PHASE I ENVIRONMENTAL SITE ASSESSMENT
BLUESTONE DAM
CONTRACTOR WORK LIMITS (CWL)
DAM SAFETY MODIFICATION STUDY
HINTON, WEST VIRGINIA
JUNE 2016
PHASE I ENVIRONMENTAL SITE ASSESSMENT
BLUESTONE DAM
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HINTON, WV
JUNE 2016

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Acronym List

AST  Aboveground Storage Tank
ASTM  American Society for Testing and Materials
CELRH EC-CE Environmental and Remediation Section of the Huntington District, United States Army Corps of Engineers
CERCLIS Comprehensive Environmental Response Compensation and Liability Information System
CWL  Contractor Work Limits
DSMS  Dam Safety Modification Study
EDR  Environmental Data Resources
EM  Engineering Manual
EPCRA Emergency Planning and Community Right to Know Act
ER  Engineering Regulations
ERGO  Environmental Review Guide for Operations
ERNS  Emergency Response Notification System
ESA  Environmental Site Assessment
FIFRA  Federal Insecticide, Fungicide and Rodenticide Act
FINDS  Facility Index System
HTRW  Hazardous, Toxic, and Radioactive Waste
LUST  Leaking Underground Storage Tank
NPL  National Priorities List
QCP  Quality Control Plan
RCRIS-LQG Resource Conservation and Recovery Information System – Large Quantity Generators
RCRIS-SQG Resource Conservation and Recovery Information System – Small Quantity Generators
RCRIS-TSD Resource Conservation and Recovery Information System – Treatment, Storage and Disposal Facilities
REC  Recognizable Environmental Concerns
SHWS  State Hazardous Waste Sites
SSHP  Site Safety and Health Plan
SWF/LF  Solid Waste Facility/Landfill Facilities
TCLP  Toxicity Characteristic Leaching Procedure
USACE United States Army Corps of Engineers
UST  Underground Storage Tank
EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers (USACE) conducted a Phase I Environmental Site Assessment (ESA) on the Contractor Work Limits (CWL) for the Dam Safety Modification Study (DSMS) being conducted for Bluestone Dam. The DSMS will determine what construction activities will be performed to alleviate deficiencies of the Bluestone Dam stilling basin, designated as Phase 5 construction. The purpose of the Phase I ESA was to identify the potential presence of hazardous, toxic, or radioactive waste (HTRW) contamination in the CWL. The investigation was performed in accordance with ASTM E 1527-15 and 1528-14 Standards, USACE Huntington District ISO 9001 procedures, and USACE HTRW policies.

Environmental professionals conducted the field investigation of the proposed CWL in March and May 2016. During the physical inspection, the ground surface of the area was examined for signs of contamination. Specific indicators of possible environmental contamination include stained soil, stressed vegetation, surface debris, underground storage tank (UST) fill caps or vent lines, and unusual ground depressions or formations. The site reconnaissance also included the assessment of the potential for contamination from activities on adjacent areas. Color photographs of the characteristics of the area were taken during the site assessment.

Title ownership was researched on the non-Federal portion of the CWL between State Route 20 and the New River downstream of the dam. The bulk of the property in the CWL is owned by the Federal Government and has been since the 1940s. Interviews were conducted with USACE Bluestone Dam project personnel to obtain specific information about past activities and current conditions on the sites. Records of regulatory agencies listing recognized environmental conditions in connection with the properties were accessed through Environmental Data Resources Inc., a commercial database retrieval company located in Milford, CT. The current US Geological Survey (USGS) 7.5-minute topographic map and historic USGS topographic maps were obtained and reviewed as part of the ESA.

Based on this assessment, there are no environmental concerns that would impact construction activities in the present CWL. It is recommended that current Phase 3 and Phase 4 construction activities be monitored for any incidents that might environmentally impact future construction activities on the USACE project. If the design plans undergo further changes to include any additional areas for Phase 5 construction or mitigation, then those properties will have to be evaluated for any HTRW concerns.
1. INTRODUCTION

The U.S. Army Corps of Engineers (USACE) conducted a Phase I Environmental Site Assessment (ESA) on the Contractor Work Limits (CWL) for the Dam Safety Modification Study (DSMS) of Bluestone Dam. The DSMS and subsequent construction activities will address the deficiencies of the current stilling basin. The purpose of the Phase I ESA was to identify the potential presence of hazardous, toxic, or radioactive waste (HTRW) contamination in the CWL. The investigation was performed in accordance with ASTM E 1527-15 and 1528-14 Standards, USACE Huntington District ISO 9001 procedures, and USACE HTRW policies.

1.1 Project History

The Bluestone Dam is located near Hinton in Summers County, West Virginia, on the New River, one mile upstream from the confluence with the Greenbrier River. Bluestone Dam was constructed in the 1940’s. The original design intent was to provide flood control for the Kanawha River Basin and hydroelectric power generation capacity. At the height of World War II, construction efforts were temporarily suspended because of labor and steel shortages. Once construction was re-initiated, the hydroelectric power function of the dam was revisited. It was decided at that time to only install the six, 19-foot diameter penstocks and indefinitely delay the powerhouse and turbine construction. The dam is a straight, concrete gravity structure with a maximum height above stream channel of about 165 feet. The main body of the dam consists of the left and right abutment sections, the spillway section, assembly bay section, powerhouse intake section, and the non-overflow section. The original conservation pool was 1,490 feet assuming a hydroelectric function. Because the dam currently serves as a flood control structure only, the operating pools are 1,406 feet during winter months and 1,410 feet during summer months. The pool of record for the facility is elevation 1,506 feet, which occurred during a storm event in 1960.

In 1998, the Huntington District received approval to modify the dam to safely pass a Probable Maximum Flood (PMF) event. Construction efforts under the approved plan have been divided into manageable contracts. Five construction contracts have been awarded to date. Phase 1, Phase 2A, and Phase 2B construction efforts are complete. Phase 3 and Phase 4 are currently ongoing. Following are brief descriptions of the work within each of the current construction phases.
a) Phase 1 – Construction of mass concrete thrust blocks at the toe of the penstock monoliths and 3 hydraulically actuated bulkheads were installed at the end of the penstock to allow for the release of additional discharge.

b) Phase 2A – Installation of a swing gate closure across State Route 20, east abutment gravity wall and other miscellaneous items.

c) Phase 2B – Installation of 216 high strength steel strand anchors in the dam and 3 hydraulically actuated bulkheads which completed the installation of the bulkheads from Phase 1.

d) Phase 3 - Construction of a penstock discharge scour protection stilling basin.

e) Phase 4 - Installation of 278 high strength steel strand anchors in the dam.

f) Phase 5 - Current DSMS to address remaining deficiencies.

1.2  Project Overview

The DSMS and subsequent Phase 5 construction will address the potential scouring of the current unlined stilling basin, and confinement of the outflow through the spillway during the PMF. The CWL will allow access to the spillway from both sides of the river downstream of the dam, and the backside of the dam if required.

1.3  Limitations of Investigation

The investigations were performed based solely upon information available to the USACE Huntington District, Environmental and Remediation Section (CELRH-EC-CE) at the time of the investigation. Services for the Phase I ESA did not include sampling, testing, and/or analyses to conclusively ascertain that contamination exists or is absent at or near the project site. Information concerning environmentally-sensitive incidents was gathered based on state and federal databases available for public review and interviews with current owners, occupants, utility company personnel, and/or regulatory agency personnel. No warranties or certifications can be provided by CELRH-EC-CE concerning the accuracy or completeness of all the information reviewed during the investigations.

The determination of potential HTRW contamination should not be considered as a definite assertion that an environmentally-sensitive condition actually exists. The conclusions and recommendations presented herein are based on information gathered using that degree of care and skill ordinarily exercised under similar circumstances by competent members of the environmental profession and no warranties are expressed or implied.

Furthermore, no ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Conducting a Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions and this assessment recognizes reasonable limits of time and cost. In addition, appropriate inquiry does not mean an exhaustive assessment of a property. At some point, the
cost of information obtained or the time required to gather it outweighs the usefulness of the information and in fact may be a material detriment to the orderly completion of transactions. Furthermore, subsequent ESAs should not be considered valid standards to judge the appropriateness of any prior assessment based on hindsight, new information, use of developing technology or analytical techniques, changing regulatory or industry standards, or other factors.

1.4 **Scope of Work and Investigative Procedures**

In accordance with USACE HTRW Policy and current ISO 9001 procedures and work instructions, a Quality Control Plan (QCP) and a Site-Specific Safety and Health Plan (SSHP) were developed and implemented during all phases of this investigation. Procedures and documentation of the QCP are enclosed in Appendix F. A copy of the SSHP is located in Appendix G.

The following sections describe the general procedures used for the scope of this investigation. Site-specific findings are discussed in Section 2.0 below.

1.4.1 **Site Assessment**

The fieldwork for the investigation consisted of site visits to observe the conditions of the properties with regard to recognizable environmental concerns (RECs). Environmental professionals physically investigated the area on 24 March 2016, and 18 May 2016. During the physical inspection, the ground surface was examined for signs of contamination. Specific indicators of possible environmental contamination include stained soil, stressed vegetation, surface debris, underground storage tank (UST) fill caps or vent lines, and unusual ground depressions or formations. The site reconnaissance also included the assessment of the potential for contamination on the property due to activities on adjacent properties. Site assessment interviews were completed for this area and are located in Appendix H. Color photographs of the area and of features considered to be possible RECs were taken to supplement written records of the visual observations. These photographs are located in Appendix I.

1.4.2 **Interviews**

The field investigations were supplemented by interviewing USACE personnel who work at Bluestone Dam. These interviews were performed in order to obtain information about current and previous usage of the properties and about activities associated with environmentally sensitive incidents. Interviews with project personnel are documented in Appendix H.

The following individuals were interviewed:

- Dean Bonifacio, Park Manager, Bluestone Dam
- Whitfield Lance, Construction Inspector, Bluestone Construction RE Office
- John Atkins, Construction Inspector, Bluestone Construction RE Office
1.4.3 Records of State and Federal Agencies

A site map showing the locations of the area was used to obtain federal and state records of environmentally-sensitive incidents and activities in the immediate vicinity of the project area. Federal and state databases were accessed through a commercial database retrieval company.

Records of regulatory agencies listing RECs in connection with the properties were accessed through Environmental Data Resources (EDR), Inc., a commercial database retrieval company located in Milford, Connecticut. The information ascertain provided by EDR is located in Appendix C. Results of the EDR search of available (“reasonable ascertainable”) government records in the proximity of these tracts for the following databases are presented in the following sections. Detailed information regarding the nature and function of these databases is included with the search report.

The target property was found in the following databases:
- RCRA-CESQG – Resource Conservation and Recovery Act Conditionally Exempt Small Quantity Generator
- FINDS - Facility Index System
- ECHO – EPA Enforcement and Compliance History Online
- NY MANIFEST
- WV UST

The first three databases indicate that Bluestone Dam is listed under these programs; there is no present violations, or non-compliance under these programs. Bluestone Dam is listed under the NY Manifest program for disposing of lead contaminated paint removed from the structure to a NY hazardous waste landfill in 1996. The WV UST database indicates that at one time, Bluestone Dam had three underground storage tanks at its facilities. These tanks were removed and the site closed out in 1992.

No mapped sites were found within the search radius around the target property for the following databases:
- Federal
  - NPL – National Priority List
  - Proposed NPL – Proposed National Priority List Sites
  - NPL LIENS – Federal Superfund Liens
  - Delisted NPL – National Priority List Deletions
  - FEDERAL FACILITY – Federal Facility Site Information listing
  - SEMS – Superfund Enterprise Management System
  - SEMS-ARCHIVE – Superfund Enterprise Management System Archive
  - CORRACTS – corrective Action Report
  - CERCLIS – Comprehensive Environmental Response, Compensation, and Liability Information System
• CERC-NFRAP – CERCLIS No Further Remedial Action Planned
• LIERSN 2 – CERCLA Lien Information
• CORRACTS – Corrective Action Report
• RCRA-TSDF - Resource Conservation and Recovery Act Treatment, Disposal, or Storage Facility
• RCRA-LQG – Resource Conservation and Recovery Act Large Quantity Generator
• RCRA-SQG - Resource Conservation and Recovery Act Small Quantity Generator
• LUCIS – Land Use Control Information System
• US ENG CONTROLS – Engineering Controls Sites List
• US INST CONTROL – Sites with Institutional Controls
• ERNS – Emergency Response Notification System
• RCRA-NonGen - Resource Conservation and Recovery Act Non Generators
• FUDS – Formerly Used Defense Sites
• SCR DRYCLEANERS – State Coalition for Remediation of Drycleaners Listing
• US FIN ASSUR – Financial Assurance Information
• EPA WATCH LIST – EPA Watch List
• 2020 COR ACTION – 2020 Corrective Action Program List
• TSCA – Toxic Substances Control Act
• TRIS – Toxic Chemical Release Inventory System
• SSTS – Section 7 Tracking System
• ROD – Record of Decision
• RMP – Risk Management Plans
• RAATS – RCRA Administrative Action Tracking System
• PRP – Potentially Responsible Parties
• PADS – PCB Activity Database System
• ICIS – Integrated Compliance Information System
• FTTS – FIFRA/TSCA Tracking System
• MLTS – Material Licensing Tracking System
• COAL ASH DOE – Steam-Electric Plant Operation Data
• COAL ASH EPA – Coal Combustion Residues Surface Impoundments List
• PCB TRANSFORMER – PCB Transformer Registration Database
• RADINFO – Radiation Information Database
• HIST FTTS – FIFRA/TSCA Tracking System Administrative Case Listing
• DOT OPS – Incident and Accident Data
• CONSENT – Superfund (CERCLA) Consent Decrees
• INDIAN RESERV – Indian Reservations
• FUSRAP – Formerly Utilized Sites Remedial Action Program
• UMTRA – Uranium Mine Tailings Sites
• LEAD SMELTERS – Lead Smelter Sites
• US AIRS – Permitted Facility and Emissions Listing
• US MINES – Mines Master Index File
• UXO – Unexploded Ordinance Sites
• DOCKET HWC – Hazardous Waste Compliance Docket Listing

• State and Local Records
  • WV SWF/LF – List of M.S.W. Landfills/Transfer Station Listing
  • WV LCP – Landfill Closure Program
  • WV LUST – Leaking Underground Storage Tanks
  • INDIAN LUST – LUST on Indian Land
  • FEMA UST – Underground Storage Tank Listing
  • WV AST – Aboveground Storage Tanks
  • INDIAN UST – Underground Storage Tanks on Indian Land
  • WV INST CONTROL – Sites with Institutional Controls
  • WV VCP – Voluntary Remediation Sites
  • INDIAN VCP – Voluntary Cleanup Priority Listing
  • WV BROWNFIELDSD – Brownfields Sites Listing
  • US BROWNFIELDSD – A Listing of Brownfields Sites
  • INDIAN ODI – Report of the Status of Open Dumps on Indian Lands
  • ODI – Open Dump Inventory
  • DEBRIS REGION 9 – Torres Martinez Reservation Illegal Dump Site Locations
  • US HIST CDL – Delisted National Clandestine Laboratory Register
  • WV CDL – Drug Lab Site Locations
  • US CDL – National Clandestine Laboratory Register
  • LIENS 2 – CERCLA Lien Information
  • HMIRS – Hazardous Material Information Reporting System
  • WV SPILLS – Spills Listing
  • WV AIRS – Permitted Facility and Emissions Listing
  • WV COAL ASH – Coal Ash Landfills
  • WV DRYCLEANERS – Listing of Drycleaner Locations
  • WV Financial Assurance – Financial Assurance Information Listing
  • WVNPDDES – Wastewater Discharge Permits Listing
  • WVUIC – Underground Injection Wells
  • FUELS PROGRAM – EPA Fuels Program Registered Listing

• EDR Proprietary Historical Databases
  • EDR MGP – EDR Proprietary Manufactured Gas Plants
  • EDR Historical Auto Stations – EDR Proprietary Historic Gas Stations
  • EDR Historical Cleaners – EDR Proprietary Historic Dry Cleaners

• EDR Recovered Government Archives
  • WV RGA LF – Recovered Government Archive Solid Waste Facilities List

×
• WV RGA LUST – Recovered Government Archive Leaking Underground Storage Tank

• Additional Environmental Records
  • DOD – Federally owned or administered lands, administered by the Department of Defense, that have any area equal or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Due to poor or inadequate address information, two sites could not be plotted by EDR. Unplottable sites were reported in the WV NPDES, FINDS, and ECHO databases. Both are listed as BLUESTONE DAM – DAM SAFETY ASSURANCE. The WV NPDES indicates a water discharge permit required by the Phase 3 Contractor during construction. The FINDS and ECHO are listings for the Contractors during the Dam Safety Assurance construction. There is no present violations, or non-compliance under these programs. Information collected on the orphan sites is summarized in the EDR search reports in Appendix C.

1.4.4 Ownership History

In accordance with CELRH-EC-CE ISO 9001 Work Instruction 3.36.2, Section 6.4, ownership histories were developed for the properties not owned by the Federal government. These properties are located between State Route 20 and the New River downstream of the dam, on the left descending bank. Except for the time that the properties were owned by the State of West Virginia for the relocation of State Route 20 during construction of Bluestone Dam, they have been owned by private individuals. These properties had no development prior to Coastal Drilling leasing the area for an office and warehouse during Phase 4 construction.

1.4.5 Other Phase I HTRW Investigation Reports

A Phase I ESA was performed by CELRH-EC-CE in February 1998 prior to the initial construction activities (Phase 1); this report is out of date, requiring the new ESA. No Phase II Investigations have been performed in this area.

1.4.6 ERGO Report

An environmental compliance review of Bluestone Dam was conducted on 8-10 August 2006 by a multidisciplinary team from the Huntington District based upon the Environmental Review Guide for Operations (ERGO) manual (January 1994), developed by Headquarters, US Army Corps of Engineers (HQUSACE). This review is to ensure that routine business of the Operations project are in compliance with all Federal, State and local environmental laws, regulations, and directives. This review provides a record of the environmental health of the project on the record date, as well as providing a basis against which progress can be measured. The ERGO Report is located in Appendix D.
The environmental compliance review considered twelve major environmental compliance categories, with special emphasis to those pertinent to the site. The twelve categories are:

- Category I – Air Emissions Management
- Category II – Cultural & Historic Resources Management
- Category III – Hazardous Materials Management
- Category IV – Hazardous Waste Management
- Category V – Natural Resource Management
- Category VI – Pesticide Management
- Category VII – Petroleum, Oil, & Lubricant Management
- Category VIII – Solid Waste Management
- Category IX – Special Pollutants Management: Radon, PCBs, Asbestos & Noise
- Category X – Underground Storage Tanks (USTs) Management
- Category XI – Waste Water Management
- Category XII – Water Quality Management

No significant, major or minor findings of non-compliance were noted at Bluestone Dam during the review. The scrapyard mentioned under Category VIII was located outside the CWL and has been removed. The outgranted facilities noted in the report (AEP flyash disposal area, Bluestone raw water treatment plant, and the wildlife management area) are not located within the CWL. The next ERGO review should be performed mid-year of 2016.

1.4.7 Historical Mapping

The purpose of a historical records search is to determine the past usage of each site. Aerial photographs were obtained for this report (included in Appendix B) dated 2011, 2009, 2007, 1996, 1990, 1976, 1967, and 1960. The aerial photographs do not indicate any present or historic activities that would cause HTRW concerns in the CWL. Historical topographic maps (included in Appendix B) dated 2014, 1998, 1976, 1968, 1914, 1912, 1892, and 1887 were obtained and reviewed. The 1914, 1912, 1892, and 1887 topographic maps show the area prior to Bluestone Dam being constructed. The other topographic maps (2014, 1998, 1976, and 1968) do not indicate any present or historic activities that would cause HTRW concerns in the CWL.

1.4.8 Orphan Sites

Due to poor or inadequate address information, two sites could not be plotted by EDR. Unplottable sites were reported in the WV NPDES, FINDS, and ECHO databases. Both are listed as BLUESTONE DAM – DAM SAFETY ASSURANCE. The WV NPDES indicates a water discharge permit required by the Phase 3 Contractor during construction. The FINDS and ECHO are listings for the Contractors during the Dam Safety Assurance construction. Information collected on the orphan sites is summarized in the EDR search reports in Appendix C.
1.4.9 Development of Conclusions and Recommendations

Using the investigative tools outlined above, conclusions and recommendations regarding the potential for contamination were made for this property. Recommendations may include Phase II(a) and/or other intrusive investigations in order to conclusively determine contamination presence. Based on the information obtained, the area was also evaluated for signs which may exhibit potential contamination that would require mitigation measures in accordance with federal and state law, but for which additional HTRW investigations are not recommended at this time.
2. INVESTIGATIVE FINDINGS, CONCLUSIONS, and RECOMMENDATIONS

Following the procedures outlined above, a Phase I ESA was performed on the Contractor Work Limits (CWL) for the Bluestone Dam DSMS. The DSMS and subsequent construction activities will address the deficiencies of the current stilling basin. In accordance with Corps of Engineers policy for HTRW investigations, a Quality Control Plan (QCP) and Site-Specific Safety and Health Plan (SSHP) were developed and implemented prior to and during all phases of this ESA. Procedures and documentation of the QCP are enclosed in Appendix F. A copy of the SSHP is in Appendix G. Records of the interviews and site assessment questionnaires can be found in Appendix H and color photos from the site visits are located in Appendix I. The following sections summarize the findings, conclusions, and recommendations for the CWL.

2.1 CWL Area

The CWL area is outlined on Figure 3 in Appendix A and takes in all of the property required for a Contractor to address the deficiencies of the current stilling basin. The upstream portion of the CWL includes the area immediately behind the dam, the left descending bank upstream to the Corps boat ramp and dock, and the wide areas adjacent to State Route 20 between the boat ramp and present RE Office (Appendix I, Photos BLN01 to BLN06). The downstream portion of the CWL includes the areas authorized by the Corps for the Phase 3 construction exclusive of the Emergency Spillway (Appendix I, Photos BLN07 to BLN16), Phase 4 construction (Appendix I, Photos BLN17 to BLN18), the properties located adjacent to State Route 20 downstream of the dam on the left descending bank (Appendix I, Photos BLN19 to BLN21), and the parking area adjacent to the dam on the left abutment (Appendix I, Photo BLN22).

2.1.1 Phase I Investigation Results

On 24 March 2016, and 18 May 2016, site visits were made to assess the CWL for Phase 5 construction. Site mapping is included in Appendix A. Site photos are included in Appendix I. The following observations were noted during the site visit.

The Phase 3 Contractor, Brayman Construction Company, operates on the right bank of the New River downstream of the dam. During the site visit, a petroleum containment area was observed (Appendix I, Photos BLN13 and BLN14). No spills or stained areas were observed outside of the containment area. Several diesel ASTs were observed around the emergency stilling basin utilized to refuel the compressors, generators, and cranes (Appendix I, Photos BLN15 and BLN16). No staining was observed near the ASTs.

The Phase 4 Contractor, Coastal Drilling, operates on the left bank of the New River downstream of the dam. The Contractor’s CWL includes the left bank adjacent to the stilling basin and the spillway section of the dam (Appendix I, Photo BLN17). During the site visit, no environmental concerns were observed in this area.
A portion of the CWL includes property between State Route 20 and the New River from the State Route 3 Bridge to the fishing pier road (Appendix I, Photos BLN19 to BLN21). The property is comprised of four separate tracts owned by the following:

- State Road Commission (State of WV); Map 11, parcel 158
- Jerry and Nannie Kirk; Map 11, parcel 150
- John and Wilma Angotti; Map 11, parcel 150.1
- Mary Meadows; Map 11, parcel 159

A map of the tracts is located in Appendix A (Figure 4). The ownership histories are located in Appendix E. These properties have always been owned by private individuals, except during construction of Bluestone Dam when the State of WV purchased the property to relocate State Route 20. Prior to the Phase 4 construction activities, these properties were undeveloped. Coastal Drilling purchased easements on these properties to place their office trailers, warehouse, and fenced yard (Appendix I, Photos BLN19 and BLN20). During the site visit, no environmental concerns were observed on these properties.

Dean Bonifacio is Park Manager for Bluestone Dam and has worked there since 1990. During his interview he stated that there is currently one 250 gallon diesel AST inside the dam. This AST is present for the emergency generator. Dean stated that there has never been a diesel spill associated with this AST. When questioned about the UST removal in 1992, Dean stated that he was working there when the three USTs were removed next to the maintenance building. At the time of removal, no evidence of contamination was apparent in the tank pit, and confirmation samples taken at the time came back clean. Two Construction Inspectors, Whitfield Lance and John Atkins, were interviewed to determine if any of the past or current construction contractors caused any concerns. Neither Whitfield nor John could recall any incidents from past or current contractors that would environmentally impact the proposed Phase 5 CWL.

Mapping was obtained from EDR for the project area and a review of reasonably ascertainable standard historical sources was performed as part of this investigation. The purpose of this historical record search is to determine the past uses of the project area. Aerial photographs, and USGS 7.5-minute historical topographic maps showing the project area were available and reviewed. Copies of these maps are included in Appendix B. The aerial photos and topographic maps did not indicate any past or present activities that would cause HTRW concerns within the project area.

Review of the records of regulatory agencies listing recognized environmental conditions were obtained for the project area from EDR. The target property was found in the following databases:

- RCRA-CESQG – Resource Conservation and Recovery Act Conditionally Exempt Small Quantity Generator
- FINDS - Facility Index System
- ECHO – EPA Enforcement and Compliance History Online
- NY MANIFEST
• WV UST
The first three databases indicate that the Bluestone Dam is listed under these programs; there is no present violations, or non-compliance under these programs. Bluestone Dam is listed under the NY Manifest program for disposing of lead contaminated paint removed from the structure to a NY hazardous waste landfill in 1996. The WV UST indicates that at one time, Bluestone Dam had three underground storage tanks at its facilities. These tanks were removed and the site closed out in 1992. No mapped sites were found within the search radius around the target property that would be an environmental concern. Due to poor or inadequate address information, two sites could not be plotted by EDR. Unplottable sites were reported in the WV NPDES, FINDS, and ECHO databases. Both are listed as BLUESTONE DAM – DAM SAFETY ASSURANCE. The WV NPDES is a water discharge permit required by the Phase 3 Contractor during construction. The FINDS and ECHO are listings for the Contractors during the Dam Safety Assurance construction.

2.1.2 Recommendation for Bluestone Dam CWL Area
Based on the investigative findings and the planned activities for this DSMS, there are no environmental concerns that would impact construction activities in the proposed CWL. It is recommended that current Phase 3 and Phase 4 construction activities be monitored for any incidents that might environmentally impact future construction activities on the USACE project. If the design plans undergo further changes to include any additional areas for Phase 5 construction or mitigation, then those properties will have to be evaluated for any HTRW concerns.

3. REFERENCES


EM 385-1-1, Safety and Health Requirements Manual

INSET A
NEW RIVER LOTS
SCALE: 1" = 125'

- State of WV (DOH)
- Jerry & Nannie Kirk
- John & Wilma Angotti
- Mary Meadows

SUMMERS COUNTY ~ WEST VIRGINIA

Figure 4
APPENDIX B
HISTORIC TOPOGRAPHIC MAPS
AND AERIAL PHOTOS
EDR Historical Topo Map Report

Site Name: Bluestone Dam  
Client Name: U.S. Army Corps of Engineers  
701 Miller Ave  
Hinton, WV 25951  
EDR Inquiry # 4614459.7  

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by U.S. Army Corps of Engineers were identified for the years listed below. EDR’s Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:  
Coordinates:  

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<th>Longitude:</th>
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Maps Provided:  
2014  
1998  
1976  
1968  
1914  
1912  
1892  
1887

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This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 2014 Source Sheets
- **Talcott**
  - 2014
  - 7.5-minute, 24000
- **Pipestem**
  - 2014
  - 7.5-minute, 24000
- **Forest Hill**
  - 2014
  - 7.5-minute, 24000
- **Hinton**
  - 2014
  - 7.5-minute, 24000

### 1998 Source Sheets
- **Pipestem**
  - 1998
  - 7.5-minute, 24000
  - Photo Inspected 1998
  - Aerial Photo Revised 1967
- **Hinton**
  - 1998
  - 7.5-minute, 24000
  - Photo Inspected 1998
  - Aerial Photo Revised 1976

### 1976 Source Sheets
- **Hinton**
  - 1976
  - 7.5-minute, 24000
  - Photo Revised 1976
  - Aerial Photo Revised 1976
- **Pipestem**
  - 1976
  - 7.5-minute, 24000
  - Photo Revised 1976
  - Aerial Photo Revised 1967
- **Forest Hill**
  - 1976
  - 7.5-minute, 24000
  - Photo Revised 1976
  - Aerial Photo Revised 1967

### 1968 Source Sheets
- **Forest Hill**
  - 1968
  - 7.5-minute, 24000
  - Aerial Photo Revised 1967
- **Talcott**
  - 1968
  - 7.5-minute, 24000
  - Aerial Photo Revised 1967
- **Hinton**
  - 1968
  - 7.5-minute, 24000
  - Aerial Photo Revised 1967
- **Pipestem**
  - 1968
  - 7.5-minute, 24000
  - Aerial Photo Revised 1967
Topo Sheet Key
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1914 Source Sheets

![Map Image]
Big Bend
1914
15-minute, 62500

1912 Source Sheets

![Map Image]
Big Bend
1912
15-minute, 62500

1892 Source Sheets

![Map Image]
Hinton
1892
30-minute, 125000

1887 Source Sheets

![Map Image]
Hinton
1887
30-minute, 125000
This report includes information from the following map sheet(s).

- Historical Topo Map
  - TP, Hinton, 2014, 7.5-minute
  - NE, Talcott, 2014, 7.5-minute
  - SE, Forest Hill, 2014, 7.5-minute
  - SW, Pipestem, 2014, 7.5-minute

SITE NAME:
ADDRESS:

CLIENT:
This report includes information from the following map sheet(s).

**SITE NAME:**

**ADDRESS:**

**CLIENT:**
This report includes information from the following map sheet(s).

- Historical Topo Map
  - TP, Hinton, 1976, 7.5-minute
  - SE, Forest Hill, 1976, 7.5-minute
  - SW, Pipestem, 1976, 7.5-minute

SITE NAME:
ADDRESS:

CLIENT:
This report includes information from the following map sheet(s):

- TP, Hinton, 1968, 7.5-minute
- NE, Talcott, 1968, 7.5-minute
- SE, Forest Hill, 1968, 7.5-minute
- SW, Pipestem, 1968, 7.5-minute

SITE NAME:
ADDRESS:

CLIENT:
This report includes information from the following map sheet(s).
This report includes information from the following map sheet(s).

TP, Big Bend, 1912, 15-minute

SITE NAME:
ADDRESS:

CLIENT:
This report includes information from the following map sheet(s).
This report includes information from the following map sheet(s).

SITE NAME:
ADDRESS:
CLIENT:
Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR’s professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

### Search Results:

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<th>Year</th>
<th>Scale</th>
<th>Details</th>
<th>Source</th>
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<td>USDA/NAIP</td>
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<tr>
<td>2009</td>
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APPENDIX C
RECORDS OF FEDERAL AND STATE REGULATORY AGENCIES
Bluestone Dam
701 Miller Ave
Hinton, WV 25951

Inquiry Number: 4614459.4s
May 10, 2016

The EDR Radius Map™ Report with GeoCheck®
A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA’s Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

**TARGET PROPERTY INFORMATION**

**ADDRESS**

701 MILLER AVE  
HINTON, WV 25951

**COORDINATES**

- Latitude (North): 37.6407690 - 37° 38' 26.76"
- Longitude (West): 80.8864750 - 80° 53' 11.31"
- Universal Tranverse Mercator: Zone 17
- UTM X (Meters): 510015.9
- UTM Y (Meters): 4165760.0
- Elevation: 1362 ft. above sea level

**USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY**

- Target Property Map: 6008643 HINTON, WV  
  Version Date: 2014
- Northeast Map: 6008663 TALCOTT, WV  
  Version Date: 2014
- Southeast Map: 6008633 FOREST HILL, WV  
  Version Date: 2014
- Southwest Map: 6008655 PIPESTEM, WV  
  Version Date: 2014

**AERIAL PHOTOGRAPHY IN THIS REPORT**

- Portions of Photo from: 20110823, 20111005
- Source: USDA
Target Property Address:
701 MILLER AVE
HINTON, WV 25951

Click on Map ID to see full detail.

<table>
<thead>
<tr>
<th>MAP ID</th>
<th>SITE NAME</th>
<th>ADDRESS</th>
<th>DATABASE ACRONYMS</th>
<th>RELATIVE ELEVATION</th>
<th>DIST (ft. &amp; mi.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>US CORPS OF ENGINEER</td>
<td>701 MILLER AVE</td>
<td>RCRA-CESQG, FINDS, NY MANIFEST, ECHO</td>
<td>TP</td>
<td></td>
</tr>
<tr>
<td>A2</td>
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<td>701 MILLER AVE</td>
<td>WV UST</td>
<td>TP</td>
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<tr>
<td>Reg</td>
<td>BLUESTONE LAKE</td>
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<td>DOD</td>
<td>Same</td>
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</table>
EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

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<th>Site</th>
<th>Database(s)</th>
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<td>NY MANIFEST</td>
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<td></td>
<td>ECHO</td>
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<td>BLUESTONE LAKE</td>
<td>WV UST</td>
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<td>HINTON, WV 25951</td>
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<td>Tank Status: P</td>
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<td>Date Closed: 01/30/1992</td>
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<tr>
<td></td>
<td>Closure Status: Tank removed from ground</td>
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</table>

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR’s search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

*Federal NPL site list*

NPL________________________ National Priority List
Proposed NPL________________ Proposed National Priority List Sites
NPL LIENS___________________ Federal Superfund Liens

*Federal Delisted NPL site list*

Delisted NPL_________________ National Priority List Deletions

*Federal CERCLIS list*

FEDERAL FACILITY___________ Federal Facility Site Information listing
SEMS_______________________ Superfund Enterprise Management System

*Federal CERCLIS NFRAP site list*

SEMS-ARCHIVE_______________ Superfund Enterprise Management System Archive
**EXECUTIVE SUMMARY**

*Federal RCRA CORRACTS facilities list*
CORRACTS ..................... Corrective Action Report

*Federal RCRA non-CORRACTS TSD facilities list*
RCRA-TSDF ..................... RCRA - Treatment, Storage and Disposal

*Federal RCRA generators list*
RCRA-LQG ..................... RCRA - Large Quantity Generators
RCRA-SQG ..................... RCRA - Small Quantity Generators

*Federal institutional controls / engineering controls registries*
LUCIS ......................... Land Use Control Information System
US ENG CONTROLS ............ Engineering Controls Sites List
US INST CONTROL ............ Sites with Institutional Controls

*Federal ERNS list*
ERNS ......................... Emergency Response Notification System

*State- and tribal - equivalent CERCLIS*
WV SHWS ....................... This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

*State and tribal landfill and/or solid waste disposal site lists*
WV SWF/LF .................... List of M.S.W. Landfills/Transfer Station Listing
WV LCP ......................... Landfill Closure Program

*State and tribal leaking storage tank lists*
WV LUST ....................... Leaking Underground Storage Tanks
INDIAN LUST .................. Leaking Underground Storage Tanks on Indian Land

*State and tribal registered storage tank lists*
FEMA UST ...................... Underground Storage Tank Listing
WV AST ......................... Aboveground Storage Tanks
INDIAN UST ................... Underground Storage Tanks on Indian Land

*State and tribal institutional control / engineering control registries*
WV INST CONTROL ............ Sites with Institutional Controls

*State and tribal voluntary cleanup sites*
WV VCP ......................... Voluntary Remediation Sites
INDIAN VCP ................... Voluntary Cleanup Priority Listing

*State and tribal Brownfields sites*
WV BROWNFIELDS ............. Brownfields Sites Listing
EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

**Local Brownfield lists**
US BROWNFIELDSD...... A Listing of Brownfields Sites

**Local Lists of Landfill / Solid Waste Disposal Sites**
INDIAN ODI.............. Report on the Status of Open Dumps on Indian Lands
ODI.......................... Open Dump Inventory
DEBRIS REGION 9........... Torres Martinez Reservation Illegal Dump Site Locations

**Local Lists of Hazardous waste / Contaminated Sites**
US HIST CDL.............. Delisted National Clandestine Laboratory Register
WV CDL........................ Drug Lab Site Locations
US CDL........................ National Clandestine Laboratory Register

**Local Land Records**
LIENS 2..................... CERCLA Lien Information

**Records of Emergency Release Reports**
HMIRS.................. Hazardous Materials Information Reporting System
WV SPILLS............... Spills Listing

**Other Ascertainable Records**
RCRA NonGen / NLR...... RCRA - Non Generators / No Longer Regulated
FUDS........................ Formerly Used Defense Sites
SCRD DRYCLEANERS...... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR............ Financial Assurance Information
EPA WATCH LIST......... EPA WATCH LIST
2020 COR ACTION........ 2020 Corrective Action Program List
TSCA..................... Toxic Substances Control Act
TRIS...................... Toxic Chemical Release Inventory System
SSTS.................. Section 7 Tracking Systems
ROD........................ Records Of Decision
RMP........................ Risk Management Plans
RAATS...................... RCRA Administrative Action Tracking System
PRP........................ Potentially Responsible Parties
PADS.................. PCB Activity Database System
ICIS..................... Integrated Compliance Information System
FTTS....................... FIFRA/TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS........................ Material Licensing Tracking System
COAL ASH DOE........... Steam-Electric Plant Operation Data
COAL ASH EPA............. Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER...... PCB Transformer Registration Database
RADINFO.................. Radiation Information Database
HIST FTTS................. FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS................... Incident and Accident Data
CONSENT Superfund (CERCLA) Consent Decrees
INDIAN RESERV Indian Reservations
FUSRAP Formerly Utilized Sites Remedial Action Program
UMTRA Uranium Mill Tailings Sites
LEAD SMELTERS Lead Smelter Sites
US AIRS Aerometric Information Retrieval System Facility Subsystem
US MINES Mines Master Index File
UXO Unexploded Ordnance Sites
DOCKET HWC Hazardous Waste Compliance Docket Listing
WV AIRS Permitted Facility and Emissions Listing
WV COAL ASH Coal Ash Landfills
WV DRYCLEANERS Listing of Drycleaner Locations
WV Financial Assurance Financial Assurance Information Listing
WV NPDES Wastewater Discharge Permits Listing
WV UIC Underground Injection Wells
FUELS PROGRAM EPA Fuels Program Registered Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records
EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historic Gas Stations
EDR Hist Cleaner EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives
WV RGA LF Recovered Government Archive Solid Waste Facilities List
WV RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in bold italics are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records
DOD: Consists of federally owned or administered lands, administered by the Department of
EXECUTIVE SUMMARY

Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

A review of the DOD list, as provided by EDR, and dated 12/31/2005 has revealed that there is 1 DOD site within approximately 1 mile of the target property.

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<th>Address</th>
<th>Direction / Distance</th>
<th>Map ID</th>
<th>Page</th>
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<td></td>
<td>0 - 1/8 (0.000 mi.)</td>
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Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

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<td>WV NPDES</td>
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<td>BLUESTONE DAM SAFETY ASSURANCE</td>
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### MAP FINDINGS SUMMARY

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### ADDITIONAL ENVIRONMENTAL RECORDS

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### EDR HIGH RISK HISTORICAL RECORDS

**EDR Exclusive Records**

- EDR MGP: 1.000, 0, 0, 0, 0, NR, 0
- EDR Hist Auto: 0.125, 0, NR, NR, NR, NR, 0
- EDR Hist Cleaner: 0.125, 0, NR, NR, NR, NR, 0

**EDR RECOVERED GOVERNMENT ARCHIVES**

**Exclusive Recovered Govt. Archives**

- WV RGA LF: TP, NR, NR, NR, NR, NR, 0
- WV RGA LUST: TP, NR, NR, NR, NR, NR, 0

---

- Totals --

5, 1, 0, 0, 0, 0, 6
## MAP FINDINGS SUMMARY

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<th>Database</th>
<th>Search Distance (Miles)</th>
<th>Target Property</th>
<th>&lt; 1/8</th>
<th>1/8 - 1/4</th>
<th>1/4 - 1/2</th>
<th>1/2 - 1</th>
<th>&gt; 1</th>
<th>Total Plotted</th>
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**NOTES:**
- TP = Target Property
- NR = Not Requested at this Search Distance
- Sites may be listed in more than one database
- N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.
A1
Target
US CORPS OF ENGINEERS - BLUESTONE LAKE
Property
701 MILLER AVE
HINTON, WV 25951

Site 1 of 2 in cluster A

Actual: 1362 ft.

RCRA-CESQG:
Date form received by agency: 03/20/2015
Facility name: Not reported
Facility address: 701 MILLER AVE
HINTON, WV 25951
EPA ID: WV1960010147
Mailing address: 502 EIGHTH ST ATTN: OR-E
HUNTINGTON, WV 25701
Contact: DEAN BONIFACIO
Contact address: 701 MILLER AVE
HINTON, WV 25951
Contact country: US
Contact telephone: 304-399-5140
Contact email: LLOYD.D.BONIFACIO@USACE.ARMY.MIL
EPA Region: Not reported
Land type: Federal
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste.

Owner/Operator Summary:
Owner/operator name: CORPS OF ENGINEERS
Owner/operator address: Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Federal
Owner/Operator Type: Owner
Owner/Op start date: 08/01/1990
Owner/Op end date: Not reported

Owner/operator name: CORPS OF ENGINEERS
Owner/operator address: Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Federal
Owner/Operator Type: Operator
Owner/Op start date: 08/01/1990
Owner/Op end date: Not reported
US CORPS OF ENGINEERS - BLUESTONE LAKE (Continued) 1000448591

Handler Activities Summary:
- U.S. importer of hazardous waste: No
- Mixed waste (haz. and radioactive): No
- Recycler of hazardous waste: No
- Transporter of hazardous waste: No
- Treater, storer or disposer of HW: No
- Underground injection activity: No
- On-site burner exemption: No
- Furnace exemption: No
- Used oil fuel burner: No
- Used oil processor: No
- User oil refiner: No
- Used oil fuel marketer to burner: No
- Used oil Specification marketer: No
- Used oil transfer facility: No
- Used oil transporter: No

Historical Generators:
- Date form received by agency: 11/01/2006
  Site name: US CORPS OF ENGINEERS
  Classification: Conditionally Exempt Small Quantity Generator

- Date form received by agency: 05/13/2005
  Site name: US CORPS OF ENGINEERS
  Classification: Conditionally Exempt Small Quantity Generator

- Date form received by agency: 10/23/2003
  Site name: US CORPS OF ENGINEERS
  Classification: Not a generator, verified

- Date form received by agency: 08/17/1990
  Site name: US CORPS OF ENGINEERS
  Classification: Small Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
- Evaluation date: 06/04/2003
  Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
  Area of violation: Not reported
  Date achieved compliance: Not reported
  Evaluation lead agency: EPA

- Evaluation date: 10/16/1995
  Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
  Area of violation: Not reported
  Date achieved compliance: Not reported
  Evaluation lead agency: State

- Evaluation date: 09/26/1992
  Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
  Area of violation: Not reported
  Date achieved compliance: Not reported
  Evaluation lead agency: State

- Evaluation date: 09/26/1991
US CORPS OF ENGINEERS - BLUESTONE LAKE (Continued)

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110005551321

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:

EPA ID: WV1960010147
Country: USA
Location Address 1: 701 MILLER AVE
Location City: HINTON
Location State: WV
Location Zip Code: 25951
Location Zip Code 4: Not reported

Mailing Info:
Name: US ARMY CORPS OF ENGINEERS
Contact: MICHAEL MAYNARD
Address: 701 MILLER AVE
City/State/Zip: HINTON, WV 25951
Country: USA
Phone: 304-529-5191

Manifest:

Document ID: NYB8751006
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: 803SVNY
Trans2 State ID: Not reported
Generator Ship Date: 11/20/1996
Trans1 Recv Date: 11/20/1996
Trans2 Recv Date: / /
TSD Site Recv Date: 11/21/1996
Part A Recv Date: / /
Part B Recv Date: 12/18/1996
Generator EPA ID: WV1960010147
Trans1 EPA ID: NY0982792814
Trans2 EPA ID: Not reported
TSDF ID: NYD049836679
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 08400
Units: P - Pounds
Number of Containers: 012
Container Type: DM - Metal drums, barrels
### US CORPS OF ENGINEERS - BLUESTONE LAKE (Continued)

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<th>T Chemical, physical, or biological treatment.</th>
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<td>Handling Method:</td>
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<td>Specific Gravity:</td>
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<td>Number of Containers:</td>
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<td>Container Type:</td>
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<td>Year:</td>
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**Document ID:** NYB8193924  
**Manifest Status:** Completed copy  
**Trans1 State ID:** NY67267K  
**Trans2 State ID:** Not reported  
**Generator Ship Date:** 11/06/1996  
**Trans1 Recv Date:** 11/06/1996  
**Trans2 Recv Date:** / /  
**TSD Site Recv Date:** 11/08/1996  
**Part A Recv Date:** / /  
**Part B Recv Date:** 11/27/1996  
**Generator EPA ID:** WV1960010147  
**Trans1 EPA ID:** NYD000688671  
**Trans2 EPA ID:** Not reported  
**TSDF ID:** NYD049836679  
**Waste Code:** D008 - LEAD 5.0 MG/L TCLP  
**Quantity:** 07140  
**Units:** P - Pounds  
**Number of Containers:** 001  
**Container Type:** CM - Metal boxes, cases, roll-offs  
**Handling Method:** L Landfill.  
**Specific Gravity:** 100  
**Year:** 1996

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**Document ID:** NYB7407432  
**Manifest Status:** Completed copy  
**Trans1 State ID:** TV40957  
**Trans2 State ID:** Not reported  
**Generator Ship Date:** 03/05/1996  
**Trans1 Recv Date:** 03/05/1996  
**Trans2 Recv Date:** / /
US CORPS OF ENGINEERS - BLUESTONE LAKE (Continued)

TSD Site Recv Date: 03/07/1996
Part A Recv Date: / / 
Part B Recv Date: 03/18/1996
Generator EPA ID: WV1960010147
Trans1 EPA ID: PAD146714878
Trans2 EPA ID: Not reported
TSDF ID: NYD049836679
Waste Code: D008 - LEAD 5.0 MG/L TCLP
Quantity: 01500
Units: P - Pounds
Number of Containers: 003
Container Type: DM - Metal drums, barrels
Handling Method: T Chemical, physical, or biological treatment.
Specific Gravity: 100
Year: 1996

ECHO:
Envid: 1000448591
Registry ID: 110005551321
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110005551321

A2 BLUESTONE LAKE WV UST U003771397
Target 701 MILLER AVE N/A
Property HINTON, WV 25951
Site 2 of 2 in cluster A

Actual: 1362 ft.

UST:
Facility ID: 4500716
Owner: US ARMY CORP OF ENGINEERS
Owner Address: 502 EIGHTH ST
Owner Address 2: Not reported
Owner City,St,Zip: HUNTINGTON, WV 25701
Owner Telephone: (304) 529-5388

Tank ID: D1
Tank Status: Permanently Out of Service
Tank Substance: Gasoline
Tank Capacity: 1000
Date Last Used: 09/01/1990
Date Closed: 01/30/1992
Closure Status: Tank removed from ground
Tank Material: Asphalt Coated or Bare Steel
Piping Material: Unprotected Steel
Overfill Installed: No
Installed Spill Protection: No
Cathodic Protection Method: No
Compartment: N
Latitude: Not reported
Longitude: Not reported

Tank ID: D2
Tank Status: Permanently Out of Service
Tank Substance: Diesel
Tank Capacity: 1000
Date Last Used: 09/01/1990

TC4614459.4s Page 12
BLUESTONE LAKE (Continued)

Date Closed: 01/30/1992
Closure Status: Tank removed from ground
Tank Material: Asphalt Coated or Bare Steel
Piping Material: Unprotected Steel
Overfill Installed: No
Installed Spill Protection: No
Cathodic Protection Method: No
Compartment: N
Latitude: Not reported
Longitude: Not reported

Tank ID: D3
**Tank Status:** Permanently Out of Service
Tank Substance: Gasoline
Tank Capacity: 550
Date Last Used: 09/01/1990
Date Closed: 01/30/1992
Closure Status: Tank removed from ground
Tank Material: Asphalt Coated or Bare Steel
Piping Material: Unprotected Steel
Overfill Installed: No
Installed Spill Protection: No
Cathodic Protection Method: No
Compartment: N
Latitude: Not reported
Longitude: Not reported

DOD BLUESTONE LAKE DOD

Region: N/A

BLUESTONE LAKE (County), VA

DOD Site: Yes
Tile name: WVSUMMERS
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<td>HINTON</td>
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To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

### STANDARD ENVIRONMENTAL RECORDS

#### Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA’s Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

| Date of Government Version: 03/07/2016 | Source: EPA |
| Date Data Arrived at EDR: 04/05/2016 | Telephone: N/A |
| Date Made Active in Reports: 04/15/2016 | Last EDR Contact: 04/05/2016 |
| Number of Days to Update: 10 | Next Scheduled EDR Contact: 04/18/2016 |

**NPL Site Boundaries**

Sources:

- EPA’s Environmental Photographic Interpretation Center (EPIC)
  Telephone: 202-564-7333
- EPA Region 1 Telephone: 617-918-1143
- EPA Region 3 Telephone: 215-814-5418
- EPA Region 4 Telephone: 404-562-8033
- EPA Region 5 Telephone: 312-886-6686
- EPA Region 10 Telephone: 206-553-8665

**Proposed NPL:** Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

| Date of Government Version: 03/07/2016 | Source: EPA |
| Date Data Arrived at EDR: 04/05/2016 | Telephone: N/A |
| Date Made Active in Reports: 04/15/2016 | Last EDR Contact: 04/05/2016 |
| Number of Days to Update: 10 | Next Scheduled EDR Contact: 04/18/2016 |

**NPL LIENS:** Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

| Date of Government Version: 10/15/1991 | Source: EPA |
| Date Data Arrived at EDR: 02/02/1994 | Telephone: 202-564-4267 |
| Date Made Active in Reports: 03/30/1994 | Last EDR Contact: 08/15/2011 |
| Number of Days to Update: 56 | Next Scheduled EDR Contact: 11/28/2011 |

Data Release Frequency: No Update Planned
Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions
   The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the
   EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the
   NPL where no further response is appropriate.

   Date of Government Version: 03/07/2016 Source: EPA
   Date Data Arrived at EDR: 04/05/2016 Telephone: N/A
   Date Made Active in Reports: 04/15/2016 Last EDR Contact: 04/05/2016
   Number of Days to Update: 10 Next Scheduled EDR Contact: 04/18/2016
   Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing
   A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive
   Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities
   Restoration and Reuse Office is involved in cleanup activities.

   Date of Government Version: 03/26/2015 Source: Environmental Protection Agency
   Date Data Arrived at EDR: 04/08/2015 Telephone: 703-603-8704
   Date Made Active in Reports: 06/11/2015 Last EDR Contact: 04/08/2016
   Number of Days to Update: 64 Next Scheduled EDR Contact: 07/18/2016
   Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System
   SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites,
   and remedial activities performed in support of EPA’s Superfund Program across the United States. The list was
   formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous
   waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons,
   pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
   This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the
   sites which are in the screening and assessment phase for possible inclusion on the NPL.

   Date of Government Version: 03/07/2016 Source: EPA
   Date Data Arrived at EDR: 04/05/2016 Telephone: 800-424-9346
   Date Made Active in Reports: 04/15/2016 Last EDR Contact: 04/05/2016
   Number of Days to Update: 10 Next Scheduled EDR Contact: 08/01/2016
   Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive
SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA’s knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal
RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators
RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.
**Federal institutional controls / engineering controls registries**

**LUCIS:** Land Use Control Information System  
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

<table>
<thead>
<tr>
<th>Date of Government Version</th>
<th>Source: Department of the Navy</th>
<th>Date Data Arrived at EDR</th>
<th>Telephone: 843-820-7326</th>
<th>Date Made Active in Reports</th>
<th>Last EDR Contact: 02/16/2016</th>
<th>Number of Days to Update: 13</th>
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**US ENG CONTROLS:** Engineering Controls Sites List  
A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or affect human health.

<table>
<thead>
<tr>
<th>Date of Government Version</th>
<th>Source: Environmental Protection Agency</th>
<th>Date Data Arrived at EDR</th>
<th>Telephone: 703-603-0695</th>
<th>Date Made Active in Reports</th>
<th>Last EDR Contact: 02/29/2016</th>
<th>Number of Days to Update: 53</th>
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**US INST CONTROL:** Sites with Institutional Controls  
A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

<table>
<thead>
<tr>
<th>Date of Government Version</th>
<th>Source: Environmental Protection Agency</th>
<th>Date Data Arrived at EDR</th>
<th>Telephone: 703-603-0695</th>
<th>Date Made Active in Reports</th>
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<tr>
<td>09/10/2015</td>
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<td>09/11/2015</td>
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</tbody>
</table>
Federal ERNS list

ERNS: Emergency Response Notification System
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/22/2015  
Date Data Arrived at EDR: 06/26/2015  
Date Made Active in Reports: 09/16/2015  
Number of Days to Update: 82

Next Scheduled EDR Contact: 07/11/2016 
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
State Hazardous Waste Sites. State hazardous waste site records are the states’ equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Next Scheduled EDR Contact: 06/06/2016 
Data Release Frequency: N/A

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: List of M.S.W. Landfills/Transfer Station Listing
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 01/06/2016  
Date Data Arrived at EDR: 01/12/2016  
Date Made Active in Reports: 03/08/2016  
Number of Days to Update: 56

Next Scheduled EDR Contact: 07/11/2016 
Data Release Frequency: Varies

LCP: Landfill Closure Program
The WV DEP’s LCAP aids the owners/permittees of landfills that were required to cease operations because of certain statutory closure deadlines for non-composite lined facilities.

Date of Government Version: 12/31/2015  
Date Data Arrived at EDR: 03/18/2016  
Date Made Active in Reports: 04/15/2016  
Number of Days to Update: 28

Next Scheduled EDR Contact: 06/20/2016 
Data Release Frequency: Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tanks
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 12/28/2015  
Date Data Arrived at EDR: 03/03/2016  
Date Made Active in Reports: 04/15/2016  
Number of Days to Update: 43

Next Scheduled EDR Contact: 06/13/2016 
Data Release Frequency: Semi-Annually
INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska.
Date of Government Version: 03/30/2015
Date Data Arrived at EDR: 04/28/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 55
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.
Date of Government Version: 10/27/2015
Date Data Arrived at EDR: 10/29/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 67
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.
Date of Government Version: 11/24/2015
Date Data Arrived at EDR: 12/01/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 34
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Semi-Annually

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.
Date of Government Version: 10/13/2015
Date Data Arrived at EDR: 10/23/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 118
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada.
Date of Government Version: 01/08/2015
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.
Date of Government Version: 08/20/2015
Date Data Arrived at EDR: 10/30/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 111
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.
Date of Government Version: 11/04/2015
Date Data Arrived at EDR: 11/13/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 52
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies
INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

Date of Government Version: 01/07/2016  Source: EPA Region 10
Date Data Arrived at EDR: 01/08/2016  Telephone: 206-553-2857
Date Made Active in Reports: 02/18/2016  Last EDR Contact: 04/29/2016
Number of Days to Update: 41  Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010  Source: FEMA
Date Data Arrived at EDR: 02/16/2010  Telephone: 202-646-5797
Date Made Active in Reports: 04/12/2010  Last EDR Contact: 04/11/2016
Number of Days to Update: 55  Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Varies

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST’s are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 03/02/2016  Source: Division of Environmental Protection
Date Data Arrived at EDR: 03/03/2016  Telephone: 304-926-0495
Date Made Active in Reports: 04/15/2016  Last EDR Contact: 02/29/2016
Number of Days to Update: 43  Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Annually

AST: Aboveground Storage Tanks
A listing of aboveground storage tank site locations.

Date of Government Version: 01/25/2016  Source: DEP
Date Data Arrived at EDR: 01/28/2016  Telephone: 304-926-0499
Date Made Active in Reports: 03/08/2016  Last EDR Contact: 04/25/2016
Number of Days to Update: 40  Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 08/20/2015  Source: EPA Region 6
Date Data Arrived at EDR: 10/30/2015  Telephone: 214-665-7591
Date Made Active in Reports: 02/18/2016  Last EDR Contact: 04/29/2016
Number of Days to Update: 111  Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014  Source: EPA Region 7
Date Data Arrived at EDR: 11/25/2014  Telephone: 913-551-7003
Date Made Active in Reports: 01/29/2015  Last EDR Contact: 04/29/2016
Number of Days to Update: 65  Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies
<table>
<thead>
<tr>
<th>Region</th>
<th>UST Database Details</th>
</tr>
</thead>
</table>
| Region 8 (CO, MT, ND, SD, UT, WY, 27 Tribal Nations) | Date of Government Version: 10/13/2015  
Date Data Arrived at EDR: 10/23/2015  
Date Made Active in Reports: 02/18/2016  
Number of Days to Update: 118  
Date Made Active in Reports: 02/18/2016  
Next Scheduled EDR Contact: 08/08/2016  
Data Release Frequency: Quarterly |
| Region 1 (CT, ME, MA, NH, RI, VT, 10 Tribal Nations) | Date of Government Version: 10/20/2015  
Date Data Arrived at EDR: 10/29/2015  
Date Made Active in Reports: 01/04/2016  
Number of Days to Update: 67  
Next Scheduled EDR Contact: 08/08/2016  
Data Release Frequency: Varies |
Date Data Arrived at EDR: 12/01/2015  
Date Made Active in Reports: 01/04/2016  
Number of Days to Update: 34  
Next Scheduled EDR Contact: 08/08/2016  
Data Release Frequency: Semi-Annually |
| Region 5 (MI, MN, WI, Tribal Nations) | Date of Government Version: 11/05/2015  
Date Data Arrived at EDR: 11/13/2015  
Date Made Active in Reports: 01/04/2016  
Number of Days to Update: 52  
Next Scheduled EDR Contact: 08/08/2016  
Data Release Frequency: Varies |
| Region 10 (AK, ID, OR, WA, Tribal Nations) | Date of Government Version: 01/07/2016  
Date Data Arrived at EDR: 01/08/2016  
Date Made Active in Reports: 02/18/2016  
Number of Days to Update: 41  
Next Scheduled EDR Contact: 08/08/2016  
Data Release Frequency: Quarterly |
| Region 9 (AZ, CA, HI, NV, Pacific Islands, Tribal Nations) | Date of Government Version: 12/14/2014  
Date Data Arrived at EDR: 02/13/2015  
Date Made Active in Reports: 03/13/2015  
Number of Days to Update: 28  
Next Scheduled EDR Contact: 08/08/2016  
Data Release Frequency: Quarterly |
State and tribal institutional control / engineering control registries

INST CONTROL: Sites with Institutional Controls
Sites that have institutional controls in place.

- Date of Government Version: 01/20/2016
- Source: Department of Environmental Protection
- Date Data Arrived at EDR: 02/26/2016
- Telephone: 304-558-2508
- Date Made Active in Reports: 04/15/2016
- Last EDR Contact: 02/22/2016
- Number of Days to Update: 49
- Next Scheduled EDR Contact: 06/06/2016
- Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Remediation Sites
Sites involved in the Voluntary Remediation Program.

- Date of Government Version: 01/20/2016
- Source: Department of Environmental Protection
- Date Data Arrived at EDR: 02/26/2016
- Telephone: 304-558-2745
- Date Made Active in Reports: 04/15/2016
- Last EDR Contact: 02/22/2016
- Number of Days to Update: 49
- Next Scheduled EDR Contact: 06/06/2016
- Data Release Frequency: Semi-Annually

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

- Date of Government Version: 07/27/2015
- Source: EPA, Region 1
- Date Data Arrived at EDR: 09/29/2015
- Telephone: 617-918-1102
- Date Made Active in Reports: 02/18/2016
- Last EDR Contact: 04/01/2016
- Number of Days to Update: 142
- Next Scheduled EDR Contact: 07/11/2016
- Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

- Date of Government Version: 03/20/2008
- Source: EPA, Region 7
- Date Data Arrived at EDR: 04/22/2008
- Telephone: 913-551-7365
- Date Made Active in Reports: 05/19/2008
- Last EDR Contact: 04/20/2009
- Number of Days to Update: 27
- Next Scheduled EDR Contact: 07/20/2009
- Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites Listing
Brownfields are abandoned, idle or underused commercial or industrial properties, where the expansion or redevelopment is hindered by real or perceived contamination. Brownfields vary in size, location, age, and past use -- they can be anything from a five-hundred acre automobile assembly plant to a small, abandoned corner gas station.

- Date of Government Version: 05/14/2013
- Source: Department of Environmental Protection
- Date Data Arrived at EDR: 07/05/2013
- Telephone: 304-926-0455
- Date Made Active in Reports: 08/15/2013
- Last EDR Contact: 04/01/2016
- Number of Days to Update: 41
- Next Scheduled EDR Contact: 07/11/2016
- Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment.

Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.
Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: No Update Planned

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 09/17/2015
Date Data Arrived at EDR: 12/04/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 76
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: No Update Planned

CDL: Drug Lab Site Locations
A listing of clandestine drug lab site locations.

Date of Government Version: 06/18/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 11/19/2015
Number of Days to Update: 23
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Varies

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.
GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/17/2015  
Source: Drug Enforcement Administration  
Telephone: 202-307-1000  
Date Data Arrived at EDR: 12/04/2015  
Date Made Active in Reports: 02/18/2016  
Number of Days to Update: 76  
Next Scheduled EDR Contact: 06/13/2016  
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014  
Source: Environmental Protection Agency  
Telephone: 202-564-6023  
Date Data Arrived at EDR: 03/18/2014  
Date Made Active in Reports: 04/24/2014  
Number of Days to Update: 37  
Next Scheduled EDR Contact: 08/08/2016  
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/24/2015  
Source: U.S. Department of Transportation  
Telephone: 202-366-4555  
Date Data Arrived at EDR: 06/26/2015  
Date Made Active in Reports: 09/02/2015  
Number of Days to Update: 68  
Next Scheduled EDR Contact: 07/11/2016  
Data Release Frequency: Annually

SPILLS: Spills Listing
A listing of spills and releases reported to the Office of Emergency Services, they do not include any TRI information.

Date of Government Version: 01/26/2016  
Source: Office of Emergency Services  
Telephone: 304-558-5380  
Date Data Arrived at EDR: 01/29/2016  
Date Made Active in Reports: 03/08/2016  
Number of Days to Update: 39  
Next Scheduled EDR Contact: 08/08/2016  
Data Release Frequency: Varies

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/09/2015  
Source: Environmental Protection Agency  
Telephone: 800-438-2474  
Date Data Arrived at EDR: 03/02/2016  
Date Made Active in Reports: 04/05/2016  
Number of Days to Update: 34  
Next Scheduled EDR Contact: 07/11/2016  
Data Release Frequency: Varies

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015  
Source: U.S. Army Corps of Engineers  
Telephone: 202-528-4285  
Date Data Arrived at EDR: 07/08/2015  
Date Made Active in Reports: 10/13/2015  
Number of Days to Update: 97  
Next Scheduled EDR Contact: 06/20/2016  
Data Release Frequency: Varies
DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005  Source: USGS
Date Data Arrived at EDR: 11/10/2006  Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007  Last EDR Contact: 04/15/2016
Number of Days to Update: 62  Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Date Data Arrived at EDR: 02/06/2006  Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007  Last EDR Contact: 04/15/2016
Number of Days to Update: 339  Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011  Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/09/2011  Telephone: 615-532-8599
Date Made Active in Reports: 05/02/2011  Last EDR Contact: 02/19/2016
Number of Days to Update: 54  Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information
All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/01/2015  Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/03/2015  Telephone: 202-566-1917
Date Made Active in Reports: 11/03/2015  Last EDR Contact: 02/16/2016
Number of Days to Update: 61  Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST
EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013  Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014  Telephone: 617-520-3000
Date Made Active in Reports: 08/17/2014  Last EDR Contact: 05/09/2016
Number of Days to Update: 98  Next Scheduled EDR Contact: 08/22/2016
Data Release Frequency: Quarterly
2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013  
Source: Environmental Protection Agency

Date Data Arrived at EDR: 03/03/2015  
Telephone: 703-308-4044

Date Made Active in Reports: 03/09/2015  
Last EDR Contact: 02/12/2016

Number of Days to Update: 6  
Next Scheduled EDR Contact: 05/23/2016

Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012  
Source: EPA

Date Data Arrived at EDR: 01/15/2015  
Telephone: 202-260-5521

Date Made Active in Reports: 01/29/2015  
Last EDR Contact: 03/24/2016

Number of Days to Update: 14  
Next Scheduled EDR Contact: 07/04/2016

Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014  
Source: EPA

Date Data Arrived at EDR: 11/24/2015  
Telephone: 202-566-0250

Date Made Active in Reports: 04/05/2016  
Last EDR Contact: 02/24/2016

Number of Days to Update: 133  
Next Scheduled EDR Contact: 06/06/2016

Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009  
Source: EPA

Date Data Arrived at EDR: 12/10/2010  
Telephone: 202-564-4203

Date Made Active in Reports: 02/25/2011  
Last EDR Contact: 04/25/2016

Number of Days to Update: 77  
Next Scheduled EDR Contact: 08/08/2016

Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013  
Source: EPA

Date Data Arrived at EDR: 12/12/2013  
Telephone: 703-416-0223

Date Made Active in Reports: 02/24/2014  
Last EDR Contact: 03/08/2016

Number of Days to Update: 74  
Next Scheduled EDR Contact: 06/20/2016

Data Release Frequency: Annually

RMP: Risk Management Plans
When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g. the fire department) should an accident occur.

RAATS: RCRA Administrative Action Tracking System
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

PADS: PCB Activity Database System
PCB Activity Database. PADS identifies generators, transporters, commercial storers and/or brokers and disposers of PCB’s who are required to notify the EPA of such activities.

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.
**FTTS: FIFRA/ TSCA Tracking System**
- **Description:** Tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA, and EPCRA. Maintained on a quarterly basis.
  - **Date of Government Version:** 04/09/2009
  - **Source:** EPA/Office of Prevention, Pesticides and Toxic Substances
  - **Date Data Arrived at EDR:** 04/16/2009
  - **Date Made Active in Reports:** 05/11/2009
  - **Number of Days to Update:** 25
  - **Next Scheduled EDR Contact:** 06/06/2016
  - **Data Release Frequency:** Quarterly

**FTTS INSP:**
- **Description:** A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.
  - **Date of Government Version:** 04/09/2009
  - **Source:** EPA
  - **Date Data Arrived at EDR:** 04/16/2009
  - **Date Made Active in Reports:** 05/11/2009
  - **Number of Days to Update:** 25
  - **Next Scheduled EDR Contact:** 06/06/2016
  - **Data Release Frequency:** Quarterly

**MLTS: Material Licensing Tracking System**
- **Description:** Maintained by the Nuclear Regulatory Commission (NRC), contains a list of approximately 8,100 sites which possess or use radioactive materials and are subject to NRC licensing requirements. Maintained on a quarterly basis.
  - **Date of Government Version:** 03/07/2016
  - **Source:** Nuclear Regulatory Commission
  - **Date Data Arrived at EDR:** 03/18/2016
  - **Date Made Active in Reports:** 04/15/2016
  - **Number of Days to Update:** 28
  - **Next Scheduled EDR Contact:** 08/22/2016
  - **Data Release Frequency:** Quarterly

**COAL ASH DOE:**
- **Description:** A listing of power plants that store ash in surface ponds.
  - **Date of Government Version:** 12/31/2005
  - **Source:** Department of Energy
  - **Date Data Arrived at EDR:** 08/07/2009
  - **Date Made Active in Reports:** 10/22/2009
  - **Number of Days to Update:** 76
  - **Next Scheduled EDR Contact:** 07/25/2016
  - **Data Release Frequency:** Varies

**COAL ASH EPA:**
- **Description:** A listing of coal combustion residues surface impoundments with high hazard potential ratings.
  - **Date of Government Version:** 07/01/2014
  - **Source:** Environmental Protection Agency
  - **Date Data Arrived at EDR:** 09/10/2014
  - **Date Made Active in Reports:** 10/20/2014
  - **Number of Days to Update:** 40
  - **Next Scheduled EDR Contact:** 06/20/2016
  - **Data Release Frequency:** Varies

**PCB TRANSFORMER:**
- **Description:** Database of PCB transformer registrations, includes all PCB registration submittals.
  - **Date of Government Version:** 02/01/2011
  - **Source:** Environmental Protection Agency
  - **Date Data Arrived at EDR:** 10/19/2011
  - **Date Made Active in Reports:** 01/10/2012
  - **Number of Days to Update:** 83
  - **Next Scheduled EDR Contact:** 08/08/2016
  - **Data Release Frequency:** Varies

**RADINFO:**
- **Description:** The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.
HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

HIST FTTS INSPI: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

DOT OPS: Incident and Accident Data
Department of Transportation, Office of Pipeline Safety Incident and Accident data.

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

BRS: Biennial Reporting System
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.
INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005  Source: USGS
Date Data Arrived at EDR: 12/08/2006  Telephone: 202-208-3710
Date Made Active in Reports: 01/11/2007  Last EDR Contact: 04/15/2016
Number of Days to Update: 34  Next Scheduled EDR Contact: 07/25/2016
Number of Days to Update: 34  Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program
DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 11/23/2015  Source: Department of Energy
Date Data Arrived at EDR: 11/24/2015  Telephone: 202-586-3559
Date Made Active in Reports: 02/18/2016  Last EDR Contact: 05/09/2016
Number of Days to Update: 86  Next Scheduled EDR Contact: 08/22/2016
Number of Days to Update: 86  Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites
Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010  Source: Department of Energy
Date Data Arrived at EDR: 10/07/2011  Telephone: 505-845-0011
Date Made Active in Reports: 03/01/2012  Last EDR Contact: 03/28/2016
Number of Days to Update: 146  Next Scheduled EDR Contact: 06/06/2016
Number of Days to Update: 146  Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014  Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/26/2014  Telephone: 703-603-8787
Date Made Active in Reports: 01/29/2015  Last EDR Contact: 04/07/2016
Number of Days to Update: 64  Next Scheduled EDR Contact: 07/18/2016
Number of Days to Update: 64  Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites
A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust.

Date of Government Version: 04/05/2001  Source: American Journal of Public Health
Date Data Arrived at EDR: 10/27/2010  Telephone: 703-305-6451
Date Made Active in Reports: 12/02/2010  Last EDR Contact: 12/02/2009
Number of Days to Update: 36  Next Scheduled EDR Contact: N/A
Number of Days to Update: 36  Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)
The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.
Date of Government Version: 10/20/2015  
Source: EPA  
Telephone: 202-564-2496  
Last EDR Contact: 03/24/2016  
Next Scheduled EDR Contact: 07/11/2016  
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data  
A listing of minor source facilities.  
Date of Government Version: 10/20/2015  
Source: EPA  
Telephone: 202-564-2496  
Last EDR Contact: 03/24/2016  
Next Scheduled EDR Contact: 07/11/2016  
Data Release Frequency: Annually

US MINES: Mines Master Index File  
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.  
Date of Government Version: 02/09/2016  
Source: Department of Labor, Mine Safety and Health Administration  
Telephone: 303-231-5959  
Last EDR Contact: 03/02/2016  
Next Scheduled EDR Contact: 06/13/2016  
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing  
This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.  
Date of Government Version: 12/05/2005  
Source: USGS  
Telephone: 703-648-7709  
Last EDR Contact: 03/02/2016  
Next Scheduled EDR Contact: 06/13/2016  
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing  
Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.  
Date of Government Version: 04/14/2011  
Source: USGS  
Telephone: 703-648-7709  
Last EDR Contact: 03/04/2016  
Next Scheduled EDR Contact: 06/13/2016  
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System  
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).  
Date of Government Version: 07/20/2015  
Source: EPA  
Telephone: (215) 814-5000  
Last EDR Contact: 03/08/2016  
Next Scheduled EDR Contact: 06/20/2016  
Data Release Frequency: Quarterly
**DOCKET HWC: Hazardous Waste Compliance Docket Listing**
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

- Date of Government Version: 03/01/2016
- Source: Environmental Protection Agency
- Telephone: 202-564-0527
- Date Made Active in Reports: 04/05/2016
- Number of Days to Update: 33
- Next Scheduled EDR Contact: 06/13/2016
- Data Release Frequency: Varies

**UXO: Unexploded Ordnance Sites**
A listing of unexploded ordnance site locations.

- Date of Government Version: 10/25/2015
- Source: Department of Defense
- Telephone: 571-373-0407
- Date Made Active in Reports: 04/05/2016
- Number of Days to Update: 67
- Next Scheduled EDR Contact: 07/04/2016
- Data Release Frequency: Varies

**AIRS: Permitted Facility and Emissions Listing**
Permitted facility and emissions information listing.

- Date of Government Version: 12/31/2015
- Source: Department of Environmental Protection
- Telephone: 304-926-0499
- Date Made Active in Reports: 03/08/2016
- Number of Days to Update: 39
- Next Scheduled EDR Contact: 08/08/2016
- Data Release Frequency: Varies

**COAL ASH: Coal Ash Landfills**
A listing of coal ash landfill site locations.

- Date of Government Version: 04/07/2011
- Source: Department of Environmental Protection
- Telephone: 304-926-0499
- Date Made Active in Reports: 06/02/2011
- Number of Days to Update: 36
- Next Scheduled EDR Contact: 07/25/2016
- Data Release Frequency: Varies

**DRCLEANERS: Listing of Drycleaner Locations**
A listing of drycleaners which use perchloroethylene.

- Date of Government Version: 05/19/2015
- Source: Department of Environmental Protection
- Telephone: 304-926-0475
- Date Made Active in Reports: 07/20/2015
- Number of Days to Update: 59
- Next Scheduled EDR Contact: 05/30/2016
- Data Release Frequency: Varies

**Financial Assurance: Financial Assurance Information Listing**
A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

- Date of Government Version: 03/05/2013
- Source: Department of Environmental Protection
- Telephone: 304-926-0499
- Date Made Active in Reports: 04/05/2013
- Number of Days to Update: 29
- Next Scheduled EDR Contact: 06/13/2016
- Data Release Frequency: Varies

**NPDES: Wastewater Discharge Permits Listing**
A listing of wastewater discharge permits.

- Date of Government Version: 01/21/2016
- Source: Department of Environmental Protection
- Telephone: 304-926-0495
- Date Made Active in Reports: 03/08/2016
- Number of Days to Update: 42
- Next Scheduled EDR Contact: 08/01/2016
- Data Release Frequency: Varies
UIC: Underground Injection Wells
A listing of underground injection well locations.

Date of Government Version: 01/26/2016
Source: Department of Environmental Protection
Date Data Arrived at EDR: 01/28/2016
Telephone: 304-926-0499
Date Made Active in Reports: 03/08/2016
Last EDR Contact: 01/28/2016
Number of Days to Update: 40
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/20/2015
Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/23/2015
Telephone: 202-564-2280
Date Made Active in Reports: 01/04/2016
Last EDR Contact: 03/23/2016
Number of Days to Update: 103
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/23/2015
Source: EPA
Date Data Arrived at EDR: 11/24/2015
Telephone: 800-385-6164
Date Made Active in Reports: 02/18/2016
Last EDR Contact: 02/24/2016
Number of Days to Update: 86
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR’s researchers. Manufactured gas sites were used in the United States from the 1800’s to 1950’s to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Source: EDR, Inc.
Date Data Arrived at EDR: N/A
Telephone: N/A
Date Made Active in Reports: N/A
Last EDR Contact: N/A
Number of Days to Update: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR’s review was limited to those categories of sources that might, in EDR’s opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as “High Risk Historical Records”, or HRHR. EDR’s HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Source: EDR, Inc.
Date Data Arrived at EDR: N/A
Telephone: N/A
Date Made Active in Reports: N/A
Last EDR Contact: N/A
Number of Days to Update: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies
EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Source: EDR, Inc.
Date Data Arrived at EDR: N/A Telephone: N/A
Date Made Active in Reports: N/A Last EDR Contact: N/A
Number of Days to Update: N/A Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List
The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Division of Environmental Protection in West Virginia.

Date of Government Version: N/A Source: Division of Environmental Protection
Date Data Arrived at EDR: 07/01/2013 Telephone: N/A
Date Made Active in Reports: 01/20/2014 Last EDR Contact: 06/01/2012
Number of Days to Update: 203 Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank
The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Division of Environmental Protection in West Virginia.

Date of Government Version: N/A Source: Division of Environmental Protection
Date Data Arrived at EDR: 07/01/2013 Telephone: N/A
Date Made Active in Reports: 12/30/2013 Last EDR Contact: 06/01/2012
Number of Days to Update: 182 Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013 Source: Department of Environmental Protection
Date Data Arrived at EDR: 07/17/2015 Telephone: N/A
Date Made Active in Reports: 08/12/2015 Last EDR Contact: 04/12/2016
Number of Days to Update: 26 Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.
PA MANIFEST: Manifest Information
Hazardous waste manifest information.
Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/24/2015
Date Made Active in Reports: 08/18/2015
Number of Days to Update: 25
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Annually

RI MANIFEST: Manifest Information
Hazardous waste manifest information.
Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.
Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 03/19/2015
Date Made Active in Reports: 04/07/2015
Number of Days to Update: 19
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.
Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics’ primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics’ primary database on private school locations in the United States.

Daycare Centers: Day Care Center List
Source: Office of Social Services
Telephone: 304-558-7980

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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TARGET PROPERTY ADDRESS

BLUESTONE DAM
701 MILLER AVE
HINTON, WV 25951

TARGET PROPERTY COORDINATES

Latitude (North): 37.640769 - 37° 38’ 26.77”
Longitude (West): 80.886475 - 80° 53’ 11.31”
Universal Tranverse Mercator: Zone 17
UTM X (Meters): 510015.9
UTM Y (Meters): 4165760.0
Elevation: 1362 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map: 6008643 HINTON, WV
Version Date: 2014

Northeast Map: 6008663 TALCOTT, WV
Version Date: 2014

Southeast Map: 6008633 FOREST HILL, WV
Version Date: 2014

Southwest Map: 6008655 PIPESTEM, WV
Version Date: 2014

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.
GROUNDWATER FLOW DIRECTION INFORMATION
Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

TOPOGRAPHIC INFORMATION
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY
General Topographic Gradient: General East

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES

Source: Topography has been determined from the USGS 7.5’ Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.
HYDROLOGIC INFORMATION
Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE
Target Property County: SUMMERS, WV
Flood Plain Panel at Target Property: 54089C - FEMA DFIRM Flood data
FEMA Flood Electronic Data: YES - refer to the Overview Map and Detail Map
Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY
NWI Quad at Target Property: HINTON
NWI Electronic Data Coverage: YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION
Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW
Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<table>
<thead>
<tr>
<th>MAP ID</th>
<th>LOCATION</th>
<th>GENERAL DIRECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Reported</td>
<td>FROM TP</td>
<td>GROUNDWATER FLOW</td>
</tr>
</tbody>
</table>
GROUNDWATER FLOW VELOCITY INFORMATION
Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY
Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT | GEOLOGIC AGE IDENTIFICATION
---|---
Era: Paleozoic | Category: Stratified Sequence
System: Mississippian | 
Series: Mississippian | 
Code: M | (decoded above as Era, System & Series)


DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY
The U.S. Department of Agriculture’s (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: CATEACHE
Soil Surface Texture: channery - silt loam
Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.
Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.
Corrosion Potential - Uncoated Steel: MODERATE
Depth to Bedrock Min: > 20 inches
Depth to Bedrock Max: > 40 inches
### Soil Layer Information

<table>
<thead>
<tr>
<th>Layer</th>
<th>Upper</th>
<th>Lower</th>
<th>Soil Texture Class</th>
<th>AASHTO Group</th>
<th>Unified Soil</th>
<th>Permeability Rate (in/hr)</th>
<th>Soil Reaction (pH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 inches</td>
<td>6 inches</td>
<td>channery - silt loam</td>
<td>Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.</td>
<td>FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay</td>
<td>Max: 2.00</td>
<td>Min: 0.60</td>
</tr>
<tr>
<td>2</td>
<td>6 inches</td>
<td>28 inches</td>
<td>channery - silty clay loam</td>
<td>Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.</td>
<td>FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay, FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.</td>
<td>Max: 2.00</td>
<td>Min: 0.60</td>
</tr>
<tr>
<td>3</td>
<td>28 inches</td>
<td>32 inches</td>
<td>very channery - silty clay loam</td>
<td>Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.</td>
<td>COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel, COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel.</td>
<td>Max: 2.00</td>
<td>Min: 0.60</td>
</tr>
<tr>
<td>4</td>
<td>32 inches</td>
<td>36 inches</td>
<td>weathered bedrock</td>
<td>Not reported</td>
<td>Not reported</td>
<td>Max: 0.00</td>
<td>Min: 0.00</td>
</tr>
</tbody>
</table>

### OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

**Soil Surface Textures:**
- very stony - silt loam
- silt loam
- channery - sandy loam
- loam

**Surficial Soil Types:**
- very stony - silt loam
- silt loam
- channery - sandy loam
- loam

**Shallow Soil Types:**
- channery - loam
- silt loam
- channery - sandy loam
- clay loam

**Deeper Soil Types:**
- silty clay loam
- unweathered bedrock
- silt loam
**LOCAL / REGIONAL WATER AGENCY RECORDS**

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

**WELL SEARCH DISTANCE INFORMATION**

<table>
<thead>
<tr>
<th>DATABASE</th>
<th>SEARCH DISTANCE (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal USGS</td>
<td>1.000</td>
</tr>
<tr>
<td>Federal FRDS PWS</td>
<td>Nearest PWS within 1 mile</td>
</tr>
<tr>
<td>State Database</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**FEDERAL USGS WELL INFORMATION**

<table>
<thead>
<tr>
<th>MAP ID</th>
<th>WELL ID</th>
<th>LOCATION FROM TP</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>USGS40001294306</td>
<td>1/2 - 1 Mile NNW</td>
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</tbody>
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**FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION**

<table>
<thead>
<tr>
<th>MAP ID</th>
<th>WELL ID</th>
<th>LOCATION FROM TP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No PWS System Found</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: PWS System location is not always the same as well location.

**STATE DATABASE WELL INFORMATION**

<table>
<thead>
<tr>
<th>MAP ID</th>
<th>WELL ID</th>
<th>LOCATION FROM TP</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2</td>
<td>WVWELL0228</td>
<td>1/2 - 1 Mile NNW</td>
</tr>
</tbody>
</table>
## Map ID
Map ID: A1

## Direction
Direction: NNW

## Distance
Distance: 1/2 - 1 Mile

## Elevation
Elevation: Higher

### A1 

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Org. Identifier</td>
<td>USGS-WV</td>
</tr>
<tr>
<td>Formal name</td>
<td>USGS West Virginia Water Science Center</td>
</tr>
<tr>
<td>Monloc Identifier</td>
<td>USGS-373900080532501</td>
</tr>
<tr>
<td>Monloc name</td>
<td>Sum-0044</td>
</tr>
<tr>
<td>Monloc type</td>
<td>Well</td>
</tr>
<tr>
<td>Monloc desc</td>
<td>Original station name was JOHNS DAIRYTEE</td>
</tr>
<tr>
<td>Huc code</td>
<td>05050004</td>
</tr>
<tr>
<td>Drainagearea Units</td>
<td>Not Reported</td>
</tr>
<tr>
<td>Contrib drainagearea units</td>
<td>Not Reported</td>
</tr>
<tr>
<td>Longitude</td>
<td>-80.8900868</td>
</tr>
<tr>
<td>Horiz Coll method</td>
<td>Interpolated from map</td>
</tr>
<tr>
<td>Horiz coord refsys</td>
<td>NAD83</td>
</tr>
<tr>
<td>Vert measure units</td>
<td>Not Reported</td>
</tr>
<tr>
<td>Vert measure val</td>
<td>Not Reported</td>
</tr>
<tr>
<td>Vert acc measure units</td>
<td>Not Reported</td>
</tr>
<tr>
<td>Vert acc measure val</td>
<td>Not Reported</td>
</tr>
<tr>
<td>Vert Collection method</td>
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<tr>
<td>Vert coord refsys</td>
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<tr>
<td>Countrycode</td>
<td>US</td>
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<tr>
<td>Aquifername</td>
<td>Not Reported</td>
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<tr>
<td>Formation type</td>
<td>Not Reported</td>
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<tr>
<td>Aquifer type</td>
<td>Not Reported</td>
</tr>
<tr>
<td>Construction date</td>
<td>Not Reported</td>
</tr>
<tr>
<td>Welldepth units</td>
<td>ft</td>
</tr>
<tr>
<td>Welldepth</td>
<td>85</td>
</tr>
<tr>
<td>Wellholedepth units</td>
<td>Not Reported</td>
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<tr>
<td>Ground-water levels, Number of Measurements</td>
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</tr>
</tbody>
</table>

### A2 

<table>
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<th>Value</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Sys name</td>
<td>KIRKS</td>
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<td>Facility Id</td>
<td>567051</td>
</tr>
<tr>
<td>Fac name</td>
<td>WV9945021#01</td>
</tr>
<tr>
<td>City</td>
<td>HINTON</td>
</tr>
<tr>
<td>Act status</td>
<td>A</td>
</tr>
<tr>
<td>Water type</td>
<td>Groundwater</td>
</tr>
<tr>
<td>Owner type</td>
<td>Private</td>
</tr>
<tr>
<td>Daily prod</td>
<td>0</td>
</tr>
<tr>
<td>Sys popula</td>
<td>100</td>
</tr>
<tr>
<td>Sys type</td>
<td>Non Community</td>
</tr>
<tr>
<td>Longitude</td>
<td>37.651111</td>
</tr>
<tr>
<td>Latitude</td>
<td>-80.89</td>
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<td>Updated</td>
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<tr>
<td>Wdate</td>
<td>Not Reported</td>
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<tr>
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<tr>
<td>Guid status</td>
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</tr>
<tr>
<td>Sourcetype</td>
<td>Not Reported</td>
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<tr>
<td>Whp radius</td>
<td>750</td>
</tr>
<tr>
<td>Prod gpd</td>
<td>2500</td>
</tr>
<tr>
<td>Conv facto</td>
<td>25</td>
</tr>
<tr>
<td>Calc pop</td>
<td>100</td>
</tr>
<tr>
<td>Seasonbegi</td>
<td>Not Reported</td>
</tr>
<tr>
<td>Season end</td>
<td>Not Reported</td>
</tr>
<tr>
<td>Facility type</td>
<td>Well</td>
</tr>
</tbody>
</table>

---

**Note:**
- **Map ID:** The map ID is A1 for both A1 and A2.
- **Direction:** Both are NNW.
- **Distance:** Both are 1/2 - 1 Mile.
- **Elevation:** Both are Higher.

**Database Details:**
- **Database:** FED USGS
- **EDR ID Number:** USGS40001294306 for A1, WVWELL0228 for A2.

**Ground-water levels, Number of Measurements:** 0 for A1, 0 for A2.
AREA RADON INFORMATION

EPA Region 3 Statistical Summary Readings for Zip Code: 25951
Number of sites tested: 41.
Maximum Radon Level: 18.3 pCi/L.
Minimum Radon Level: 0.3 pCi/L.

<table>
<thead>
<tr>
<th>pCi/L</th>
<th>4-10</th>
<th>10-20</th>
<th>20-50</th>
<th>50-100</th>
<th>&gt;100</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 (78.05%)</td>
<td>7 (17.07%)</td>
<td>2 (4.88%)</td>
<td>0 (0.00%)</td>
<td>0 (0.00%)</td>
<td>0 (0.00%)</td>
</tr>
</tbody>
</table>

Federal EPA Radon Zone for SUMMERS County: 1
Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.
TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

HYDROGEOLOGIC INFORMATION

AQUIFLOWR Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture’s (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.
LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

West Virginia Water Well Information
Source: Bureau of Public Health
Telephone: 304-558-6765

OTHER STATE DATABASE INFORMATION

West Virginia Oil and Gas Well Database
Source: Department of Environmental Protection
Telephone: 304-926-0450
Oil and Gas well locations in the state.

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

EPA Region 3 Statistical Summary Readings
Source: Region 3 EPA
Telephone: 215-814-2082
Radon readings for Delaware, D.C., Maryland, Pennsylvania, Virginia and West Virginia.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR’s Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey
The Sanborn Library has been searched by EDR and maps covering the target property location as provided by U.S. Army Corps of Engineers were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

**Certified Sanborn Results:**

<table>
<thead>
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<th>Certification #</th>
<th>2C44-40D5-82C2</th>
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<tr>
<td>PO #</td>
<td>NA</td>
</tr>
<tr>
<td>Project</td>
<td>Bluestone DSMS</td>
</tr>
<tr>
<td>UNMAPPED PROPERTY</td>
<td></td>
</tr>
</tbody>
</table>

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

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Bluestone Dam
701 Miller Ave
Hinton, WV 25951

Inquiry Number: 4614459.8
May 11, 2016
Thank you for your business.
Please contact EDR at 1-800-352-0050 with any questions or comments.

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EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.
EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.’s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1993 through 2013. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An ”X” indicates where information was identified in the source and provided in this report.

<table>
<thead>
<tr>
<th>Year</th>
<th>Source</th>
<th>TP</th>
<th>Adjoining</th>
<th>Text Abstract</th>
<th>Source Image</th>
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</thead>
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<tr>
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<td>Cole Information Services</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2008</td>
<td>Cole Information Services</td>
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<tr>
<td>2003</td>
<td>Cole Information Services</td>
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<tr>
<td>1993</td>
<td>Cole Information Services</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
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</table>
TARGET PROPERTY INFORMATION

ADDRESS
701 Miller Ave
Hinton, WV 25951

FINDINGS DETAIL
Target Property research detail.
ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

No Addresses Found
## Target Property: Address Not Identified in Research Source

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

<table>
<thead>
<tr>
<th>Address Researched</th>
<th>Address Not Identified in Research Source</th>
</tr>
</thead>
</table>
GENERAL:

This report presents the results of an Environmental Compliance Review conducted by District personnel on 8-10 August 2006, at Bluestone Lake (CELRH-OR-BLN) project and at outgranted facilities on Corps property at Bluestone Lake. The outgranted facilities reviewed were American Electric Power (Flyash Disposal Area), Bluestone Conference Center, Bluestone State Park, Bluestone State Park Marina, Bluestone Treatment Plant (Raw Water Pumping Station), Glen Lyn Park, West Virginia Division of Natural Resources (WVDNR) Bluestone Wildlife Management Area, and WVDNR Wildlife Section. Previous Environmental Compliance Reviews at this site were conducted on 24-26 May 1993 (Cycle I), 16-19 April 1996 (Cycle II), and 25-27 September 2001 (Cycle III), and were referenced during this review. The review was conducted under the protocols of The Environmental Assessment and Management (TEAM) guide, developed by USACERL (Special Report EC 95/05, November 1994). The purpose of the review was to ensure that routine business of the Operations project, as well as all outgranted facilities, are in compliance with all Federal, State and local environmental laws, regulations, and directives.

This “External” Environmental Compliance Review provides an environmental “snapshot in time;” in this case 8-10 August 2006, and will not reflect improvements made since that time by the project or its outgranted facilities; it documents what the conditions were at the time the assessment was undertaken. This provides a record of the environmental health of a project and outgrants on the record date, as well as providing a basis against which progress can be measured. For the next four fiscal years, Bluestone Lake (excluding the outgrants) will undergo an annual “Internal” Assessment, which documents progress made against any findings in this report, lists any new findings since this report, and addresses the status of any uncorrected findings.

BACKGROUND:

Bluestone Lake is located in Hinton, West Virginia. Construction on the dam began on 19 January 1942. Work was suspended during World War II and resumed in January 1946. The project was completed for operational purposes in January 1949. Total construction cost was approximately $30 million. The reservoir is operated for the control of floods on the New and Kanawha Rivers, and is part of the flood control system for the Ohio and Mississippi Rivers. The operation of Bluestone Lake, in combination with Sutton Lake on the Elk River and Summersville Lake on the Gauley River, provides protection from floods for the highly populated and industrialized Kanawha River valley. These three reservoirs control 57 percent of the total drainage area at Charleston, and Bluestone Lake controls 44 percent of this total. When
Bluestone Dam was built, hydroelectric power was authorized and six penstocks (sluiceways for guiding water to generators) were installed for future use. In 2001, the dam stabilization and modernization project and a hydroelectric power installation project were commenced. The top length of the dam is 2,048 feet, with a top width of 16 feet, and the maximum base width is 200 feet. The top of the dam is at elevation 1,535 feet. There are 21 crest gates measuring 30 feet in width by 31 feet high. The maximum discharge capacity is 430,000 cubic feet per second. Project personnel manage the dam site and operate the structure, to include parking, a scenic overlook, picnic facilities, and an Interpretive Center. Other facilities include a State Park, marina, camping, cabins, boating, fishing, skiing, and other recreational activities.

PROCEDURE AND PERSONNEL:

This Environmental Compliance Review considered the twelve major environmental compliance categories, with special emphasis to those pertinent to the site. It was conducted by a team effort of trained Operations and Real Estate personnel from the District Office, and Bluestone Lake project personnel. Members of this team review were:

Denis Chabot, PE, Environmental Engineer – CELRH-OR-E (Team Leader)
Melva Adkins, Realty Specialist – CELRH-RE-MM

Assisting from the Bluestone Lake project was:

Lloyd D. (Dean) Bonifacio, Park Manager – CELRH-OR-BLN
Tommy Blankenship, Maintenance Worker – CELRH-OR-BLN
David E. Staley, Maintenance Mechanic Leader – CELRH-OR-BLN

Assisting from the Kanawha Area Office was:

Edward A. Nicklow, Park Manager – CELRH-OR-KAO

The team was met and assisted at American Electric Power Flyash Disposal Area by:

Joe Ryder, Plant Environmental Coordinator – American Electric Power
Lee McKinney, Technician – American Electric Power

The team was met and assisted at the Bluestone Conference Center by:

Mark Miller, Camp Director
The team was met and assisted at Bluestone State Park by:

Brett McMillion, Superintendent

The team was met and assisted at the Bluestone State Park Marina by Melvin Ryan

The team was met and assisted at the Bluestone Treatment Plant, Raw Water Pumping Station by:

John Pentasuglia, Production Supervisor
Dave Thomas, Water Quality Supervisor

The team was met and assisted at Glen Lyn Park by:

Howard Spencer – Town of Glen Lyn, Virginia

The team was met and assisted at the West Virginia Division of Natural Resources Bluestone Wildlife Management Area by:

Melissa Pettrey, Administrative Assistant – WVDNR

The team was met and assisted at the West Virginia Division of Natural Resources Wildlife Section, by:

Ronald L. Roles, Wildlife Manager – WVDNR

COMPLIANCE CATEGORIES:

The compliance categories considered were:

Category I – Air Emissions Management
Category II – Cultural & Historic Resources Management
Category III – Hazardous Materials Management
Category IV – Hazardous Waste Management
Category V – Natural Resource Management
Category VI – Pesticide Management
Category VII – Petroleum, Oil, & Lubricant Management
Category VIII – Solid Waste Management
Category IX – Special Pollutants Management: Radon, PCB’s, Asbestos & Noise
Category X – Underground Storage Tanks (USTs) Management
Category XI – Waste Water Management
Category XII – Water Quality Management
CATEGORY OF FINDINGS:

For the purpose of this summary, "comments" and "findings" are described as:

a. **SIGNIFICANT**: A finding requiring immediate action to mitigate direct threats to human health, safety, environment, or the site mission.

b. **MAJOR**: A finding which requires a relatively large commitment of time, human resources, or financial resources, but poses no immediate threat to human health, safety, environment, or the site mission.

c. **MINOR**: A finding that can be addressed with relatively modest expenditures of time, human resources, and/or financial resources.

d. **GENERAL COMMENT**: A comment on a positive (good) or poor management practice, but one that is not a violation of any federal, state or local law.

SUMMARY OF FINDINGS:

**BLUESTONE PROJECT SITE**: The environmental program at Bluestone Lake is very good, and no Significant, Major or Minor findings of non-compliance were noted at the project site during this review. **13 comments** of a general nature (plus **1** positive comment) are found within.

**OUTGRANTS**: Findings of non-compliance were noted for the outgranted areas. **1 Major finding**, **4 Minor findings** and **31 comments** of a general nature (plus **4 positive comments**) are listed. Efforts continue by the Real Estate Division to convince the parties responsible at the outgranted areas to bring those facilities into compliance.

APPENDICES (SPECIFIC COMMENTS) FOR OPERATIONS PROJECTS:

**Appendix A-1** provides a summary of specific comments by category for Corps facilities at Bluestone Lake under the management of Operations and Readiness Division personnel. The Appendix indicates that the environmental program at facilities under Operations and Readiness Division at Bluestone Lake are well managed, and no significant, major or minor findings of any non-compliance were noted at the project site during this review.

**Appendix A-2** contains detailed descriptions of the **13 general comments** pertaining to the Bluestone Lake project (including the Contractor Compound, but not including outgranted areas, which are not the responsibility of Bluestone O&M personnel). In addition, each finding or comment contains a recommended corrective action. Note that the recommendation is just that of the team members, and Bluestone Lake’s Park Manager is encouraged to solicit other ideas or implement local ideas towards these improvements.
APPENDICES (SPECIFIC FINDINGS) FOR OUTGRANTED (REAL ESTATE) AREAS:

Findings of major and minor non-compliance were noted at outgranted areas. Recommendations to correct the 1 Major finding, 4 Minor findings and 31 comments of a general nature are included. Efforts continue by the Real Estate Division to convince the parties responsible at the outgranted areas to bring those facilities into compliance.

Appendix B-1 provides a summary of specific findings by site pertaining to the outgranted areas within the boundaries of the Bluestone Lake project.

Appendix B-2(A,B,C,D,E,F,G,H) contains applicable comments and detailed descriptions of each finding pertaining to the outgranted areas within the boundaries of the Bluestone Lake project. Also included are recommended remedies to all findings.

Appendix B-2A provides information concerning environmental condition at the American Electric Power Flyash Disposal Area.
Appendix B-2B addresses findings/comments at the Bluestone Conference Center
Appendix B-2C addresses findings/comments at Bluestone State Park
Appendix B-2D addresses findings/comments at Bluestone State Park Marina
Appendix B-2E provides information concerning environmental condition at the Bluestone Treatment Plant (Raw Water Pumping Station)
Appendix B-2F addresses comments at Glen Lyn Park
Appendix B-2G addresses comments at the West Virginia Division of Natural Resources (WVDNR) Bluestone Wildlife Management Area
Appendix B-2H addresses comments at the WVDNR – Wildlife Section
The following summarizes the number and types of findings or comments for each category pertaining to facilities under the responsibility of the Operations and Readiness Division:

**CATEGORY I – AIR EMISSIONS MANAGEMENT**
No findings, facility in compliance

**CATEGORY II – CULTURAL & HISTORIC RESOURCES MANAGEMENT**
No findings, facility in compliance

**CATEGORY III – HAZARDOUS MATERIALS MANAGEMENT**
No findings, 9 general comments, facility in compliance

**CATEGORY IV – HAZARDOUS WASTE MANAGEMENT**
No findings, facility in compliance

**CATEGORY V – NATURAL RESOURCE MANAGEMENT**
No findings, facility in compliance

**CATEGORY VI – PESTICIDE MANAGEMENT**
No findings, facility in compliance

**CATEGORY VII – PETROLEUM, OIL, & LUBRICANT MANAGEMENT**
No findings, 3 general comments, facility in compliance

**CATEGORY VIII – SOLID WASTE MANAGEMENT**
No findings, 1 general comment, facility in compliance

**CATEGORY IX – SPECIAL POLLUTANTS MANAGEMENT: RADON, PCB’S, ASBESTOS & NOISE**
No findings, facility in compliance

**CATEGORY X – UNDERGROUND STORAGE TANKS (USTS) MANAGEMENT**
No findings, facility in compliance

**CATEGORY XI – WASTE WATER MANAGEMENT**
No findings, facility in compliance, 1 positive comment

**CATEGORY XII – WATER QUALITY MANAGEMENT**
No findings, facility in compliance
APPENDIX A - 2

DETAILED FINDINGS & REMEDIES
ENVIRONMENTAL COMPLIANCE REVIEW
BLUESTONE LAKE
OPERATIONS AND READINESS DIVISION

CATEGORY III – HAZARDOUS MATERIALS MANAGEMENT

Location: Dam; Third Floor; Oil Closet

General Comment/Recommendation: The project does a good job of keeping many of the drums and containers of various materials in a single location in the Oil Closet on the third floor. No secondary containment has been made available for these materials. Recommend that the project utilize the Oil Closet room as secondary containment by installing a liquid proof lip completely across the access to the closet.

Location: Contractor Compound

General Comment/Recommendation: Gasoline and oil were observed being stored in the contractor’s trailer. Secondary containment was not being provided, and any leak from the gasoline and oil containers would leak from the trailer and immediately contaminate the ground below. Recommend that all liquid fuels, oil, and other liquid chemicals be placed within proper secondary containment. Further, all gasoline should be stored at the point furthest from the door, to permit personnel to escape in the event of a fire.

Location: Old Barge

General Comment/Recommendation: Hydraulic hoses on old barge may degrade over time due to use, weather, and sunlight. Hydraulic hoses may not show signs of impending failure, but fail instantly under load. A ruptured hose under load can quickly evacuate the contents of the hydraulic tank into the environment. Recommend that:

1) The hoses frequently be visually inspected, and

2) That a hose change-out cycle be implemented and adhered to. This change-out cycle should be developed by determining from the manufacturer the maximum expected life of the hoses, then applying a factor to compensate for the effect of the hoses being out-of-doors year-round, in cold and hot weather, and sunlight.
Location: Old Barge

**General Comment/Recommendation:** A spill kit should be permanently stationed on the old barge for use if a hydraulic hose ruptures, or if any type of oil leak should occur. **Recommend** that this spill kit be obtained and stored in a clean, dry container which is covered to protect from sunlight, moisture, and heat to prevent premature deterioration of the absorbent material.

Location: Contractor Compound; Pole Building

**General Comment/Recommendation:** Various flammable and combustible materials are stored at the site. **Recommend** that National Fire Protection Association (NFPA) signs be posted on or next to the entrance to the Pole Building to assist emergency personnel. These signs should indicate the highest hazard levels contained in each building in the Health (blue), Flammability (red), and Reactivity (yellow) diamonds.

Location: Contractor Compound

**General Comment/Recommendation:** An unmarked drum of material was observed at the Contractor Compound. **Recommend** that this drum be either labeled or properly disposed of.

Location: Contractor Compound

**General Comment/Recommendation:** A propane tank at the contractor compound was not marked as to contents; there were also no warnings posted to prohibit smoking. **Recommend** that this tank be labeled as to contents, and “No Smoking within 50 feet” signs be conspicuously posted.

Location: Maintenance Compound; Truck-mounted Fuel Tank

**General Comment/Recommendation:** A truck-mounted fuel tank was observed at the Maintenance Compound which did not have warnings to prohibit smoking. **Recommend** that this tank be provided with “No Smoking” signs on all sides except for the side up against the truck cab.
Location: Contractor Compound

**General Comment/Recommendation:** Lead-acid batteries were observed under the trailer without secondary containment. **Recommend** that the batteries be placed in secondary containment; otherwise completely removed from the site and cores recycled.

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**CATEGORY VII – PETROLEUM, OIL, & LUBRICANT MANAGEMENT**

**Location:** Dam; Fifth Floor

**General Comment/Recommendation:** An abandoned diesel tank remains in the dam; there are no plans to re-activate usage of this tank. **Recommend** that the tank be removed from the dam, cut into two or more pieces, and taken to the landfill. Special precautions are required prior to cutting fuel tanks; OR-BLN may contact OR-E for advice prior to taking this step.

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**Location:** Dam; Fourth Floor

**General Comment/Recommendation:** An oil tank for the penstock gates has been installed on the Fourth Floor of the Dam which is not fitted with secondary containment. **Recommend** that adequate secondary containment be installed for this oil tank.

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**Location:** Dam; Fourth Floor

**General Comment/Recommendation:** The hydraulic tank for the drift and debris tower is located on the Fourth Floor of the Dam, and does not have secondary containment. **Recommend** that adequate secondary containment be installed for the hydraulic tank.

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**CATEGORY VIII – SOLID WASTE MANAGEMENT**

**Location:** Scrap Yard

**General Comment/Recommendation:** The scrap yard had an inordinate amount of material which was not cataloged and haphazardly stored. In addition to safety and some minor environmental concern, the material was obviously becoming waste
material, and the area is quickly becoming an unlicensed junk yard. **Recommend** that the scrap yard be given a discerning review for what to keep and what should be disposed of, either through recycling or paid landfill.

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**CATEGORY XI – WASTE WATER MANAGEMENT**

**Location:** Lift Station (in field between Maintenance Compound and Dwelling)

**General Comment:** A pump test was performed on the lift station. All parts of the lift station were found to be in good condition and working properly. *(Note: That the Lift Station was found to be in excellent operating condition indicates a Good Management Practice).*

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APPENDIX B - 1

SUMMARY OF FINDINGS
BLUESTONE LAKE
REAL ESTATE DIVISION (OUTGRANTS)

The following summarizes the number and types of findings or comments for each category pertaining to facilities under the responsibility of the Real Estate Division:

CATEGORY I – AIR EMISSIONS MANAGEMENT
No findings, all outgranted facilities in compliance

CATEGORY II – CULTURAL & HISTORIC RESOURCES MANAGEMENT
No findings, all outgranted facilities in compliance

CATEGORY III – HAZARDOUS MATERIALS MANAGEMENT
Bluestone Conference Center: 1 Minor finding, 3 general comments
Bluestone State Park: 1 Minor finding, 8 general comments, 1 positive comment
Bluestone State Park Marina: 1 Major finding, 1 general comment
WVDNR Bluestone Wildlife Management Area: No findings, 8 general comments
WVDNR Wildlife Section (Parks): No findings, 3 general comments
No findings at other outgranted facilities; these other facilities in compliance

CATEGORY IV – HAZARDOUS WASTE MANAGEMENT
No findings, all outgranted facilities in compliance

CATEGORY V – NATURAL RESOURCE MANAGEMENT
No findings, all outgranted facilities in compliance

CATEGORY VI – PESTICIDE MANAGEMENT
No findings, all outgranted facilities in compliance

CATEGORY VII – PETROLEUM, OIL, & LUBRICANT MANAGEMENT
WVDNR Wildlife Section (Parks): 1 Minor finding
No findings at other outgranted facilities; these other facilities in compliance

CATEGORY VIII – SOLID WASTE MANAGEMENT
Bluestone State Park: No findings, 1 general comment
WVDNR Bluestone Wildlife Management Area: No findings, 1 general comment
No findings at other outgranted facilities; these other facilities in compliance

CATEGORY IX – SPECIAL POLLUTANTS MANAGEMENT: RADON, PCB’S, ASBESTOS & NOISE
No findings, all outgranted facilities in compliance
CATEGORY X – UNDERGROUND STORAGE TANKS (USTS) MANAGEMENT
  No findings, all outgranted facilities in compliance

CATEGORY XI – WASTE WATER MANAGEMENT
  Bluestone Conference Center: No findings, facility in compliance, 2 positive comments
  Bluestone State Park Marina: 1 Minor finding
  Glen Lyn Park: No findings, 1 general comment
  No findings at other outgranted facilities; these other facilities in compliance

CATEGORY XII – WATER QUALITY MANAGEMENT
  Bluestone Conference Center: No findings, 1 general comment, 1 positive comment
  Bluestone State Park: No findings, 2 general comments
  Glen Lyn Park: No findings, 1 general comment
  WVDNR Wildlife Section (Parks): No findings, 1 general comment
  No findings at other outgranted facilities; these other facilities in compliance
NOTE: No findings were observed at the American Electric Power Flyash Disposal Area. The ERGO team reviewed practices at the site, and discussed procedures with the Plant Environmental Coordinator. Discussion focused on the processes for fly-ash compaction and cover.

The site is in excellent shape. Wild animals (deer, rabbit, waterfowl) were observed utilizing the reclaimed portions at the northern end of the site. No erosion or release of any fly-ash were noted.

The disposal area has a collection system and monitoring wells completely along the perimeter. Since the date of the inspection on 9 August 2006, AEP has submitted sampling reports to OR-E showing the results from these monitoring wells. All readings are either non-detectable or well below the limits which the State of Virginia Department of Environmental Quality (VDEQ) requires of AEP. The State also monitors air quality at the site.

The site will require perpetual mechanical “brush hogging” and monitoring by American Electric Power Company. Real Estate Division will need to require this.

(NOTE: American Electric Power is utilizing Good Management Practices with regards to the Glen Lyn Flyash Disposal Area).
CATEGORY III – HAZARDOUS MATERIALS MANAGEMENT

Finding Number: BLN/06-03-001

Ranking: Minor

Location: Shop

Comment: Oil, 5-gallon gasoline cans, mineral spirits, and oil-based paint are being stored at this location without any secondary containment.

Recommendation: Gather all compatible materials together in a few distinct locations and provide adequate secondary containment. Adequate requires that the containment be large enough to hold 110 percent of the largest container in the system if a release occurs. Reminder when designing secondary containment: gasoline must be placed away from exits.

Location: Shop

General Comment/Recommendation: Unlabeled drums of used oil were observed at the site. The drums were also not provided with secondary containment. Recommend the drums be marked “USED OIL” in accordance with state law, and placed within adequate secondary containment.

Location: Shop

General Comment/Recommendation: Various materials are stored at the site. Recommend that National Fire Protection Association (NFPA) signs be posted on or next to the access doors of the Shop to assist emergency personnel. These signs should indicate the highest hazard levels contained in each building in the Health (blue), Flammability (red), and Reactivity (yellow) diamonds.
Locations:
1) Carpenter Shop
2) Pool

**General Comment/Recommendation:** MSDS sheets were only available in the Main Building, but were not available in the Carpenter Shop or at the Pool, where most materials were being stored and used. **Recommend** that Conference Center personnel ensure that MSDS sheets are available for all materials on site, and that these MSDS sheets are available at all times in the areas where the materials are being stored, mixed, applied or used.

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**CATEGORY XI – WASTE WATER MANAGEMENT**

Location: Sewage Lagoon

**General Comment:** The Sewage Lagoon was checked and found to be operating properly. At this area there was no odor, and the NPDES permit had been secured. *(Note: This check of the Sewage Lagoon indicates that the Bluestone Conference Center operates this area using Good Management Practices).*

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Location: Lift Station

**General Comment:** The Lift Station on the site was checked and found to be operating properly and maintained with no problems. *(Note: This indicates that the Bluestone Conference Center operates this area using Good Management Practices).*

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**CATEGORY XII – WATER QUALITY MANAGEMENT**

Location: Water Plant

**General Comment:** The Water Plant was checked and found to be in good repair and utilizing good housekeeping and recordkeeping. A check of records of turbidity indicated that turbidity levels were on an order of magnitude 10 times lower than allowable. *(Note: This check of the turbidity at the Water Plant indicates that the Bluestone Conference Center operates this plant using Good Management Practices).*
Location: Main Building; and other areas on site

**General Comment/Recommendation:** At the Main Building, a hose was connected to a threaded spigot and was found lying in a sink. The spigot did not contain a vacuum breaker (backflow preventer), and the situation was perfect for the siphoning of contaminated water back into the drinking water system. **Recommend** that all threaded hose connections on site be inventoried and a vacuum breaker be placed on each threaded spigot. The Conference Center was provided with a working sample vacuum breaker and should purchase and install similar vacuum breakers for all remaining spigots.
APPENDIX B – 2C

DETAILED FINDINGS & REMEDIES
ENVIRONMENTAL COMPLIANCE REVIEW
BLUESTONE LAKE
BLUESTONE STATE PARK
REAL ESTATE DIVISION (OUTGRANT)

CATEGORY III – HAZARDOUS MATERIALS MANAGEMENT

General Note:

Bluestone State Park corrected the most serious deficiency identified during the 2001 ERGO assessment, that of chlorine gas cylinders being employed as disinfectant for the swimming pool. Mishandling or accidental discharge of the chlorine gas, which is heavier than air and would have hovered just above the surface, could have resulted in many deaths and injuries during a day of heavy visitation. Park personnel have removed all cylinders from the system, and now utilize solid tablets for disinfections, which are easy to handle and improve safety. (This correction indicates a Good Management Practice).

Finding Number: BLN/06-03-002 Ranking: Minor
Location: Gas Shed

Comment: At this location, gasoline and diesel products are dispensed into equipment and vehicles. Currently, the fuel dispensing takes place on a surface of gravel over earth. Overfills or inattention could result in spills which immediately contaminate the environment.

Recommendation: Recommend that a fuel-dispensing pad be poured whenever funds permit. The surface of this pad should be liquid-tight, and sloped only gently (approx. 1/16” per foot or less) which will allow time for personnel to place absorbents on a spill when it occurs. Recommend also that the State Park personnel procure some absorbents in readiness for a spill event, storing them near the dispensing pumps in a position where they can be reached within a few seconds.

(Note: This was a general comment five years ago; it is elevated to a Minor Finding due to lack of attention to this easy fix, as well as continual fueling operations being performed at this location)
Location: Gas Shed

**General Comment/Recommendation:** Hydraulic oils, gasoline cans containing fuel, motor oil, transmission fluid, and kerosene are all being stored at the Gas Shed without proper secondary containment. **Recommend** that adequate secondary containment be provided for these and all other fuel and chemically-based products.

Location: Maintenance Shop

**General Comment/Recommendation:** Unlabeled drums of used oil were observed at the Maintenance Shop. **Recommend** the drums be marked “USED OIL” in accordance with state law. (See next comment concerning placement within adequate secondary containment).

Location: Maintenance Shop

**General Comment/Recommendation:** The secondary containment for the used oil at the Maintenance Shop was computed and was found to be inadequate at current 5’ x 7’ x less than 1.5 inches. For 110 percent of the largest container, the walls of the secondary containment must be 4 inches in height to provide adequate volume; currently the walls are just over 1 inch in height. **Recommend** the modification be made to increase the volume of the secondary containment.

Location: Maintenance Shop

**General Comment/Recommendation:** Waste batteries were being stored on a pallet by the side of the Maintenance Shop. In lieu of secondary containment for these batteries, **recommend** that these (battery) cores be removed from the site and taken to a recycling center.

Location: Office

**General Comment/Recommendation:** Propane tanks at the Office were not marked as to contents; there were also no warnings posted to prohibit smoking. **Recommend** that the tanks be labeled as to contents, and “No Smoking” signs be conspicuously posted.
Location: Pool

General Comment/Recommendation: Muriatic acid is being stored at the Pool without proper secondary containment. **Recommend** that adequate secondary containment be provided for the muriatic acid.

Location: Pool

General Comment/Recommendation: Chlorine and muriatic acid are being stored and used at the Pool, and Material Safety Data Sheets for these chemicals were not present. **Recommend** that MSDS sheets for all materials being used or stored at the Pool be obtained and placed in a convenient and conspicuous location.

Location: Maintenance Shop

General Comment/Recommendation: Various fuels and oils were being stored at the Maintenance Shop. **Recommend** that National Fire Protection Association (NFPA) signs be posted on or next to the access doors to assist emergency personnel. These signs should indicate the highest hazard levels contained in the building by placing the correct numbers in the Health (blue), Flammability (red), and Reactivity (yellow) diamonds.

CATEGORY VIII – SOLID WASTE MANAGEMENT

Location: Maintenance Shop

General Comment/Recommendation: Solid waste was building up on site and had been so for some time. **Recommend** that the solid waste be removed and properly disposed of.

CATEGORY XII – WATER QUALITY MANAGEMENT

Location: Sewage Treatment Plant

General Comment/Recommendation: A threaded hose connection at the Sewage Treatment Plant did not contain an anti-siphon backflow preventer. To protect the drinking water supply from possible contamination which might occur during low
pressure situations, **recommend** that this and all threaded hose connections on site be inventoried and a vacuum breaker be placed on each threaded spigot. State Park personnel were provided with a working sample vacuum breaker and should purchase and install similar vacuum breakers for all remaining threaded hose connections.

**Location:** Pool

**General Comment/Recommendation:** Backwash of filters is being discharged onto the ground. An NPDES permit had not been obtained from the State for this discharge. **Recommend** plumbing the backwash discharge into the existing lift station, which would take to backwash water to the sewage treatment plant. In lieu of this, if discharges are to remain unchanged, then **recommend** that the NPDES permit be secured and posted.
APPENDIX B – 2D

DETAILED FINDINGS & REMEDIES
ENVIRONMENTAL COMPLIANCE REVIEW
BLUESTONE LAKE
BLUESTONE STATE PARK MARINA
REAL ESTATE DIVISION (OUTGRANT)

CATEGORY VII – PETROLEUM, OIL, & LUBRICANT MANAGEMENT

Finding Number: BLN/06-07-001
Ranking: MAJOR

NOTE: These same findings were observed during Cycle III and documented as Finding Number BLN/01-07-001. These findings have not been corrected by the Bluestone State Park Marina.

Location: Marina, Fuel Oil Tank

Comment: The fuel oil tank was examined by the team and found lacking in several areas. These comments were made:
1) An electrical solenoid valve is absent and tank contents could be completely siphoned into lake.
2) Tank did not contain proper vents.
3) No smoking signs were absent from the tank.

Recommendations:

1) That a normally-closed electrical solenoid valve be provided on the tank to prevent the siphoning of the entire contents of the fuel tank into the lake in the event of an accident. The solenoid valve should be wired in conjunction with the dispensing pump, so that when the lever on the pump is raised, the solenoid is energized and opened (Note: This absence of a siphon prevention device is the deficiency leading to the cause of the assignment of “Major finding.”)

2) That the fuel storage tank be vented to a minimum of 12 feet above ground level.

3) That “Flammable – No Smoking” signs be placed on all 4 sides of the fuel trailer.
Location: Marina

General Comment/Recommendation: Gas cans were outside of the fuel trailer without any secondary containment. **Recommend** that the gas cans be placed into adequate secondary containment.

CATEGORY XI – WASTE WATER MANAGEMENT

**Finding Number:** BLN/06-11-001 **Ranking:** Minor

Location: Residential Trailer

Comment: The toilet in the trailer is hooked up for use, but sewage outfall discharges into a gray water pit. There is no septic system at the location; no lift station and no commercial sewer. The hookup is not in conformance with code (illegal outfall).

Recommendation: Recommend that the toilet in the trailer be physically removed and the outlet pipe be plugged (and this step verified by the District); then the gray water pit can continue to be used for any sinks and laundry in the trailer.

NOTE: This same finding was observed during Cycle III and documented as Finding Number BLN/01-11-001. This finding was not corrected by the Bluestone State Park Marina.
General Note:

The ERGO Team met with the Raw Water Pumping Station management, and reviewed the physical facilities at the site. No deficiencies; therefore no findings or comments, were noted in the review. The Bluestone Treatment Plant (Raw Water Pumping Station) management is very interested in environmental protection, and are proving to be good partners with the Corps in this realm.
CATEGORY XI – WASTE WATER MANAGEMENT

Location: Glen Lyn Park; Trailers

General Comment/Recommendation: Part of Glen Lyn Park is a campground, so trailers are permitted to utilize the site. A trailer dump station is provided. However, on the day of the assessment, trailers for an event were also allowed to park behind the comfort station. It was one of these trailers where it was noted that the sewage discharge was exiting the trailer directly to the ground. Mr. Spencer of the town of Glen Lyn spoke with owners of the trailer and requested that they discontinue this practice. The owners were departing the site within two hours, but had been dumping wastewater onto the ground the entire week. Because of this incident, the ERGO team examined every trailer at the site to ensure no other were releasing wastewater, and determined that none were. Recommend that the City of Glen Lyn periodically check to ensure that no trailers are discharging wastewater rather than taking it to the dump station, and ensure that any permission given for a temporary trailer comes with a strict warning that there will be no tolerance for releasing wastewater onto the ground. Instances of this should be immediately reported to Real Estate Division.

CATEGORY XII – WATER QUALITY MANAGEMENT

Location: Various locations at site

General Comment/Recommendation: Several threaded hose connections were seen without anti-siphon backflow preventers. To protect the drinking water supply from possible contamination which might occur during low pressure situations, recommend that anti-siphon devices be purchased and placed on all threaded connections. The Superintendent of Public Works for Glen Lyn was provided with a working frostproof backflow preventer as a sample of what should be purchased for hose connectors. All additional backflow preventers should be purchased and installed by the town.
APPENDIX B – 2G

DETAILED FINDINGS & REMEDIES
ENVIRONMENTAL COMPLIANCE REVIEW
BLUESTONE LAKE
WEST VIRGINIA DIVISION OF NATURAL RESOURCES
BLUESTONE WILDLIFE MANAGEMENT AREA
REAL ESTATE DIVISION (OUTGRANT)

CATEGORY III – HAZARDOUS MATERIALS MANAGEMENT

Location: Gashouse

*General Comment/Recommendation:* A large amount of fuel and oils in 55 gallon drums are stored and used out of the Gashouse. The gashouse has no secondary containment for any of the materials. **Recommend** adequate secondary containment be provided for these materials. On the day of the assessment, adequate secondary containment would have been a minimum of 61 gallons. Due to the large number of drums and other primary containers, recommend that the Gashouse itself be sealed to become secondary containment.

Location: Gashouse

*General Comment/Recommendation:* Unlabeled drums of used oil were observed at the Gashouse. **Recommend** the drums be marked “USED OIL” in accordance with state law.

Location: Gashouse

*General Comment/Recommendation:* Some containers at the Gashouse were unlabeled, and Bluestone Wildlife Management Area personnel could not identify some of the materials in the unmarked containers. Other containers were mislabeled. **Recommend** that all materials in the containers be identified, and all containers properly marked.
Location: Gashouse

**General Comment/Recommendation:** At this location, gasoline and diesel products are dispensed into equipment and vehicles. Currently, the fuel dispensing takes place on a surface of gravel over earth. Overfills or inattention could result in spills which immediately contaminate the environment. **Recommend** that a fuel-dispensing pad be poured whenever funds permit. The surface of this pad should be liquid-tight, and sloped only gently (1/16” per foot or less) which will allow time for personnel to place absorbents on a spill when it occurs. **Recommend** also that the Wildlife Management Area personnel procure some absorbents in readiness for a spill condition, storing them near the dispensing pumps in a position where they can be reached within a few seconds.

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Location: 3 Locations on Site

**General Comment/Recommendation:** Three propane tanks at the Wildlife Management Area did not have warnings posted to prohibit smoking. **Recommend** that the tanks be labeled as to contents, and “No Smoking” signs be conspicuously posted.

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Location: Mechanics Shop

**General Comment/Recommendation:** An unmarked sprayer was observed in the Mechanics Shop. **Recommend** that the sprayer be dedicated to the use of one material, and mark the sprayer accordingly for that material.

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Location: Welding Shop

**General Comment/Recommendation:** An oxygen cylinder was observed to be not adequately secured to the structure or a cart at the Welding Shop. **Recommend** that the chain is tightened to secure the cylinder against falling.

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Location: Gashouse

**General Comment/Recommendation:** Various fuels and chemicals are stored in the Gashouse. In the event of a fire, emergency personnel will need to know the hazards faced. **Recommend** that National Fire Protection Association (NFPA) signs be posted on or next to the access doors to assist these
emergency personnel. These signs should indicate the highest hazard levels contained in the building by placing the correct numbers in the Health (blue), Flammability (red), and Reactivity (yellow) diamonds.

CATEGORV VIII – SOLID WASTE MANAGEMENT

Location: Behind Paint Shed

General Comment/Recommendation: A huge collection of solid waste was building up behind the buildings. This collection is haphazardly placed, and is on the verge of becoming a non-permitted disposal area (junk-yard), with the wooded area growing up through the waste. Recommend that the solid waste be removed and taken to a licensed landfill (or recycling).
CATEGORY III – HAZARDOUS MATERIALS MANAGEMENT

Location: Fuel Storage Building

General Comment/Recommendation: At this location, gasoline and diesel products are dispensed into equipment and vehicles. Currently, the fuel dispensing takes place on a surface of gravel over earth. Overfills or inattention could result in spills which immediately contaminate the environment. **Recommend** that a fuel-dispensing pad be poured whenever funds permit. The surface of this pad should be liquid-tight, and sloped only gently (1/16” per foot or less) which will allow time for personnel to place absorbents on a spill when it occurs. **Recommend** also that the Wildlife Section personnel procure some absorbents in readiness for a spill condition, storing them near the dispensing pumps in a position where they can be reached within a few seconds.

Location: Gas House

General Comment/Recommendation: Material Safety Data Sheets (MSDS) were not present at the Gas House. Fuels and other chemicals are being stored or used at this area. **Recommend** that MSDS be obtained for every fuel and chemical on site, and posted conspicuously where the materials are used or stored.

Locations:
1) Storage Building
2) Well House

General Comment/Recommendation: The LP gas tanks were not labeled as to content and not marked prohibiting smoking. **Recommend** that the tanks be marked “Propane” and also “Flammable, No Smoking,” or equivalent. The LP gas company servicing the tank should be able to supply decals, at Wildlife Section personnel’s request, likely without charge.
CATEGORY VII – PETROLEUM, OIL, & LUBRICANT MANAGEMENT

Finding Number:  BLN/06-07-001       Ranking: Minor

Location:  Gas House

Comment:  An observation of diesel fuel being stored in a kerosene container was made during the Assessment. Although this is not as dangerous a situation as gasoline being stored in a kerosene container (the result of which would be a Significant or Major finding), it could result in an injurious situation.

Recommendation:  Recommend that all containers be marked properly, and the contents always be double-checked to ensure that the material contained is that which is stated on the label.

CATEGORY XII – WATER QUALITY MANAGEMENT

Location:  Various locations at site

General Comment/Recommendation:  In 2001, the ERGO team recommended that all threaded hose connections at the site be fitted with anti-siphon backflow preventers. Wildlife Section Management has decided to prohibit drinking of the water and use it only for non-potable purposes. This is an acceptable practice, but there are no warnings that the water is not potable. Recommend that all water points be labeled “Water Not Fit to Drink,” or equivalent.
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APPENDIX F
QUALITY CONTROL PLAN

Qualifications: See below.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Daniel F. Stark, PG
Environmental Geologist

Environmental Professional in Responsible Charge: Daniel F. Stark, PG

Qualifications:

Relevant Education:
MS, 33 Semester hours – Environmental Science, WV College of Graduate Studies
1993-2001

BS, Geology, West Virginia University, 1979

Relevant Experience:
1996-present, Environmental Geologist, US Army Corps of Engineers – Perform environmental site assessments and plan and manage environmental investigation and remediation of residential and commercial sites.

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of this part.

Daniel F. Stark, PG
Environmental Geologist
I. Purpose.
This Quality Control Plan (QCP) presents the policy and specific actions that are being implemented on this program to insure that high quality products are produced on time and within budget. It defines the responsibilities and roles of each member on the Independent Quality Control Team. This QCP covers the review of Phase I HTRW Investigations prepared by the Environmental and Remediation Section (CELRH-EC-CE) and those prepared by an Architect-Engineer (A-E) consultant.

II. References.

a. ER 1110-1-2 Engineering and Design Quality Management

b. CELRDC 5-1-1 Quality Management Plan

c. CELRHR 5-2-5 Quality Management Plan

d. Work Instruction 3.36.2, Huntington district ISO standard for conducting Phase I Environmental Site Assessments, 28 March 2003

e. EM 385-1-1 Safety and Health Requirements Manual

f. ASTM E 1527-15 and E 1528-14, ASTM Standards on Environmental Site Assessments for Commercial Real Estate

g. ER 1110-2-1150, Engineering and Design - Engineering and Design for Civil Works Projects, 31 August 1999.

III. General.

A. Type of Project – Phase I HTRW Environmental Site Assessment Report on Bluestone Dam DSMS Contractor Work Limits (CWL).

B. Location – Bluestone Dam, Miller Avenue, Hinton, WV.

C. Customer/Sponsor – The customer for this project is the U.S. Army Corps of Engineers.

D. Project Description – Assessment of all project lands that could be contaminated prior to conducting work on the site. A site assessment of all project lands shall include investigation of adjacent properties from which contamination could migrate. The Assessment shall consist of an environmental site assessment using standard practices to determine the potential for or presence of hazardous, toxic, or radioactive waste (HTRW) or other environmental concerns.
IV. Quality Control Plan.

An effective Quality Control Plan (QCP) is important to the undertaking of this program due to the potential risks that HTRW poses to human health and the environment. An effective QCP will ensure that a high quality technical product will be produced that will require little or no revision prior to a quality assurance review.

A qualified environmental professional from CELRH-EC-CE is responsible for compiling the Quality Control Plan. A QCP review team shall review this document.

V. Quality Control Process.

The Phase I HTRW Investigation shall be conducted by a functional team of qualified environmental professionals from CELRH-EC-CE with full communication between team members. The Lead Environmental Professional shall be responsible for coordination of the Phase I investigation and the development of the final report in accordance with standard practices, policies, and guidelines. The functional team will be responsible for ensuring a quality product is produced through internal checks, review and interaction with the Independent Quality Control Team (IQCT) members assigned to monitor project Quality.

The QCP shall apply to all tasks/activities and products (SSHP and Draft/Final reports) associated with this project. The Quality Control Plan was prepared according to ER 1110-1-12 Change 2, Engineering and Design, Quality Management, 31 March 2011; LRD Regional Business Processes Manual: 08000 Engineering & Construction: 08504 LRD – QC/QA Procedures for Civil Works; 08504 LRH –QCP Work Instruction; and the applicable ISO processes developed for this type of work.

The QCP addresses all work information and activities required for the SSHP and Phase I HTRW Investigation. The plan addresses the responsibilities and roles of each member on the Independent QC Team (IQCT), along with those preparing or performing the tasks/activities for this project. Quality control shall be managed in compliance with required ISO procedures for quality control. USACE guidance documents and links to the ISO 9000 process can be found on the internet at the following address: https://pmbpmanual.irl.ds.usace.army.mil/qualtrax/

The draft and final versions of the Phase I HTRW Report shall include a separate QC appendix that includes an activity review checklist (appropriate checks on those activities that were performed/reviewed) for the specific product along with a signed sheet which designates the name, date and official work title of the those persons performing/conducting the following activities: performance of activities/investigation, independent review of documents/reports, and approval of all work necessary to complete these activities. All comments and responses from USACE’s QC review of the draft SSHP, QCP, and Phase I HTRW Report shall be included in the QC appendix of the final plans and reports.
VI. IQCT Review Team.

An IQCT will be assembled and will consist of experienced professionals knowledgeable of the technical requirements, customer needs, and schedule. Reviewers will be independent of the Functional Team. Members of the Environmental and Remediation Section or other district elements may serve as reviewers if they have not participated in report preparation.

Only quality products will be released from the IQCT review team. All members of the review team will sign a quality certification sheet.

VII. Quality Assurance.

A quality assurance (QA) review of the Phase I HTRW Investigations executed by CELRH-EC-CE will be conducted by the designated Quality Assurance team member.

Phase I HTRW Investigation Reports that are prepared by CELRH-EC-CE will be kept on file in the district office. Reports that contain questionable findings or recommendations for Phase II will be sent to the CELRN Environmental Restoration Design Center (ERDC) for QA review.

VIII. Resolution and Documentation.

The reviewers will provide a written record of comments for resolution. The functional team will respond to all comments and incorporate appropriate changes. Review comments and responses form an important record that completes the final product. Documentation of the independent review will be consistent, accurate, and a permanent part of the record.

IX. Checklist.

A checklist is included in Section XII of this plan and is intended to serve as a guide in checking or reviewing the Phase I HTRW Investigation Report. The checklist shall not substitute for sound judgment be reviewers.

X. QC Certification

The QC Certification will be completed on a project by project basis and placed in the project file.

XI. Project Schedule.

The Environmental & Remediation Section will follow the schedules as set by the Project Delivery Team (PDT) and Planning Division.
XII. QC Review Checklist

Project: Bluestone Dam DSMS Contractor Work Limits (CWL), Phase I HTRW Environmental Site Assessment Report.

QC Reviewer: Janet K. Wolfe

The following checklist is provided for QC review. Response "Y", "N", or "NA" should be marked in the space provided.

A. Introduction / Executive Summary

B. Site Description
   1. Background and Site History
   2. USGS Topographic Map
   3. Site Vicinity Map
   4. Site Map

C. Assessment Methodology
   1. Environmental Screening
   2. Deed Search
   3. Aerial Photo's
   4. Site Reconnaissance
   5. Site Photo's
   6. Ascertainable/Standard Sources
   7. Safety Plan
   8. Interviews
   9. Data Review
   10. Conformance to ASTM Standards

D. Summary of Findings

E. Conclusions

F. Exposure Assessment

G. Recommendations
   1. Other Actions

H. Appendices
   1. Site Maps
   2. Interview Records
   3. Photo documentation
   4. Environmental Screening Data
XIII. Quality Certification Document

This is to certify that the Lead Environmental Professional and the IQCT members have reviewed the attached document in accordance with the Quality Control Plan. All comments resulting from the various reviews have been resolved and incorporated.

Internal Quality Control Team

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<td>IQCT:</td>
<td>Janet K. Wolfe</td>
<td>23-June-2016</td>
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MEMORANDUM FOR CELRH-EC-CE, ATTN: Dan Stark

SUBJECT: Comments on the Draft Phase I Environmental Site Assessment, Bluestone Dam, Contractor Work Limits (CWL), Dam Safety Modification Study, June 2016

1. Comments on the above referenced document are included below.

2. General Comment: I noticed you have Roman Numerals for page numbers rather than Arabic Numerals (i.e., I, 2, 3, etc.). Just checking to see if this is intentional.

3. Section 1, Introduction, line 3. Clarify “this study”. Are you referring to the DSMS or the Phase I ESA? In line 5, clarify “this area”. Are you referring to the stilling basin?

4. Section 1.4.3, Records of State & Fed Agencies, page xi – 1st full paragraph. Information you have here about “these 2 sites” that “could not be plotted” could be referenced in Section 1.4.8, Orphan Sites.

5. Section 1.4.4, Ownership History. Tract maps for the non-federal properties should be included. What type of activities was conducted on the property by DOH? Did they store explosives for blasting activities in road construction? Any gas, oil, chemicals, maintenance products, etc. stored at this location during DOH use?

6. Section 1.4.5, Other Phase I HTRW Reports. Provide a clearer reference to the previous HTRW Report. Include the date and name of the report.

7. Section 1.4.6. CELRH Operations Division has files for old ERGO Reports. Operations Division also has UST files. Have you checked the ERGO files to see if there are ERGO Reports preceding the August 2006 ERGO Report? Operations’ UST files should have a record of the UST Closures. The records could show if any soil was remediated and if Closure was deemed complete by WVDEP.

8. Section 2, Investigative Findings, 2nd line, page xiii. Re: “this study”. Same comment as No. 3 above.

9. Section 2.1, CWL Area. Tract maps for the non-federal properties should be included. The locations of these tracts should also be shown on Figure 3.

10. Section 2.1.1, Phase I Investigation Results, page xiv. You could include Parcel Numbers for each of the property owners in the bulleted list.


12. Appendix A, Project Mapping. Tract maps of the non-federal properties should be included in the report. The drawing (Figure 3) of the CWLs in Appendix A should be revised to include the location of the non-federal properties.
13. Appendix D, ERGO Report. For clarity, you could include a statement in the body of the ESA report that indicates that none of the outgranted facilities (i.e., AEP flyash disposal area, raw water pumping station, etc.) listed on pg 1 of the Bluestone Lake Cycle IV Environmental Compliance Review are located within the CWLs.

14. Appendix D, ERGO Report. In Category VIII – Solid Waste Management, there is mention of a scrap yard. Is this storage/disposal area located within the CWLs? If so, provide a current status of the scrap yard.

15. Appendix D, ERGO Report. In Category XI – Waste Water Management, there is mention of a lift station. Is this storage/disposal area located within the CWLs?

16. Appendix F. Quality Control Plan, Section V, Quality Control Process. The references should be checked and updated if necessary. The following are helpful suggestions:
   a. I couldn’t find those same documents you referenced in Section V your QCP when I recently updated the QCP for one of my recent projects. I finally made a reference to the following in Qualtrax: “LRD Regional Business Processes Manual: Quality Management System Operational Process”.
   b. I’ve checked Qualtrax again. Under the LRD Regional Business Processes Manual, there are the following subsections under 08000 Engineering & Construction: 08504 LRD – QC/QA Procedures for Civil Works; 08504 LRH – QCP Work Instruction.
   c. The section 08504 LRD - QC/QA Procedures for Civil Works has a reference to ER 1110-1-12 Change 2, Engineering and Design, Quality Management, 31 March 2011.
   d. We can check Qualtrax further to see if there are other references that should be included. I’ve also suggested that it would be good if additional guidance/training be provided to our section on this.

17. Appendix F. Quality Control Plan. Section V, Quality Control Process. The link to MYCO in the 3rd paragraph would not open. This may be a website that has changed.

18. Appendix F. Quality Control Plan. Section XII, QC Review Checklist. The name of the project needs to be changed to Bluestone.

19. Appendix I, Color Photographs. Recommend that the CWL drawing (Figure 3 in Appendix A) include the location of some or all of the following that is shown in the photos:
   - Contractor warehouse (photo 10)
   - Contractor concrete plant (photo 11)
   - Contractor Spoil Site (photo 12)
   - Contractor Petroleum Area (photo 13)
   - Diesel AST (15)
   - Contractor’s trailer office (photo 19)
   - Contractor’s yard & easement (photo 20)
20. If you have any questions, let me know.

Janet K. Wolfe, Chemist
Environmental and Remediation Section
MEMORANDUM FOR CELRH-EC-CE, ATTN: Janet Wolfe

SUBJECT: Response to Comments on the Draft Phase I Environmental Site Assessment, Bluestone Dam, Contractor Work Limits (CWL), Dam Safety Modification Study, June 2016

1. Response to your comments on the above referenced document are included below.

2. General Comment: I noticed you have Roman Numerals for page numbers rather than Arabic Numerals (i.e., 1, 2, 3, etc.). Just checking to see if this is intentional.
Response: This document will be an Appendix to an EIS. Roman Numerals were intentionally utilized to differentiate from main EIS report.

3. Section 1, Introduction, line 3. Clarify “this study”. Are you referring to the DSMS or the Phase I ESA? In line 5, clarify “this area”. Are your referring to the stilling basin?
Response: “This study” refers to the DSMS, and has been clarified. “This area” refers to the CWL, and has been clarified.

4. Section 1.4.3, Records of State & Fed Agencies, page xi – 1st full paragraph. Information you have here about “these 2 sites” that “could not be plotted” could be referenced in Section 1.4.8, Orphan Sites.
Response: Concur. Sites have been discussed in Section 1.4.8.

5. Section 1.4.4, Ownership History. Tract maps for the non-federal properties should be included. What type of activities was conducted on the property by DOH? Did they store explosives for blasting activities in road construction? Any gas, oil, chemicals, maintenance products, etc. stored at this location during DOH use?
Response: Concur. Tract map showing the non-federal properties is included in Appendix A as Figure 4. As stated in the report, the DOH utilized the property to relocate State Route 20; any property not required for the right-of-way of State Route 20 was sold. The relocation of the roadway was performed in the 1940’s; records indicating storage of explosives, gas, oil, and chemicals would not be specific.

6. Section 1.4.5, Other Phase I HTRW Reports. Provide a clearer reference to the previous HTRW Report. Include the date and name of the report.
Response: Concur. The date of the older Phase I HTRW Report has been included. A copy of the report is not available, so the name of the report has not been included.

7. Section 1.4.6. CELRH Operations Division has files for old ERGO Reports. Operations Division also has UST files. Have you checked the ERGO files to see if there are ERGO Reports preceding the August 2006 ERGO Report? Operations’ UST files should have a record of the UST Closures. The records could show if any soil was remediated and if Closure was deemed complete by WVDEP.
Response: The ERGO report gives a snapshot of the compliance of the project with all Federal, State, and local environmental laws. The 2006 report indicated no current impact of the UST removal. Discussion with Dean Bonifacio, who was present during the UST removal in 1992
and the 2006 ERGO review, indicated that there was no environmental impact related to the USTs. The UST files were not acquired for the report.

8. Section 2, Investigative Findings, 2nd line, page xiii. Re: “this study”. Same comment as No. 3 above.
Response: Concur. “This study” has been clarified.

9. Section 2.1, CWL Area. Tract maps for the non-federal properties should be included. The locations of these tracts should also be shown on Figure 3.

10. Section 2.1.1, Phase I Investigation Results, page xiv. You could include Parcel Numbers for each of the property owners in the bulleted list.
Response: Concur. Parcel numbers have been included.

Response: Concur. Corrected.

12. Appendix A, Project Mapping. Tract maps of the non-federal properties should be included in the report. The drawing (Figure 3) of the CWLs in Appendix A should be revised to include the location of the non-federal properties.
Response: Concur. Tracts of non-federal properties were annotated on Figure 3.

13. Appendix D, ERGO Report. For clarity, you could include a statement in the body of the ESA report that indicates that none of the outgranted facilities (i.e., AEP flyash disposal area, raw water pumping station, etc.) listed on pg 1 of the Bluestone Lake Cycle IV Environmental Compliance Review are located within the CWLs.
Response: Concur. Language included indicating that the outgranted facilities are not located in the CWL.

14. Appendix D, ERGO Report. In Category VIII – Solid Waste Management, there is mention of a scrap yard. Is this storage/disposal area located within the CWLs? If so, provide a current status of the scrap yard.
Response: Concur. The scrap yard was located outside of the CWL and has been removed. Language referencing this scrap yard has been included.

15. Appendix D, ERGO Report. In Category XI – Waste Water Management, there is mention of a lift station. Is this storage/disposal area located within the CWLs?
Response: The location of the lift station is noted in the ERGO report and is not included in the CWL.

16 Appendix F. Quality Control Plan, Section V, Quality Control Process. The references should be checked and updated if necessary. The following are helpful suggestions:

a. I couldn’t find those same documents you referenced in Section V your QCP when I recently updated the QCP for one of my recent projects. I finally made a reference to the following in Qualtrax: “LRD Regional Business Processes Manual: Quality Management System Operational Process”.

2
b. I've checked Qualtrax again. Under the LRD Regional Business Processes Manual, there are the following subsections under 08000 Engineering & Construction:
08504 LRD - QC/QA Procedures for Civil Works; 08504 LRH - QCP Work Instruction.

c. The section 08504 LRD - QC/QA Procedures for Civil Works has a reference to ER 1110-1-12 Change 2, Engineering and Design, Quality Management, 31 March 2011.

d. We can check Qualtrax further to see if there are other references that should be included. I've also suggested that it would be good if additional guidance/training be provided to our section on this.

Response: Concur. References have been updated.

17. Appendix F. Quality Control Plan. Section V, Quality Control Process. The link to MYCO in the 3rd paragraph would not open. This may be a website that has changed.
Response: Concur. Link has been updated.

18. Appendix F. Quality Control Plan. Section XII, QC Review Checklist. The name of the project needs to be changed to Bluestone.
Response: Concur. Name of project changed to Bluestone.

19. Appendix I, Color Photographs. Recommend that the CWL drawing (Figure 3 in Appendix A) include the location of some or all of the following that is shown in the photos:
- Contractor warehouse (photo 10)
- Contractor concrete plant (photo 11)
- Contractor Spoil Site (photo 12)
- Contractor Petroleum Area (photo 13)
- Diesel AST (15)
- Contractor's trailer office (photo 19)
- Contractor's yard & easement (photo 20)
Response: Concur. The above locations were annotated on Figure 3.

20. If you have any questions, let me know.

Daniel F. Stark, Environmental Geologist
Environmental and Remediation Section
APPENDIX G
SITE SAFETY AND HEALTH PLAN
GENERIC
SITE SAFETY AND HEALTH PLAN
FOR
PHASE I HTRW ENVIRONMENTAL SITE ASSESSMENTS

Prepared by:
U.S. Army Corps of Engineers
Huntington District
502 8th Street
Huntington, West Virginia 25701-2070

Prepared by:
Nickolas McHenry
Environmental Engineer
Environmenatal and Remediation Section

Reviewed by:
Wyatt Krien
Chief
Environmental and Remediation Section

Approved by:
Shreda Gorum
Safety & Occupational Specialist
Safety Office
1.0 INTRODUCTION

1.1 Purpose. The purpose of this Site Safety and Health Plan (SSHP) is to establish personnel protection standards, mandatory safety practices, and procedures for all work conducted in the execution of Phase I HTRW Investigations and Asbestos Inspections. The plan assigns responsibilities, establishes standard operating procedures, and provides emergency procedures while operations are being conducted during these field activities. This SSHP is designed to comply with the USACE Safety and Health Requirements Manual, EM 385-1-1, 03 November 2003.

1.2 Policy. The provisions set forth in this SSHP are mandatory for all personnel who perform or assist in the conduct of this work. All personnel must become familiarized with the requirements of this SSHP prior to performance of any Phase I HTRW Investigation or Asbestos inspection. The SSHP shall be amended to be site-specific, i.e., show local hospital route, site locations, etc., prior to each new field activity.

2.0 SITE DESCRIPTION AND CONTAMINATION CHARACTERISTICS

2.1 General. Sites to be investigated will include residential or commercial properties, civil works sites, former manufacturing facilities, military sites, or work for others sites.

2.2 Contamination Characteristics. Investigations and inspections at sites other than typical residential or commercial (non-industrial) shall be performed with extreme caution due to the unknown nature of the contaminants. Contamination may range from minor petroleum contamination (fuel spills, motor oil) or improperly disposed household wastes, to more toxic wastes such as PCBs, heavy metals, dioxins, volatiles, and ordnance. Prior to the site visit, the inspection team shall assess the hazardous and toxic contamination potential for the site and amend this SSHP, as appropriate. It is noted that intrusive sampling, other than sampling for asbestos containing materials (ACM), is beyond the scope of Phase I HTRW Investigations.

Each site shall be thoroughly inspected for any evidence of HTRW contamination in accordance with the requirements of ASTM E 1527-05 and ASTM E 1528-00. Structures shall be inspected for potential ACM and samples taken and analyzed in accordance with USEPA guidance for this work. The site shall be thoroughly walked over and inspected for any signs of contamination, such as distressed vegetation, partially buried drums, excavation or fill activities, underground storage tanks, soil staining, etc.

3.0 HAZARD/RISK ANALYSIS

3.1 Chemical Hazards. Inspectors could be exposed to a variety of contaminants; however, due to the non-intrusive nature of a Phase I investigation, the likelihood for exposure is very minimal. Inspectors shall not open any drums or underground storage tanks (USTs), nor
disturb any other areas of suspect contamination. If a hazardous or toxic condition is evident or suspected, the team shall immediately cease the investigation and notify the Chief, Environmental and Remediation Section. Re-entry to the site shall not be permitted until the situation has been thoroughly investigated.

ACM inspectors shall reduce the risk of exposure to these materials with the use of safe sampling procedures. Inspectors shall wear appropriate respiratory protection if the suspect material appears to be friable. Friable sampling areas shall be wetted prior to sampling and immediately sealed with a clear lacquer or other encapsulating material following the sampling activity.

3.2 Accident Prevention. The most significant hazards expected to be encountered while performing these investigations will be slip, trips, falls, and cuts. These hazards are prevalent due to uneven terrain, weather conditions (rain or snow), dilapidated structures, unstable refuse piles, etc. The use of protective gloves and appropriate footwear will minimize these hazards. Inspectors must remain aware of these hazards at all times and shall employ use of the "buddy system" when performing these inspections to reduce the possibility of injury. Inspectors shall also use sound judgment when inspecting a site and shall cease the inspection immediately when human health and safety is jeopardized. Obviously hazardous areas, such as structures with rotten floors, open tanks and drums, confined space entry, etc., will be avoided.

Execution of these field activities will be conducted during both hot and cold temperatures, as well as during inclement weather. Investigators shall take such precautions as wearing rain suits, layering clothing for cold weather, or wearing loose-fitting clothing during hot weather. Since these activities are not particularly physically taxing, workers should not experience heat or cold stress. Frequent breaks in the shade or in a warm vehicle will be possible, as well as replenishing oneself with cold or warm fluids as applicable.

Other hazards to be aware of are biological hazards, such as bees, ticks, snakes, etc., as well as vicious animals. Fieldwork shall be abandoned when any of these hazards are present and shall not resume until safe site entry can be made.

3.3 Vehicle Operation. Field personnel may require the use of a motor vehicle. All vehicles shall be operated in accordance with EM 385-1-1, 18.B. Key points from the Corps safety manual are:

- Operators shall exercise defensive driving techniques.
- Seat belts shall be worn by all occupants.
- The operator shall have the vehicle under control at all times.
- Vehicles shall be driven at speeds not greater than the posted legal speed limit, weather permitting.
- Vehicles shall not be left unattended until the motor has been shut off and the key removed from the ignition.
- Headlights shall be used from sunset until sunrise and during times of adverse weather or sight conditions.
All equipment shall be properly secured.
Vehicle shall be maintained in good working order.
Personnel shall be clear of traffic when exiting the vehicle.

Special considerations need to be taken for off-road usage of vehicles. Off-road areas include but are not limited to trails, tracks, and haul roads and the following precautions shall be exercised:

- Reduce speed on trails, tracks, and haul roads compared to similarly-constructed civil roads.
- Trails, tracks, and haul roads are not built to highway standards for width and sight distance, so be alert for other vehicles.
- Intersections of trails, tracks, or haul roads must be considered high-risk areas - proceed with extreme caution.
- Cross-country driving is discouraged unless a ground guide is leading the vehicle on foot.
- Grades greater than 10% shall not be driven on.

If all-terrain vehicles (ATVs) or utility vehicles are used, the requirements of EM 385-1-1 Section 18.D or Section 18.F, respectively, must be followed.

4.0 STAFF ORGANIZATION, QUALIFICATIONS AND RESPONSIBILITIES

4.1 Staff Organization. The Corps inspection team shall consist of two field workers, environmental engineers or engineering technicians. If ACM sampling is required, one team member shall be certified to conduct this work. Each individual shall be responsible as a site safety and health officer due to the minimal hazards associated with this work. Key personnel for this work include the following:

- Environmental Engineers
  - Frank Albert, P.E.
  - Lisa Humphreys
- Chemist
  - Janet Wolfe
  - Jason Ritter
- Geologist
  - Daniel Stark, P.G.
- Engineering Technician
  - Jo Huff (Asbestos)

Additional personnel may be essential to these work activities, as approved by the Chief, Environmental and Remediation Section.

4.1.1 Section Chief's Responsibilities. For job-related injuries which require medical treatment, the Section chief shall accompany the injured employee to the medical treatment facility and explain the employee's regular duties and the availability of "Light Duty" so that the injured employee can return to work as soon as medically possible.
4.1.2 **Employee's Responsibilities.** Employees shall be required to read this SSHP and comply with all aspects contained herein. Employees shall not endeavor to conduct these investigations without use of the "buddy system". Employees shall immediately notify the Chief, Environmental and Remediation Section, of any hazardous or potentially hazardous incident or working situation. Employees shall comply with all property owners’ security or clearance requirements. Finally, employees shall comply with a property owner's request to vacate the premises, if so directed, and shall immediately apprise the Chief, Environmental and Remediation Section, of this situation.

4.1.3 **Reporting and Investigation.** All accidents shall be reported as soon as possible to the Section Chief. The Branch Collateral Duty Safety Officer shall investigate the accident and recommend any corrective actions on ENG Form 3394, furnished to the Safety Office within 2 working days following the accident.

4.2 **Training.** All investigators have been trained for HTRW work in accordance with 29 CFR 1910.120(e) and receive an annual eight-hour refresher course in hazardous waste site operations. This training meets the requirements of EM 385-1-1, 28.D. All personnel have received Red Cross-sponsored first aid and CPR training and are qualified to administer minor first aid treatment, which is considered adequate for these investigations. Training documentation is on file at the District office. Additionally, all personnel have received site-specific training as required in EM 385-1-1, 28.D.03. Inspectors involved in sampling suspect ACM have received USEPA-sponsored training that meets the requirements of 40 CFR Part 763 AHERA for purposes of accreditation required under Toxic Substances Control Act (TSCA) Section 206. Asbestos inspectors shall also receive an annual training refresher and license renewal.

5.0 **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

5.1 **General.** All personnel have been issued their own PPE and received training in the proper use of this equipment. Regular inspections of this equipment are the individual's responsibility. Any defective equipment shall be reported immediately to the Section Chief so that a replacement can be issued. All PPE meets or exceeds the appropriate ANSI standard.

5.2 **Protection Requirements.** The level of protection for these investigations should be Level D. No personnel shall enter a site or situation that requires protection above this level. The minimum requirements for Level D protection are sleeved (long or short) shirts, long trouser pants, and steel-toed safety shoes or boots. Personnel may be required to wear safety glasses with side shields, a hard hat, or protective gloves depending on the work situation (sampling asbestos, entering crawl spaces, etc.). All employees receive regular medical exams to assure that they are physically fit to conduct hazardous waste site investigations in accordance with EM 385-1-1, 05.E. and 29 CFR 1910.120.
6.0 MEDICAL SURVEILLANCE

6.1 General. All employees engaged in HTRW activities are required to enter the District's medical surveillance program, which is executed by the Safety and Occupational Health Office. The program is conducted in accordance with EM 385-1-1, Appendix K and 29 CFR 1910.120 and its appendices. The Safety Office contracts with licensed Occupational Health physicians who are knowledgeable of the physical requirements for hazardous waste site workers.

A baseline physical exam and assessment are conducted to assure that the employee is physically fit to perform the duties required in hazardous waste site operations. This initial exam includes a complete physical examination of major vital organs, chest x-ray, EKG, complete blood workup, audiogram and pulmonary function tests. The examining physician then furnishes the Safety Office a certification of the employee’s ability to perform this work or any restrictions that should be imposed.

Annual exams are then conducted which consist of the physical exam, blood work, audiogram, and pulmonary function tests. A chest x-ray and EKG are conducted every third year, or at the discretion of the Safety Office or examining physician. The District Safety Office maintains the medical files for all hazardous waste site workers for a period of 30 years following employment with the Government. Additional, non-scheduled examinations shall be conducted, given the following conditions:

- After an employee has been subjected to a known acute exposure of a hazardous or toxic material.
- After an employee has been subjected to a potential acute exposure of a hazardous or toxic material.
- At the request of an employee who feels that he or she has the symptoms of an acute exposure.
- Prior to an employee's return to work following extended absence due to work-related injury or illness.

7.0 MONITORING

7.1 Air Monitoring. Due to the non-intrusive nature of these investigations, air monitoring should not be required. Employees shall avoid areas that may be suspect for collection of toxic vapors such as manholes, confined spaces, etc. Sampling for ACM shall be conducted in a controlled manner to eliminate air borne particulates. Employees shall use a respirator as required to conduct this work and shall not allow unprotected field personnel or the public within any exposure areas. Employees using respirators must have annual respirator training.

7.2 Heat/Cold Stress Monitoring. Due to the short term nature of these field investigations, heat or cold stress related problems should not occur. Employees should be able to perform their limited field activities and then seek comfort within a heated or air conditioned.
vehicle, in shady areas, in a nearby building, etc.

8.0 STANDARD SAFETY PROCEDURES

Standard safety procedures for these HTRW/ACM activities include the following:

- Employees shall always use the "buddy system".
- Employees shall never open or tamper with drums, containers, USTs, or any other potential sources of hazardous and toxic substances.
- Employees shall use sound judgment when entering potentially dangerous situations, i.e., dilapidated structures, properties with vicious dogs, etc. If any of these situations arise, the investigation shall cease until safe site entry can be made.

9.0 SITE CONTROL

These investigations will be conducted on private, public, and Government property. Site control will not be under the control of the field personnel on public or private property. Personnel shall be required to maintain control within the vicinity of ACM sampling activities, however, to protect other field workers and the public.

10.0 PERSONAL HYGIENE AND DECONTAMINATION

Personnel shall adhere to the standard safety procedures noted in Section 8.0 and avoid contact with any potentially hazardous or toxic substances. If contact is made with minor contaminants, such as petroleum products, normal washing with soap and water should be adequate. Should contact be made with caustic or acidic substances, the exposed area shall be flushed with water for 15 minutes and the injured worker rushed to the local hospital or other medical facility.

Workers involved with sampling of ACM shall take care to avoid contact with any particulates. If exposure occurs, the affected area shall be washed with soap and water to remove any contamination.

Workers shall always practice good hygiene and be sure to wash their hands prior to eating, drinking, or smoking. They shall also thoroughly wash their face, hands, and any other exposed areas following the conduct of daily field activities.

11.0 EQUIPMENT DECONTAMINATION

The equipment necessary to conduct these field activities includes a camera and asbestos sampling tools. Decontamination of the asbestos sampling tools shall be accomplished by wiping the tool clean after each sampling activity to avoid any cross-contamination between samples. Wiping cloths shall be double-bagged and disposed of in a sanitary landfill.
12.0  EMERGENCY EQUIPMENT AND FIRST AID

All employees engaged in these activities have received Red Cross-sponsored training in minor first aid and CPR. Since the "buddy system" shall be employed during these activities, the requirement in EM 385-1-1 to have two employees on the site certified in first aid and CPR shall be met. The Government vehicle shall be equipped with a first aid kit to treat minor injuries. The first aid kit shall be restocked prior to each field investigation and checked to assure that the contents have remained sterile.

13.0  EMERGENCY RESPONSE

13.1  General. If an emergency arises that involves a major personal injury, fire, or other threat to the surrounding area, local emergency responders shall be contacted. Since these activities may be conducted in remote locations, employees must become familiar with the location of the closest medical facility and the most direct route to that facility.

13.2  Emergency Contacts:

<table>
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<tr>
<th>Service</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulance</td>
<td>911</td>
</tr>
<tr>
<td>Fire and/or Sheriff</td>
<td>911</td>
</tr>
<tr>
<td>Summers County ARH</td>
<td>(304) 466-1000</td>
</tr>
<tr>
<td></td>
<td>1500 Terrace St, Hinton, WV</td>
</tr>
</tbody>
</table>

13.3  Directions to Hospital:

1. Head **north** on Miller Ave.  
   0.5 mi
2. Turn **right** onto **WV-3/Greenbrier Drive**  
   1.3 mi
3. Turn **right** onto **Terrace Street**  
   0.1 mi
4. Destination will be on the **left**.
# JOB HAZARD ANALYSIS

**FOR**

**PHASE I HTRW INVESTIGATIONS & ASBESTOS INSPECTIONS**

<table>
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<tr>
<th>ACTIVITY</th>
<th>HAZARD</th>
<th>REMEDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle operation</td>
<td>1. Inclement weather or visibility hazards.</td>
<td>1. Always wear seat belts; use headlights from dusk to dawn or in fog; obey posted speed limit; slow down as appropriate; apply 2 second rule.</td>
</tr>
<tr>
<td></td>
<td>2. Medication or other drowsiness.</td>
<td>2. Never operate a vehicle if medication causes drowsiness; never drive if you are sleepy or otherwise impaired.</td>
</tr>
<tr>
<td></td>
<td>3. Other drivers and traffic.</td>
<td>3. Use defensive driving techniques; park your vehicle clear from traffic.</td>
</tr>
<tr>
<td>Phase I HTRW Inspection</td>
<td>1. Slip, trip and fall</td>
<td>1. Assure firm footing; do not climb unstable slopes; wear protective footwear.</td>
</tr>
<tr>
<td></td>
<td>2. Unknown HTRW</td>
<td>2. Never open drums, containers or underground storage tanks for these investigations.</td>
</tr>
<tr>
<td></td>
<td>4. Biological and physical hazards</td>
<td>4. Use tick or insect repellent; do not enter sites with vicious animals.</td>
</tr>
<tr>
<td>Asbestos sampling</td>
<td>1. Airborne particulates.</td>
<td>1. Adequately wet the sample area prior to sampling; wear respiratory protection as required.</td>
</tr>
<tr>
<td></td>
<td>2. Cuts or abrasions.</td>
<td>2. Wear protective leather gloves; always use a sharp sampling tool.</td>
</tr>
<tr>
<td></td>
<td>3. Sample cross-contamination.</td>
<td>3. Thoroughly wipe sampling tools after each sampling activity.</td>
</tr>
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</table>
701 Miller Ave, Hinton, WV 25951 to Summers County ARH Hospital Drive 1.9 miles, 5 min

701 Miller Ave
Hinton, WV 25951

1. Head north on Miller Ave toward Rose St

2. Turn right onto WV-3 E/Greenbrier Dr

3. Turn right onto Terrace St
   🌐 Destination will be on the left

Summers County ARH Hospital
1500 Terrace Street, Hinton, WV 25951

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Google Maps
701 Miller Ave, Hinton, WV 25951 to Summers County ARH Hospital

1. Head north on Miller Ave toward Rose St
   0.5 mi

2. Turn right onto WV-3 E/Greenbrier Dr
   1.3 mi

3. Turn right onto Terrace St
   Destination will be on the left
   0.1 mi

Summers County ARH Hospital
1500 Terrace Street, Hinton, WV 25951
APPENDIX H
INTERVIEWS
## CONVERSATION RECORD

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### TIME

- **TIME:** 1330
- **DATE:** 20-April-2016

### Routing

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</table>

### NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

- **Dean Bonifacio, Park Manager**
- **CELRH-OR-BLN**
- **TELEPHONE NO.: 304-466-1234**

### ORGANIZATION (Office, dept., bureau, LRH-OR-BLN)

- **3**

### SUBJECT

**Environmental Concerns - Bluestone Dam**

### SUMMARY

Dean Bonifacio, Bluestone Park Manager, has worked at Bluestone Dam since 1990. Dean stated that they removed the three USTs at their maintenance office in 1992. At the time of removal, no evidence of contamination was present in the tank pits; confirmation samples were taken and they came back clean.

A 250 gallon diesel tank is present inside the dam structure for the emergency generator. The tank is double-walled, and there has been no diesel spills. Dean stated that the past, or ongoing, Phased construction Contractors have not environmentally impacted the areas that comprise the proposed CWL for Phase 5.

### ACTION REQUIRED

### NAME OF PERSON DOCUMENTING CONVERSATION

- **Daniel F. Stark**

### SIGNATURE

- **Daniel F. Stark**

### DATE

- **20-April-2016**

### ACTION TAKEN

**This form was electronically produced by Elite and modified by USDA/ARS/ITD using Informs Software.**
### CONVERSATION RECORD

**TIME** 13:00  
**DATE** 24-March-2016

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**Location of Visit / Conference:**

<table>
<thead>
<tr>
<th>NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU</th>
<th>ORGANIZATION (Office, dept., bureau.)</th>
<th>TELEPHONE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitfield Lance</td>
<td>CELRH-EC-C-BLN</td>
<td>304-466-6950</td>
</tr>
</tbody>
</table>

**SUBJECT**

Environmental Concerns - Bluestone Dam

**SUMMARY**

Whitfield Lance has been a Construction Inspector at Bluestone Dam for 19 years. During his tenure, there has been no incidents at, or in close proximity to the Bluestone Dam that would environmentally impact the Project. As a requirement of the construction Contractors during Phase 1 through Phase 4, they were/are obligated to apprise the RE Office of any environmental incidents that would impact the site and remediate the concern according to State and Federal regulations. The Contractors were/are required to verify that the CWLs have no environmental concerns after their construction contracts are finished.

**ACTION REQUIRED**

None.

**NAME OF PERSON DOCUMENTING CONVERSATION**

Daniel F. Stark

**SIGNATURE**

Daniel F. Stark

**DATE**

25-March-2016

**ACTION TAKEN**


---

This form was electronically produced by Elite and modified by USDA/ARS/ITD using Informs Software.
CONVERSATION RECORD

TIME 0730  DATE 14-April-2016

TYPE
\[\checkmark\] VISIT  \[\ ] CONFERENCE  \[\ ] TELEPHONE

ROUTING
INCOMING  \[\ ]  OUTGOING

LOCATION OF VISIT / CONFERENCE:

NAME OF PERSON(S) CONTACTED OR IN CONTACT
WITH YOU

John Atkins  CELRH-EC-C-BLN  304-466-6950

ORGANIZATION (Office, dept., bureau,)

TELEPHONE NO.

SUBJECT

Environmental Concerns - Bluestone Dam

SUMMARY

John Atkins has been a Construction Inspector at the Bluestone RE Office for over eight years. During his tenure at Bluestone, no environmental incidents have been observed by him that would be a concern. He stated that the Contractors have performed due diligence during, and prior to completion of their contracts to ensure that their CWLs have not been environmentally impacted by their activities.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

Daniel F. Stark

SIGNATURE

DATE 14-April-2016

ACTION TAKEN

SIGNATURE

TITLE

DATE
APPENDIX I
COLOR PHOTOGRAPHS
Photo BLN03 – Access Road to Corps Dock & Boat Launch Ramp
24 March 2016

Photo BLN04 – Corps Dock and Boat Launch Ramp
24 March 2016
Photo BLN05 – Wide Area#1 Between State Route 20 and Lake
24 March 2016

Photo BLN06 – Wide Area#2 Between State Route 20 and Lake
24 March 2016
Photo BLN07 – Phase 3 CWL Downstream Right Bank
24 March 2016

Photo BLN08 – Phase 3 CWL Adjacent to Dam and Emergency Stilling Basin Downstream Right Bank
24 March 2016
Photo BLN11 – Phase 3 Contractor’s Concrete Plant Downstream Right Bank
24 March 2016

Photo BLN12 – Phase 3 Contractor’s Spoil Site Downstream Right Bank
24 March 2016
Photo BLN13 – Phase 3 Contractor’s Petroleum Containment Area
Downstream Right Bank
24 March 2016

Photo BLN14 – Phase 3 Contractor’s Petroleum Containment Area
Downstream Right Bank
24 March 2016
Photo BLN15 – Phase 3 Contractor Diesel AST Adjacent to Emergency Stilling Basin Downstream Right Bank
24 March 2016

Photo BLN16 – Phase 3 Contractor Diesel AST Adjacent to Emergency Stilling Basin Downstream Right Bank
24 March 2016
Photo BLN17 – Phase 4 CWL Adjacent to Dam Left Bank and Stilling Basin
24 March 2016

Photo BLN18 – Public Fishing Pier Left Bank and Stilling Basin
24 March 2016
BLN19 – Phase 4 Contractor’s Trailer Office on Easement
Downstream Left Bank
18 May 2016

BLN20 – Phase 4 Contractor’s Yard and Warehouse on Easement
Downstream Left Bank
18 May 2016
BLN21 – Phase 4 Contractor’s Easement
Downstream Left Bank
18 May 2016

BLN22 – Parking Lot Adjacent to Dam on Left Abutment
18 May 2016
CERTIFICATION OF RECORDS SEARCH
BLUESTONE LAKE PROJECT
AEP FLY ASH DISPOSAL
TRACTS NOS. 70, 70-A, 71-1, 71-A, 71-2 and 300B

1. A comprehensive search of pertinent records was conducted on November 2016 by CELRH-EC-CE

2. Summary of records search:

( ) No records were found which indicated that this property has been the site of a release, storage or disposal of any hazardous substances.

( ) The records search delineated in paragraph 1 (above) indicates that a problem may exist concerning hazardous substances in relation to the tracts of land associated with this action. See attached Findings prepared by this office.

( ) There are no available records on subject tracts.

BY: [Signature]

DATE: 29-December-2016
MEMORANDUM FOR CELRH-RE-Q, ATTN: Steven Rhodes, Jr.

SUBJECT: Bluestone Lake Project, AEP Flyash Site, Update of Environmental Baseline Study (EBS) for Tracts Nos. 70, 70-A, 71-1, 71-A, 71-2, and 300B

1. Reference the email request from Steven Rhodes, Jr., CELRH-RE-Q, dated 26 October 2016, requesting an EBS for subject tracts in order to dispose of land that had been leased by American Electric Power (AEP) at the Glen Lyn Power Plant.

2. The subject tracts are located along the left descending embankment of the New River in Giles County, Virginia, downstream of the town of Glen Lyn. The subject tracts are generally level property adjacent to the New River.

3. A records search was conducted in November 2016. No internal records could be found concerning the subject tracts, however, records supplied by AEP indicate the presence of fly ash landfills and impoundments on some of the subject tracts.

4. Tracts 70 and 70-A have been identified as containing two fly ash landfills and a leachate pond. One landfill, designated as AEP Landfill, was operated from 1977 to 2010 when it was closed and capped. The other landfill, designated by AEP as West Pond, was operated from 1974 and is presently inactive awaiting closure. The leachate pond is currently active servicing the two adjacent landfills.

5. Tracts 71-1 and 71-A have been identified as containing a fly ash pond, designated by AEP as Auxiliary Fly Ash Pond, closed in 2014 and awaiting closure.

6. Tracts 71-2 and 300B are located adjacent and downstream of an ash pond, designated by AEP as Bottom Ash Pond. This ash pond was constructed in 1957 and is presently inactive awaiting closure. This ash pond, though not on the two tracts, is in the flooding easement for the New River.

7. Fly ash contains metals that, in certain concentrations, have the potential to be hazardous substances. The landfills and ponds are also located in the low lying areas that are subject to flood water inundation and erosion. The potential erosion during flood events could compromise the stability of the ponds and landfills resulting in exposure of the New River to the fly ash.

8. The Corps of Engineers (USACE) has not performed any activities on or in close proximity to the subject tracts that would environmentally impact them.

9. USACE has not detected any environmental impact downstream as a result of the activities performed by AEP on or in close proximity to the subject tracts.
10. For further information, please contact Dan Stark at x5363 (office), or daniel.f.stark@usace.army.mil.

WYATT H. KMEN
Chief, CELRH-EC-CE