL	State Priority List: state equivalent to CERCLIS and NPL
SWF/LS	State SW Facilities and Landfills: inventory of active or inactive solid waste disposal facilities, including landfills
LUST	Reported leaking UST incidents
Registered USTS	USTs registered with the state and regulated under RCRA and/or state regulations; substances and threshold quantities may vary by state

Optional

AIRS	Aerometric Information Reporting System, EPA Office of Air Quality Planning and Standards: air permit information; now contains CDS data
CDS	Compliance Data (Reporting) System; transferred to AIRS: source compliance and enforcement history
DOCKET	Enforcement Docket System, EPA Office of Enforcement and Compliance Monitoring: actions filed by Dept. of Justice on behalf of EPA
FINDS	Facility Index System, EPA: index by facility identification of databases containing more detailed information
FTTS	FIFRA-TSCA Tracking System: listing of violations under FIFRA, TSCA, and EPCRA
PADS	PCB Activity Database System: data on PCB-handling facilities

PCS	Permit Compliance System: NPDES permit information, including compliance and enforcement history
RODS	Computer compilation of CERCLA investigation Records of Decision
SETS	Site Enforcement Tracking System: EPA's system for tracking CERCLA PRPs
TRIS	Toxic Release Inventory System: compilation of data collected under §313 of EPCRA
TSCA	TSCA Inventory System: listing of facilities manufacturing certain TSCA-regulated chemicals

Further Data

To obtain information directly from the source concerning the above databases, and related ones, you may contact the following:

Name	Information	Contact
Biological Data System	Biological data and ecological assessment data	U.S. EPA (202) 382-7220
CERCLA Information System (CERCLIS)	Potentially contaminated sites	National Technical Information Service 5285 Port Royal Road Springfield, VA 22161 (800) 336-4700 (703) 487-4650
Chemical Directory	Substances regulated under TSCA	U.S. EPA (202) 382-5457
Consolidated List of Chemicals (List of Lists)	Chemicals subject reporting under SARA Title III	NTIS (limited availability from EPA OSWER when reissued)
Emergency Response Notification System	Releases of oil and hazardous substances	U.S. DOT (617) 484-2626

Environmental Fate Database	Fate and behavior of chemicals in the environment	NTIS
Facility Index System	Inventory of sites and facilities regulated by EPA	U.S. EPA (202) 382-2416
Flood Insurance Rate Maps (FIRMS)	Delineation of flood hazard boundaries for flood insurance purposes	Federal Emergency Management Agency Fed. Insurance Admin. Office of Risk Assess. 500 C St., SW Washington, DC 20472 (800) 333-1363 OR Local Zoning and Planning Office
Hazardous Waste Data Management System	Hazardous Waste TSD, transporters and generators	NTIS
Integrated Risk Information System	Risk database for Superfund Risk Assessments	U.S. EPA (202) 488-0550
Open Dump Inventory	Open dumps that do not meet RCRA §4004 criteria	U.S. EPA (202) 382-4687
Public Health Risk Evaluation Database	Software package providing data on chemicals likely to be found at Superfund sites	U.S. EPA (202) 383-2182
Storage and Retrieval System of Water Quality Information (STORET)	Surface and groundwater quality data	U.S. EPA (202) 382-7046 or (919) 541-7146
Superfund Enforcement Tracking System	Data on Potentially Responsible Parties at Superfund sites	U.S. EPA (202) 475-8717

Toxic Release Inventory (TRI)	SARA Title III reporting data TOXNET database	National Library of Medicine (NLM) 8600 Rockville Pike Bethesda, MD 20894 (800) 638-8480 (301) 496-6531 mms@nlm.nih.gov
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USGS Maps: Topographic Quadrangles, National Wetland Inventory. Ecological Inventory Geologic and Bedrock	Maps delineating geographic, political, and cultural features; wetlands boundaries and acre - age; and sensitive environments and habitats	U.S. Geological Survey 12201 Sunrise Valley Dr. Reston, VA 22092 (800) 872-6277 (USA-MAPS)
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Vendors

The following is a short list of vendors from which environmental searches, maps, other graphic physical setting/standard historical source data, and other EBS necessities may be obtained. In general, search vendors now routinely set their search distances (usually referred to as the radius from the subject property) at the approximate minimum search distances recommended in the ASTM Standard Practices, unless the user requests otherwise. This is a rapidly growing service industry, and new vendors are constantly entering the field, while existing vendors expand their services to meet changing standards and competition. Inclusion in this list does not indicate endorsement by the National Guard Bureau.

Vendor	Services	Address
American Society for Testing and Materials (ASTM)	Standard Practices E 1527, E 1528 (ca. \$23 ea.) Transaction Screen Questionnaires (25 for \$10)	1916 Race Street Philadelphia, PA 19103-1187 (215) 299-5585 (215) 977-9679 FAX
AP Environmental Data Co.	Online (from user's terminal) environmental data base searches	13740 Research Blvd. Suite A3 Austin, TX 78750 (512) 250-2100 (512) 250-9200 FAX
Environmental Assessment Association	Environmental data base searches, title abstracts, aerial photographs, Sanborn maps, to order	8383 East Evans Road Scottsdale, AZ 85260 (602) 483-8100 (602) 998-8022 FAX
Environmental Data Resources, Inc.	Environmental data base searches, aerial photographs, Sanborn maps,	3530 Post Road Southport, CT 06490 (203) 255-6606

	to order	(203) 255-1976 FAX
Environmental Search	Environmental data base searches to order	5362 Noland Road Shawnee, KS 66216 (913) 631-7440 (913)631-4599 FAX
Vista Environmental Information, Inc.	Environmental data base searches, aerial photographs, Sanborn maps, to order	415 Eagleview Blvd. Suite 112 Exton, PA 19341 (215) 458-1122 (215) 458-1134 FAX 5060 Shoreham Place Suite 300 San Diego, CA 92122 (619) 450-6100 (619)450-6195 FAX (800) 767-0403
Carolina Global Maps, Inc.	USGS maps*	210 West Fourth St. P.O. Box 8026 Greenville, NC 27835 (800)248-6277 (800)321-6277 FAX
Map Express	USGS maps*, aerial and satellite photographs from EROS	P.O. Box 280445 Lakewood, CO 80228-0445 (303) 987-9384 (800)627-0039 (303) 969-8195 FAX

*Note that USGS topographical maps, the standard physical setting source, are widely available in camping supply stores in the area being assessed, as well as directly from USGS. The advantage to specialized vendors is their ability to determine from various kinds of location information what map or maps will be needed (if the property is in the corner of a standard 7.5 Minute Quadrangle, you may need as many as four maps to plot your search radii). They can also ship on very short notice via next-day air services.

In addition, one vendor has developed a menu-driven program that will provide 'boiler-plate' text for preparing EBS reports:

Dynamic Software	Environmental Audit Phase-1 software for ESA report preparation	P.O. Box 3846 Indiatlantic, FL 32903-3846 (800) 365-3962
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APPENDIX C

EBS QUESTIONNAIRE

QUESTIONS

Number	General Liability Concerns	YES	NO	N/A	UNK
A1	Have there been any federal or state enforcement actions against the facility?				
A2	Are there any pending enforcement actions against the facility, its owner, or operator?				
A3	Has the owner or operator entered into any consent decrees or administrative consent orders?				
A4	If so, have these decrees or orders provided a full release from liability?				
A5	Has the property or adjoining property been used for gas station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junk yard or landfill, or a waste treatment storage, disposal, processing, or recycling facility?				
A6	Does seller's business involve the use, treatment, storage, or disposal of hazardous substances?				
A7	Have there been any citizen suits filed against the facility, owner, or operator?				
A8	Have there been any regulator warning letters or administrative orders against the facility, owner, or operator?				
A9	Have there been any notices of violation, consent orders, or consent decrees sent to the owner or operator under the citizen suit provisions of any statute?				
A10	Do any settlement agreements with the government or private parties leave the owner or operator open to subsequent suits on the same issues?				
A11	Can the facility incur future liability through non-compliance with the above orders or decrees?				
A12	Has the owner or operator received any Requests for Information, Notice and Demand letters or administrative inquires from any governmental entity with regard to its environmental practices?				
A13	Has an "imminent hazard" ever been alleged to exist at the site?				
A14	Has the owner or operator not maintained all records required by each environmental statute?				
A15	Is the facility out of compliance with any environmental permits?				
A16	Do past practices leave the owner or operator open to citizen suits or government enforcement actions?				
A17	Has the facility undergone any environmental audits/inspections?				
A18	Have audit/inspection deficiencies gone uncorrected?				
A19	Have any claims been made under the companies' insurance policies?				
A20	Is the company in violation of laws that require insurance policies to cover environmental contingencies?				
A21	Is the property adjacent to or on an abandoned mining site?				
A22	Is the property adjacent to railroad tracks or underground pipes?				
A23	Is the property part of or adjacent to an oil or gas producing property?				
A24	Are there any environmental liens or governmental notification relating to past or recurrent violations of environmental laws?				

Number	Clean Air Act	YES	NO	N/A	UKN
B1	Does the facility emit air pollutants into the environment?				
B2	Is the facility a type for which new standards of performance (NSPS) have been promulgated? See 40 C.F.R. Part 60 for a list of new source categories and applicable standards.				
B3	Is the facility in violation or has the facility been in violation of the NSPS or the permit?				
B4	Is the facility located in a nonattainment area?				
B5	Will the facility be subject to maximum attainable control technology (MACT)?				
B6	Is a capital expenditure required to meet the requirements of emissions reductions in the new Clean Air Act, i.e., is the facility required to reduce emissions because it is in a non-attainment area?				
B7	Does the facility incinerate any wastes of any kind?				

Number	Radon	YES	NO	N/A	UKN
C1	Were the results of an EPA short term radon test performed in the basement above 4pCi/l or 0.02 WL?				
C2	Is there evidence that nearby structures have elevated indoor levels of radon or radon progeny?				
C3	Have local water supplies been found to have elevated levels of radon or radium?				
C4	Is the property located on or near sites that currently are or formerly were used for uranium, thorium or radium extraction or for phosphate processing?				
C5	Were the structures constructed from salvaged material from oil wells or other structures characteristic of high radon levels?				
	Note: A property may be acceptable for radon if guidelines in AR 200-1, Chapter 11 are met.				

Number	Clean Water Act	YES	NO	N/A	UKN
D1	Does the facility discharge pollutants into the waters of the state or onto land from which pollutants could enter such waters?				
D2	Even if the discharge was permitted by the state, is there any basis upon which EPA might challenge the variance or exemption as abdicating the state's responsibilities?				
D3	Are there or has there been any flooring, drains, or walls that are stained by substances other than water or are emitting foul odors?				
D4	Do the discharge monitoring reports (DMRs) indicate violations of the permit? Have DMR's gone unsubmitted?				
D5	Are there any septic tanks, sumps from floor drains, or below-ground oil-water separators?				
D6	Have any toxic or hazardous pollutants ever been spilled or otherwise released at the site?				
D7	Is there cause to believe that any operation or equipment at the facility might be the cause of a future spill or release of a pollutant?				
D8	Has the facility neglected to apply for necessary facility NPDES storm water discharge permits?				
D9	Has there been any road oiling done on the facility?				
D10	Are there any equipment cleaning stations?				
D11	Are there sinkholes, abandoned manholes, abandoned sewer lines or other aquifer access points?				
D12	Are there any oily sheens on the surface water or unusual odors?				
D13	Can the facility's Clean Water Act permits be easily transferred?				
D14	Are permits required to discharge into the WWTF?				
D15	Will a new or modified permit be necessary for an expansion of operations?				
D16	Are there any visual evidence of wells? Pressure tanks? Pipes that extend vertically into the ground? Above-ground pump heads? Small sheds or shelters (sometimes resembling dog houses)? Electrical transformers on poles for no other apparent use (especially in agricultural settings)? Concrete pads surrounding a pipe or opening? Depressions in the ground? Small lined or unlined pits? Simple holes in the ground?				
D17	Are there any non-permitted storm water discharges?				
D18	Does the adjacent property discharge waste water on to evaluated property?				
D19	Does the evaluated property discharge waste water on or adjacent to the property?				
Number	Comprehensive Environmental Response, Compensation and Liability Act	YES	NO	N/A	UKN

E1	Has the facility ever generated, transported, or disposed of a hazardous substance as defined by Section 9601(14) of CERCLA?				
E2	Are any of the facility wastes disposed of in a manner which would create a release or a threat of release prompting future enforcement or private cost recovery actions?				
E3	Has the operator/owner ever notified the National Response Center of a reportable quantity release of a hazardous substance into the environment?				
E4	Is the owner/operator currently subject to any administrative orders under section 106 of CERCLA, and has it properly complied with all orders issued in the past?				
E5	Has the owner/operator received any section 104(e) letters from EPA requesting information concerning material sent to sites listed on the National Priorities List?				
E6	Has the company failed to develop a complete history of its past disposal practices, including production of all waste manifests, shipping records, disposal contracts, etc., to determine potential liability under CERCLA?				
E7	Has the facility failed to comply with the Emergency Planning and Community Right to Know Act?				
E8	Has the company received any notice from adjoining landowners, other potentially responsible parties, or waste disposal facilities that it is responsible under section 107 for cleanup costs or contribution?				

Number	Resource Conservation and Recovery Act	YES	NO	N/A	UKN
F1	Does the facility generate, treat, store, transport, or dispose of hazardous waste?				
F2	Does the facility accumulate hazardous waste for periods in excess of 90 days?				
F3	Does the facility hold a RCRA permit or EPA Waste Generator Number?				
F4	Is the facility out of compliance with applicable RCRA regulations?				
F5	Has there been any hazardous substances or petroleum products, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the property?				
F6	Has fill material been brought onto the property that originated from a contaminated site?				
F7	Has there been any pesticides, paints or other chemicals in individual containers stored on or used at the property or facility?				
F8	Has an imminent and substantial endangerment ever been alleged to be present at the site?				
F9	Has an audit been conducted at this facility to determine RCRA compliance?				
F10	Has an inventory been taken to determine the amount and location of underground storage tanks at the facility?				
F11	Are there any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground?				
F12	Do existing tanks meet all requirements, i.e., financial assurance, leak detection, spill protection, overflow?				
F13	Are there any petroleum storage and/or delivery facilities (including gas stations) or chemical manufacturing plants located on adjacent properties?				
F14	Are there any active underground or above ground tank facilities on-site for such activities as motor fuel, waste oil or fuel oil storage, hazardous waste or chemical storage in any size?				
F15	Have any of the tanks that are more than 10 years old NOT been successfully tested for leaks.				
F16	Are there any deactivated USTs on the property?				
F17	Are there any hydraulic lift sumps for equipment?				
F18	Are there any lead screening tests that indicate evidence of lead-based paint?				
F19	Was the building constructed prior to 1979?				
F20	Is the paint peeling or chipping?				

Number	Toxic Substances Control Act	YES	NO	N/A	UKN
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	Note: Common synonyms/names for PCBs include chlorodiphenyls, Aroclor, Askarel, Pyranol and Inerteen.				
G1	Did the facility manufacture, process or distribute in commerce any chemical substances regulated by TSCA?				
G2	Have adverse consequences been alleged to have been caused by exposure to chemical substances produced by the facility?				
G3	Does the company have PCBs on site?				
G4	Is there a need for a comprehensive PCB survey?				
G5	Has the facility failed to comply with all asbestos reporting requirements?				
G6	Are there any florescent light ballasts containing PCBs in the building?				
G7	Is there any visible or documented evidence of soil or groundwater contamination from PCBs on the property?				
G8	Is there evidence of soil discoloration around present or former equipment sites, utility poles, etc.?				
G9	Are any of the lights damaged or leaking?				
G10	Are any of the capacitors or transformers inside residential buildings?				
G11	Are any of the transformers or capacitors not clearly marked, well maintained, or secure?				
G12	Have PCB concentrations of 50 ppm or greater been found in contaminated soils or groundwater?				
G13	Is there any evidence of hydraulic fluid leaks on lifts installed prior to 1980?				
	Note: Additional PCB containing materials: carbonless copy paper, brake linings, printers ink, synthetic rubber, natural gas (as a contaminant), microscopy mounting media, fabric coatings, and cutting oils.				

Number	The Safe Drinking Water Act	YES	NO	N/A	UKN
H1	Has there been a discharge of any substance or material at the facility which might find its way into a public water system?				
H2	Is the property served by a private/non-public water system that has been found to have contaminants in quantities that exceed drinking water guidelines or has it been designated as contaminated?				
H3	Does the drinking water at the facility contain lead at levels above 10 ppb?				

Number	Asbestos Removal and Inspection	YES	NO	N/A	UKN
I1	Was the building constructed prior to 1980?				
I2	Has the building been inspected by a certified asbestos removal team since 1980 for the presence of ACM?				
I3	Has all friable asbestos been removed or contained so that it does not create the potential for human exposure?				
I4	Does the site survey reveal any visible evidence of possible ACM? (boiler insulation, floor tiles, building siding, shingles, roofing felt, wall and ceiling insulation, acoustical ceiling tiles, window putty, fuse boxes, heat reflectors, air duct lining)				
I5	Is there any documented evidence of asbestos? (tests, surveys, management plan, etc.)				

Number	Waste Disposal Facilities	YES	NO	N/A	UKN
J1	Has there been or is there any pits, ponds, or lagoons associated with waste treatment or disposal?				
J2	Is there any evidence of acid pits located on or adjacent to the site?				
J3	Is it likely the property was used for illegal or uncontrolled dumping?				
J4	Are there any obvious high risk neighbors in adjacent properties engaged in producing storing or transporting hazardous wastes, chemicals, or substances?				
J5	Was the site ever used for research, industry, or military purposes?				
J5	Has any of the site space ever been leased to commercial tenants who are likely to have used, transported, or disposed of toxic chemicals? (e.g. dry cleaner, print shop, service stations, etc.).				

Number	Additional Hazards	YES	NO	N/A	UKN
K1	Do the tenant areas contain Urea Formaldehyde Foam Insulation (UFFI) that was installed less than a year ago?				
K2	Is there any identifiable UFFI behind exterior-wall switch and outlet cover plates?				
K3	Are there any elevated formaldehyde concentrations?				
K4	Did interviews indicate the presence of UFFI?				
K5	Are there any citizen complaints or local law enforcement responses to unexploded munitions (UXO)?				
K6	Has the property ever been suspected to contain or been used for military chemical/biological testing?				
K7	Has the Army Technical Escort Unit or Army Corps of Engineers responded to UXO or chemical test kits incidents?				
K8	Do any of the building structures have cannecc (made from sugar cane waste) building materials?				
K9	Are there any small arms test ranges that have been used to perform function checks on serviced weapons?				
K10	Are there any ranges, impact areas, berms, maneuver areas, training areas, OB/OD areas present on the facility?				
K11	Is there evidence of any "red dust" (arsenic) from cannecc materials?				
K12	Is there documented evidence that Electromagnetic Radiation (EMF) is present on the property?				

Number	Natural and Cultural Resources	YES	NO	N/A	UKN
L1	Does the site have any known or potential federal or state threatened & endangered species?				
L2	Has an Endangered Species Survey been completed for the area?				
L3	Have there been any Biological, Historical, Cultural, Soil, or Aquatic surveys of the site?				
L4	Does the site have any erosion problems, I.e. bare areas, gullies, runoff during major storm events?				
L5	Does the site have an Integrated Natural Resources Management Plan (IMRMP)?				
L6	Have planning level natural resources surveys been conducted on the site (including soils, flora, fauna, wetlands)?				
L7	Does the site currently have commercial natural resource activities (timber, agricultural, grazing outleases)?				
L8	Do NEPA documents exist that address/sauthorize natural resource management activities?				
L9	Has a noxious weed survey been completed for the area?				
L10	Are there any buildings or structures older than 50 years old on the property?				
L11	Are there any archeological sites on the property?				
L12	Is there a Cultural Resources Management Plan inplace for the site?				
L13	Are there any known sites of importance to Native American tribes?				
L14	Is there a memorandum of agreement or programmatic agreement addressing cultural resources in place?				
L15	Have invasive, non-native plant species been identified on the property?				
L16	Has there been a wetland survey for the site?				
L17	Are there any planned projects to create wetlands on this site?				
L18	Are there any planned uses for this site that may impact existing wetlands?				
L19	Are there any completed or in progress Environmental Assessments and/or Environmental Impact Statements?				
L20	Was the proposed real estate transaction found to have "FNSI" or a "ROD"?				
L21	Has a Pest Management Plan been completed for the site?				
L22	Does the site have any major pest problems (insects, invasive plants, animals, pathogens, rodents, et cetera)?				

GENERAL ENVIRONMENTAL SEARCH

	YES	NO	N/A	UKN
Do any of the following Federal government record systems list the property or any property within the circumference of the area noted below:				
National Priorities List - within 1.0 mile (1.6Km)?				
CERCLIS List - within 0.5 mile (0.8 Km)?				

RCRA TSD Facilities - within 1.0 mile (1.6 Km)?				
Do any of the following state record systems list the property or any property within the circumference of the area noted below:				
List maintained by state environmental agency of hazardous waste sites identified for investigation or remediation that is the equivalent to NPL - within 0.5 mile (1.6 Km)?				
List maintained by state environmental agency of sites identified for investigation or remediation that is the state equivalent to CERCLIS - within 0.5 mile (0.8 Km)?				
Leaking Underground Storage Tank (LUST) List - within 0.5 mile (0.8 Km)?				
Solid Waste/Landfill Facilities - within 0.5 mile (0.8 Km)?				
Based on fire insurance maps or consultation with the local fire department , are there any buildings or other improvements on the property or adjoining property identified as having been used for an industrial use or uses likely to lead to contamination of the property?				
The preparer of the transaction screen questionnaire must complete and sign the following statement.				
This questionnaire was completed by:				
Name:				
Title:				
Firm:				
Address:				
Phone number:				
Date:				
If the preparer is different than the user, complete the following:				
Name of user:				
User's address:				
User's phone number:				
Preparer's relationship to site:				
Preparer's relationship to user:				
Copies of the completed questionnaire have been filed at:				
Copies of the completed questionnaire have been mailed or delivered to:				
Preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct and to the best of the preparer's actual knowledge no material facts have been suppressed or misstated.				
Signature: _____ Date: _____				

APPENDIX D

ENVIRONMENTAL BASELINE STUDY OUTLINE

I EXECUTIVE SUMMARY

- a. Why project is being done
- b. What was done/real estate action proposed
- c. What sites were investigated
- d. Summary of significant findings
- e. What are the recommendations
- f. Certification Statements

II PURPOSE

III SCOPE

- a. Real property transaction type
- b. Property category (I, II, III, IV, V, VI, VII)
- c. Parties
- d. Proposed use(s)
- e. Restrictions
- f. Remediation responsibilities

IV INTRODUCTION

- a. Authority
- b. Purpose of EBS
- c. Site name, address, alias, ID number
- d. Site location within the state
- e. Agency/name of organization performing the EBS
- f. Sites RCRA status
 - 1 Permits
 - 2 Issuing agency
 - 3 Date
 - 4 Permit number
 - 5 Violations
- g. CERCLIS ID number
- h. Summary of activities
- i. Standard Identification Codes (SIC)

V SURVEY

- a. Methodology
 - 1 Approach and rationale
 - 2 Description of documents reviewed
 - a) Information from client
 - b) Published information
 - c) Environmental agency records and files
 - 3 Property inspections

- 4 Personal interviews
- 5 Sampling
 - a) Planned sampling
 - b) Previous sampling
- 6 Population data

VI BODY

- a. Review of site background
 - 1 Site location and legal description
 - a) Identify property (boundaries and surveyed property)
 - b) Describe (size, setting, accessibility, active/inactive)
 - c) Current use
 - d) Previous uses (since 1940 or back to pre-development)
 - 1) Title search/title review (50 years chain of custody)
 - 2) Aerial photographs (back to 1940 in 10 yr increments)
 - 3) Maps and other data
 - 4) Lists of special resources
 - e) Chronological record of ownership(50 yr chain of title)
 - 2 Descriptions of:
 - a) Structures (buildings)
 - b) Roads
 - c) Other improvements (heating, cooling, sewage)
 - d) Paved or covered areas (type and % coverage)
 - 3 Surrounding area (site vicinity description)
 - a) Previous uses (i.e., crop history)
 - b) Current uses
 - c) Sensitive receptors (w/in one-half mile)
- b. Record review (Appendix E)
 - 1 General public records
 - 2 Regulatory compliance records (violations)
 - a) Database search results
 - b) State, county, and municipal agency inquiries
- c. Interviews
 - 1 Immediate site
 - 2 Adjacent land uses/patterns
 - a) Persons on immediate site
 - b) Adjoining or hydrologically upgradient owners (up to 1 mi.)
 - c) Land, zoning, or tax officials, real estate salespersons
- d. Site reconnaissance and investigation
 - 1 Visual inspection
 - a) Immediate site
 - b) Surrounding area
 - 2 Investigation for environmental hazards
 - a) Topography and soils
 - b) Geology (including karst systems)
 - 1) Exposed surface
 - 2) Anomalies
 - 3) Break in slope/scarps

- 4) Bedrock outcrops
- 5) Vegetative changes
- 6) Orientations, aperature
- 7) Mapped geologic formation
- c) Hydrology
 - 1) Surface (15 mi. downstream)
 - 2) Sub-surface (depth to uppermost aquifer)
 - 3) Monitoring equipment
 - 4) Conduits
 - 5) Recharge areas
 - 6) Discharge areas
 - 7) Groundwater sampling results
- d) Medical waste
- e) Polychlorinated biphenyls (PCBs)
 - 1) Concentrations and quantities
 - 2) Spills
 - 3) Equipment location
- f) Asbestos-containing materials (ACM)
 - 1) Buildings pre-1987
 - 2) Location map/plan and quantities
- g) Radon (residential buildings, schools, hospitals)
- h) Lead
 - 1) Paint (residential buildings, schools, hospitals)
 - 2) Soil
 - 3) Drinking water
- i) Urea Formaldehyde Foam Insulation (UFFI)
- j) Hazardous substances
 - 1) Hazardous waste
 - Disposal (contractor, quantity, description)
 - Storage (location, spills, spill containment)
 - Treatment (permit, type, quantity, method)
 - 2) Hazardous materials
 - Storage (quantity, types, spill containment, location, description)
 - 3) Petroleum (POL)
 - 4) Petroleum waste
- k) Solid waste
 - 1) Landfills (within 0.5 mi. or on the facility) open or closed
 - 2) Transfer stations
 - 3) Incineration locations and types
- l) Pits, sumps, drywells, oil water separators, floor drains, or catchbasins
- m) On-site aboveground and underground storage tanks
 - 1) Locations
 - 2) Volume
 - 3) Contents
 - 4) Age
 - 5) Construction material
 - 6) Cathodic protection
 - 7) Inventory methodology

- 8) Tank integrity testing
- 9) Past malfunctions
- 10) Regulatory registration or closure/removal status
- n) Off-site storage tanks
- o) Storm water drainage
- p) UXO (types, location, quantities)
- q) Noise potential
- r) Air
 - 1) Permits
 - 2) Monitor equipment
- s) Radioactive waste
- t) Visual disturbances
 - 1) Distressed vegetation
 - 2) Surface staining
 - 3) Subsidence
 - 4) Discharge
 - 5) Fill materials
 - 6) Adjacent property observation
- u) Waste water treatment
- v) CERCLA related contamination
 - 1) Properties that do not require remedial actions
 - 2) Properties where remedial actions have been done
 - 3) Properties which require remedial actions
- w) Waste water (i.e. equipment cleaning station)
 - 1) Disposal
 - 2) Quantity
 - 3) Treatment
- x) Septic tanks
- y) Environmental compliance
 - 1) Current regulatory status
 - 2) Closure status
 - 3) Future regulatory status

3 Investigation for special resources

- a) Threatened and endangered species
- b) Wetlands
- c) Conservation areas
- d) Undeveloped floodplains/Wild and Scenic Rivers
- e) Scientific significance
- f) Wilderness Areas
- g) National Natural Landmarks
- h) Undeveloped properties within sole source aquifer
- i) Historic property
- j) Recreational areas
- k) Undeveloped coastal zones (Coastal Barrier Resources System)
- l) 100-year floodplain
- m) Wild and Scenic Rivers
- n) Sole source aquifers
- o) Erosion Problems

VII APPLICABLE REGULATORY COMPLIANCE ISSUES

- a. List of compliance issues
- b. Description of corrective actions
- c. Estimates of various alternatives

VIII SUMMARY OF FINDINGS

- a. Facility matrix
- b. Property categories map
- c. Resources map
- d. Data Gaps
- e. Risk assessment
- f. Investigative Findings
- g. Sampling
- h. History and current use
- i. Environmental setting
- l. Adjacent properties

IX CONCLUSIONS

X RECOMMENDATIONS

XI LIMITATIONS

XII REFERENCES

- a. Persons interviewed (tenants, owners, management)
- b. Environmental documentation
- c. Previous environmental investigations
- d. Ongoing environmental investigations

XIII APPENDICES

- a. Photo documentation
- b. Data search agency information
- c. Environmental Baseline Study Questionnaire
- d. Past reports
- e. EBS Information Search Checklist
- f. Terms
- g. Maps
- h. Ownership/historical documentation
- i. Regulatory documentation
- j. Interview Records
- k. FOIA requests and responses

XIV CERTIFICATIONS

XV LIST OF FIGURES

- a. State location map

- b. Topographic Map
- c. Site layout/plan
- d. Potential source location map
- e. Historic expansion of significant structures
- f. Location of surface water drainage divides
- g. Hazardous substances and petroleum storage
- h. Current and former tank locations
- i. Septic systems, oil water separators
- j. Map showing contaminated and uncontaminated properties

XVI LIST OF TABLES

- a. Points-of-contact (Interviewee, Agency, Office, Address, Date Contacted)
- b. Source of Table (type, volume, location, dates)
- c. Pathway Table (media, relative pathway priorities)
- d. Receptor Table (human, health, proximity, route of exposure)
- e. Recommended analyses for any eventual monitoring
- f. On-base operational buildings and structures
- g. On-base housing facilities
- h. On-base recreational buildings and structures
- i. UST summary
- j. ACM suspected areas

APPENDIX E

INFORMATION SEARCH CHECKLIST

Maps/Atlases/Photographs

- Topographical - USGS
- Wetlands Delineation Maps
- Glacial Deposits
- Bedrock type & depth
- Watershed
- Aquifer classifications
- Water Table/Potentiometric
- Mineral Resources
- Oil & Gas Information
- Seismic
- Critical Wildlife Habitat
- Endangered Species
- Aerial photos (back to 1940 in 15 yr intervals)
- Sanborn & City Atlases
- Fire Insurance Plans
- Soil Conservation Survey Maps

Regulatory

State/Federal Records

Federal Records

- CERCLIS
- NPL
- RCRA-TSD
- RCRA Generator List
- ERNS

State Records

- State CERCLIS
- State NPL (SPL)
- State Solid Waste Disposal Facility List
- LUST List
- UST Permit List
- AST Permit List

SARA Title III Reports

State/Federal Data Bases

- AIRS
- DOCKET
- CMEL
- RAATS
- CDS

Public Records

- Polk records, County, City, & State Directories
- Engineering Plans/Gas/Water/Electric Utility Maps
- Gas Utility Plans/Maps
- Water Utility Plans/Maps
- Electric Utility Plans/Maps

Surface/Subsurface Data

- Soil Borings, Test Pits, or Excavations
- Blasting or Borrow Pit Areas
- Backfill around Site
- Local/County Officials

Phone Surveys/Interviews

- Registry of Deeds
- Tax Collector/Assessor
- Board of Health/Health Investigators
- Fire Department
- Planning/Zoning Board
- Sanitary Districts
- Building Inspector
- County Commissioner
- Engineering Department
- Department of Public Works
- Water/Sewer Department
- Emergency Response Personnel
- Zoning & Planned Use Issues

Agriculture/Livestock History

- Fruits and Vegetables
- Field Crops
- Livestock

Facility History

Radon Assessment

- Consultant radon survey
- Drinking water survey
- On-site radon test results

Asbestos Assessment

- Building construction rehabilitation specifications
- Engineer's/Consultant's asbestos report

Polychlorinated Biphenyls

- Utility transformer records

- FINDS
- FTTS
- NESHAPS
- PADS
- PCS
- RODS
- SETS
- TRIS
- TSCA

- Site survey of transformers
- Site soil, groundwater PCB test results
- Underground Storage Tanks (USTs)
- Oil, motor fuel and waste oil systems reports
- Site soil and groundwater tests
- Site tank survey

Environmental Information Firms
See Appendix B

Additional Hazards

- Urea Formaldehyde Foam Insulation Survey
- Interior air test results
- Lead paint survey
- Lead in drinking water test results
- Pesticide/Herbicide Management Survey
- Facility spill reports

Buildings

- Improvement records
- Plans & Specifications
- Directories for Prior Owner/Tenant
- Environmental site assessment reports
- Environmental audit reports
- Community Right-To-Know Plan
- Geotechnical studies
- Process Flow Charts
- Raw Materials Inventory
- Safety plans
- Waste Disposal Records/Manifests
- Soil and Gas Surveys
- Business Directories
- Facility Maintenance Records/MSDS Lists
- Enforcement Order/Agency Inspection
- Insurance & Environmental documents
- Building Zoning Records
- Water Supply Data & Water Information
- Geophysical Surveys

Real Estate Records (50 years)

- Deeds
- Leases
- Easements
- Liens
- Property tax records
- Real estate sales persons
- Trial court records for liens
- Zoning/land use records
- Restrictive covenants of record

Miscellaneous Sources

- Historical Societies
- Libraries
- U.S. Coast Guard Spill Reports
- Environmental Protection Agency (EPA)
- United States Geological Survey (USGS)
- Defense Technical Information Center (DTIC)
- U.S. Army Environmental Center Tech. Info. Ctr.
- Alternative Sources Associated w/Installations
- Universities
- Map Archives
- Phone Directories
- DoD Nonstockpile Chemical Material Program

State Organizations

- Waste Management Board
- Regional Water Quality Control Board
- State Department of Health Services
- Air Quality Management District
- Geology Department

Department of Pollution Control

Studies/Audits

NEPA (Rec & Check, EAs, EISs)

Historical/Cultural Resources Plans

Facility Environmental or Training Office

Facility Training Office

ACTS

ECAS

DB1383

Self Audits

FUDS

Permits

Corps of Engineers (COE) Permits

Standard Industrial Code (SIC)

Storm Water Runoff Permits

RCRA Permits

Clean Air Act (CAA) Permits

National Pollutant Discharge Elimination System (NPDES) Permits

Facility Operations Record

Spill Prevention Control & Countermeasure (SPCC) Plan

Material Safety Data Sheets

Occupational Safety & Health Administration (OSHA) Right-to-Know Claims

Security Exchange Commission (SEC) and Environmental Finding

FINDS Index

APPENDIX F

DETAILED COST EXTIMATE FOR EBSs

I PHASE I	
1. Title Search	\$2,000.00
2. EBS Phase I	\$2,500 - \$10,000

I FIELD WORK

I	
1. Monitoring Well Installation: 10 wells @ \$4,000.00 per well	\$40,000.00
2. Sample Collections:	
a. Monitoring Wells (2 hours/well for 13 wells)	26 hours
b. Wipe Samples (0.5 hours/sample for 12 samples)	6 hours
c. Soil/Sediment Samples (1 hour/sample for 18 samples)	18 hours
d. Radon	<u>50 hours</u>
e. Air Monitoring	
f. Receptor Survey	
g. Risk Assessment	
3. Surveys	
a. Magnetometer Survey, Ground Peniradar	2 hours
b. Asbestos Survey	4 hours
c. Lead Paint Survey (Inspect painted surfaces for cracked or peeling paint)	8 hours
d. Mob to Site	3 hours
e. DeMob	<u>3 hours</u>
	<u>20 hours</u>

Total: 70 HOURS
or approximately 9 days

2 Technicians for 9 days =

2 men for 9 days = 18 man days @ \$500.00: \$9,000.00

TOTAL FIELD WORK COSTS:	\$49,000.00
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III. TRAVEL AND PER DIEM

1. 18 Man Days on Travel @ \$66.00/day	\$1,188.00
2. 500 miles @ \$.35/mile	\$175.00
3. Gas	\$50.00

TOTAL TRAVEL AND PER DIEM COSTS: \$1,413.00

IV. CHEMICAL ANALYSIS

1. Underground Storage Tanks	
2 Soil Samples	
Analyze 2 Soil Samples for TRPHs @ \$125.00 each	\$250.00
2. Mesquito Control Commision	
A. Interior	
10 Wipe Samples Inside Building:	
Analyze 10 Wipe Samples for Pesticides (method 8080) @ \$200.00 each	\$2,000.00
Analyze 10 Wipe Samples for Herbicides (method 8150) @ \$160.00 each	\$1,600.00
B. Exterior	
6 Soil Samples Around Perimeter of Building	
Analyze 6 Soil Samples for Pesticides (method 8080) @ \$200.00 each	\$1,200.00
Analyze 6 Soil Samples for Herbicides (method 8150) @ \$160.00 each	\$960.00
3. Fence Perimeter	
6 Soil Samples Along Fence	
Analyze 6 Soil Samples for Pesticides (method 8080) @ \$200.00 each	\$1,200.00
Analyze 6 Soil Samples for Herbicides (method 8150) @ \$160.00 each	\$960.00
Analyze 6 Soil Samples for TRPHs @ \$125.00 each	\$750.00
4. Drainage Ditch	
3 Sediment Samples	
Analyze 3 Soil Samples for Pesticides (method 8080) @ \$200.00 each	\$600.00
Analyze 3 Soil Samples for Herbicides (method 8150) @ \$160.00 each	\$480.00
Analyze 3 Soil Samples for TRPHs @ \$125.00 each	\$375.00
Analyze 3 Soil Samples for RCRA Metals @ \$234.00 each	\$702.00
5. Groundwater Sampling	
10 New Wells and 3 existing wells	
Analyze 13 Wells for Volatile Organics (method 8240) @ \$275.00 each	\$3,575.00
Analyze 13 Wells for PAH (method 610) @ \$175.00 each	\$2,275.00
Analyze 13 Wells for Pesticides (method 8080) @ \$ 200.00 each	\$2,600.00
Analyze 13 Soil Samples for RCRA Metals @ \$234.00 each	\$3,042.00

6. Lead		
A. 1 Wipe Sample on Interior		
1 Wipe Sample on Exterior		
Analyze 2 Wipe Samples for Lead @ \$ 54.00		\$108.00
each		
B. 1 Soil Sample		
Analyze 1 Soil Sample for Lead @		\$54.00
\$54.00 each		
7. Asbestos		
22 Bulk Samples		
Analyze 22 Bulk Samples for Asbestos @ \$35.00		\$770.00
each		
8. Radon		
5 Test Kits @ \$30.00 each		\$150.00
9. QC Samples		
A. Mosquito Control Commission		
1 Wipe Sample Duplicate @ \$360.00		\$360.00
each		
B. Lead Remelt		
1 Wipe Sample Duplicate @ \$54.00		\$54.00
each		
C. Soil Samples		
2 Soil Sample Duplicates @ \$719.00		\$1,438.00
each		
D. Groundwater		
1 Groundwater Duplicate @ \$884.00		\$884.00
each		
3 Trip Blanks @ \$250.00 each		\$750.00
		<u>\$750.00</u>
	TOTAL CHEMICAL	\$27,037.00
	ANALYSIS COSTS:	
V. MONITORING WELL INSTALLATION PLAN		
5 Man-days @ \$500.00/day		\$2,500.00
VI. SITE SAFETY AND HEALTH PLAN		
4 Man-days @ \$500.00/day		\$2,000.00
VII. CHEMICAL DATA ACQUISITION PLAN		
6 Man-days @ \$500.00/day		\$3,000.00
VIII. REPORT OF FINDINGS		
6 Man-days @ \$500.00/day		\$3,000.00
IX. TECHNICAL OVERSIGHT		
10 Man-days @ \$500.00/day		\$5,000.00
		<u>\$5,000.00</u>
	SUB-TOTAL:	\$92,900.00
	CONTINGENCIES	\$9,290.00
	(10%):	
	TOTAL:	<u>\$102,190.00</u>

X. UNDERGROUND STORAGE TANK REMOVAL ACTION

1. Mobilization	\$300 - \$1,000
2. UST Removal and Disposal	\$3,000 - \$21,000
3. Material Excavation (12cy @\$5.50 - \$45.00)	\$66 - \$540
4. Contaminated Material Disposal (12cy @ \$50.00)	\$600.00
5. Backfill Material	
A Borrow Material (20cy @ \$6.50 - \$20.00)	\$130 - \$400
B Topsoil (12cy @ \$8.00 - \$20.00)	\$96 - \$240
6. Application and Closure Reports	\$250 - \$1,900
7. Analytical Testing	
A TRPH (GRO, DRO), 12 samples @ \$100.00	\$1,200.00
B BTEX (6 samples @ \$100.00)	\$600.00
C TCLP (TRPH, benzene, lead), 1 @ \$750.00	\$750.00
8. Seeding	\$75 - \$500
9. Pavement Replacement	\$850.00

XI. PUBLIC RELATIONS ACTIVITIES

a. Public Releases	
1. Table Top Display (including hardware)	\$4,500
2. 20-Minute Video	\$31,000
3. 12-Page Brochure (Develop Camera Ready Copy)	\$15,000
4. News Release (Research & Produce)	\$1,000
5. Fact Sheet (Research & Produce)	\$1,500
6. Finalize Draft Community Relations Plan (CRP) w/o interviews	\$1,800
	TOTAL
	\$54,800

b. Restoration Advisory Boards

1. Establishment Costs	
a) Develop selection process	\$1,500
b) Form selection committee	\$1,500
c) Develop survey	\$950
d) Prepare news release	\$250
e) Display advertisement	\$200
f) Plan information meeting	\$650
g) Facilitate information meeting	\$300
h) Develop handbook for members	\$1,500
i) Develop mailing list	\$150

j) Develop preliminary charter		\$1,500
	TOTAL	<u>\$8,500</u>

2. On-going Operations

a) Plan RAB meeting		\$650
b) Provide meeting support		\$300
c) Facilitate meeting		\$300
d) Meeting notices		\$150
e) Community mail outs		\$1,500
f) Meeting facility rental		\$150
g) Audiovisual equipment		\$100
h) Meeting minutes		\$350
i) Refreshments		\$50
j) Finalize Charter		\$1,500
	TOTAL	<u>\$5,050</u>

APPENDIX G

REFERENCES

- a. 40 CFR Part 373.
- b. DA Pam 200-1,
- c. RCS 1383 Guidance Handbook
- d. AR 405-10, Acquisition of Real Property and Interests Therein, July 1974.
- e. AR 405-80, granting Use off Real Estate, February 1979.
- f. AR 405-90, Disposal of Real Estate (Chapter 2, Property to be Excessed; Chapter 6, DA Disposal of Real Property, Appendix D, Decontamination of Real Property (SOCS)), 10 May 1985.
- g. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA § 120)(42 USC 9601), as amended
- h. Resource Conservation and Recovery Act of 1976(40 CFR 261, 262, 263, 302, and 761)
- i. Federal Property Management Regulations (41 CFR 101-47)
- j. Guidance to Environmental Site Assessments (1992) The Association of Ground Water Scientists and Engineers (AGWSE)
- k. Hazardous and Solid Waste Amendments (HSWA) of 1984.
- l. ASTM Standard Practice E 1527
- m. Corps of Engineers (33 CFR 320)(404 Permit).
- n. H.R. 2787, 101st Cong. 1st SESs. (1989).
- o. Defense Environmental Restoration Program (DERP)
- p. CERFA - Community Environmental Response Facilitation Act [USC 9620(h)]
- q. The Clean Water Act
- r. Army Regulation 200-1
- s. SARA Title III, § 211
- t. AR 200-1, Environmental Protection and Enhancement (Chapter 12, paragraph 12-5, Real Property Transactions, and Appendix B, Environmental Baseline Study (EBS) Protocol), 23 April 1990.
- u. AR 200-2, Environmental Effects of Army Actions; (Chapter 2, National Environmental Policy Act (NEPA) and the Decision Process; Chapter 3, Required Records and Documents; Chapter 4, Categorical Exclusions; Chapter 5, Environmental Assessment (EA); Chapter 6, Environmental Impact Statement (EIS), 23 December 1988.
- v. Draft Army National Guard Real Estate Manual for Federal Property, 24 September 1997.
- w. National Guard Bureau – Army National Guard Real Estate Manual for Federal Property, Guidance on Preparing Documentation for Army National Guard Real Estate Actions Dealing with Federal Property, July 1998.
- x.
- y. Public Law 102-425, The Community Environmental Response Facilitation Act, 19 October 1992.
- z. Federal Register, 40 CFR Part 373, U.S. Environmental Protection Agency,

Reporting Hazardous Substance Activity When Selling or Transferring Federal Real Property; Final Rule, 16 April 1990.

aa. BRAC Cleanup Plan (BCP) Guidebook, Department of Defense, Fall 1993.

bb. Memorandum, The Deputy Secretary of Defense, 9 September 1993, subject: Disposal of Real Property at Closing and Realigning Bases.

cc. Memorandum, Office of the Assistant Secretary of Defense, 18 June 1992, subject: Amended Initial Guidance for Environmental Reviews for Parceling.

dd. Memorandum, USATHAMA, CETHA-BC-B, 28 April 1992, subject: Statements of Condition (SOC).

ee. Memorandum, AMC, AMCEN-R, 2 April 1991, subject: Preliminary Assessment Screenings (PAS).

ff. Memorandum, HQDA(ENVR-EH), 12 March 1991, subject: Preliminary Assessment Screenings (PAS).

gg. Memorandum, HQDA(ENVR-EH), 25 February 1991, subject: Preliminary Assessment Screening (PAS) Training.

hh. Memorandum, HQDA(ENVR-EH), 1 November 1990, subject: Real Property Transactions and Preliminary Assessment Screenings (PAS).

ii. Memorandum, SFIM-AEC-BCB (Draft), 29 September 1993, subject: Environmental Documentation for Property Transfer and Lease.

jj. All state and local statute and regulations pertaining to environmental restoration and compliance. Many states have received authorization to implement and enforce Federal RCRA regulations as well as state-specific RCRA regulations that may be more stringent than the Federal regulations. States may also have their own reporting and notification requirements that differ from the Federal requirements. At the local level; cities, counties, water districts, and air quality management districts often require operation permits for septic systems, wash racks, paint booths, air emissions sources, landfills, etc.