Phase I Environmental Site Assessment

Pāhala Wastewater Treatment Plant (WWTP)

Pāhala, District of Ka‘ū, County of Hawai’i, Hawai’i 96777

Prepared for
County of Hawai’i Wastewater Division
108 Railroad Road
Hilo, Hawai’i 96720

July 17, 2017

Brown AND Caldwell
220 Athens Way, Suite 500
Nashville, Tennessee 37228

Table of Contents

List of Figures vii

List of Tables vii

Executive Summary ES-1

Property Description ES-1

Site and Area Reconnaissance ES-1

Physical Setting ES-1

Records Review ES-2

Interviews ES-3

Findings, Opinions, and Conclusions ES-3

1. Introduction 1-1

1.1 Purpose 1-1

1.2 Scope of Services 1-1

1.3 Limiting Conditions 1-2

1.4 Exceptions or Deviations from Standard 1-3

2. User Provided Information 2-1

2.1 Reason for Performing Phase I ESA 2-1

2.2 Commonly Known or Reasonably Ascertainable Information 2-1

2.3 Property Value Comparison to Purchase Price 2-1

2.4 Specialized Knowledge 2-1

2.5 Title Records 2-1

2.6 Environmental Liens or Activity and Use Limitations 2-1

2.7 Owner, Property Manager, or Occupant Information 2-2

3. Site Physical Setting Overview 3-1

3.1 Location 3-1

3.2 Current Ownership 3-1

3.3 Physical Characteristics 3-1

3.3.1 Physical Features and Topography 3-1

3.3.2 Geology and Hydrology 3-1

4. Records Review 4-1

4.1 Historical Use Information 4-1

4.1.1 Chain-of-Title Report (50 Years)/Property Deed Review/Environmental Lien Search 4-1

4.1.2 Historical Aerial Photographs 4-1

4.1.3 Historical City Directories 4-2

4.1.4 Historical Topographic Maps 4-2

4.1.5 Sanborn Fire Insurance Maps 4-3

4.2 Vapor Encroachment Screening 4-3
4.3 Previous Investigations and Assessments 4-3
4.4 Standard Environmental Regulatory Record Sources 4-4
4.5 Orphan Summary 4-4
4.6 Additional Environmental Record Sources 4-4
4.6.1 Local Fire Department 4-5
4.6.2 Department of Health/Environmental Division 4-5
4.6.3 Building Permit/Inspection Department 4-5
5. Interviews 5-1
5.1 Interviews with Owners, Occupants, and Others Knowledgeable of the Target Property 5-1
6. Site and Area Reconnaissance 6-1
6.1 Methodology and Limiting Conditions 6-1
6.2 Site Reconnaissance 6-1
6.2.1 Underground Storage Tanks 6-1
6.2.2 Aboveground Storage Tanks 6-2
6.2.3 Hazardous Materials and Waste 6-2
6.2.4 Solid Waste 6-2
6.2.5 PCB-Containing Fluids 6-2
6.2.6 Water Supply/Utilities and Wells 6-2
6.2.7 Wastewater, Sewage Disposal, and Septic Tanks 6-2
6.2.8 Odors 6-2
6.2.9 Pits, Ponds, Lagoons, and Other Surface Waters 6-2
6.2.10 Heating and Air Conditioning Systems 6-2
6.2.11 Staining and Corrosion 6-2
6.2.12 Drains, Sumps, and Dry Wells 6-3
6.2.13 Stained Soil or Pavement 6-3
6.2.14 Stressed Vegetation 6-3
6.2.15 Oil and Gas Wells and Mine Shafts 6-3
6.2.16 Structures 6-3
6.3 Area Reconnaissance 6-3
6.3.1 North 6-3
6.3.2 Northeast 6-3
6.3.3 East 6-3
6.3.4 South 6-3
6.3.5 West 6-3
7. Findings, Opinions, and Conclusions 7-1
7.1 Summary of Findings 7-1
7.2 Data Failures and Gaps 7-1
7.2.1 Data Failures 7-1
7.2.2 Data Gaps 7-1
7.3 Conclusions and Recommendations 7-2

7.4 Environmental Professional's Statement and Signature 7-3
8. Environmental Professionals' Qualifications 8-1
9. References 9-1

Appendix A: Figures
Appendix B: Site and Surrounding Area Photographs
Appendix C: EDR
Appendix D: Historical Research Documentation
Appendix E: VES Report
Appendix F: User Questionnaire
Appendix G: Qualifications of Environmental Professionals

List of Figures

Figure 1 – Target Property Map

Figure 2 – Topographic Map

List of Tables

Table 4-1. Historical Aerial Photographs 4-1

Table 4-2. Historical Topographic Maps 4-2

Table 6-1. Conditions Observed During Site Reconnaissance 6-1

Executive Summary

Brown and Caldwell (BC) performed a Phase I Environmental Site Assessment (ESA) for the property located on the northeast of the intersection of Maile Street and Hawai'i Belt Road in Pāhala District of Ka'ū, County of Hawai'i, Hawai'i 96777 (target property). This Phase I ESA is intended to serve The County of Hawai'i as an appropriate, commercially prudent, and reasonable inquiry regarding the potential for recognized environmental conditions (RECs) in connection with the target property. The site reconnaissance was conducted by Caitlin Shannon of BC on June 2, 2017.

Property Description

The target property consists of 42.5 acres of land containing a macadamia nut orchard. The target property is located in the vicinity of latitude 19.192989 degrees north and longitude 155.478283 degrees west in in the Pāhala District of Ka'ū, County of Hawai'i, Hawai'i 96777. Access to the target property is from the southwest via Maile Street. See Figure 1 for a Target Property Map.

Site and Area Reconnaissance

At the time of the site reconnaissance, the property consisted of macadamia trees, with a line of mature pine trees along the western boundary. A portion of the southeastern corner of the target property forms part of the macadamia nut processing plant parking lot. The surface sloped gently toward the southeast. A dilapidated asphalt roadway through the central portion of the target property, oriented southwest to northeast, as well as unpaved, dirt roadways were present onsite. An irrigation system has been installed throughout the target property consisting of control valves, polyvinyl chloride (PVC) pipes and risers, and sprinkler heads. Debris was observed on the southern, western, and central portions of the property and consisted of miscellaneous household debris, spent irrigation tubing, and brush piles. Water utilities are present on the target property

The target property is bordered to the north by a high-tension power line and Maile Street, beyond which are single family residences and wooded land. The target property is bordered to the northeast by Guinea grass overgrowth and the former Ka'ū Sugar Mill operation. The target property is bordered to the east by macadamia nut trees and a dirt road, beyond which is the macadamia nut processing plant. The target property is bordered to the south by Hawai'i Belt Road, beyond which are macadamia nut trees. The target property is bordered to the west by Maile Street, beyond which are macadamia nut trees.

BC's site and area reconnaissance indicated no RECs to the target property.

Physical Setting

According to the United States Geological Survey (USGS) topographic map Pāhala, Hawai'i dated 2013, the elevation of the target property is approximately 691 feet above mean sea level (amsl). The target property slopes gently toward the south-southeast with a general topographic gradient to the south-southeast.

The reported depth to shallow groundwater is between 375 to 938 feet below ground surface (bgs) based on monitor well depth provided in the Environmental Data Resources, Inc. (EDR) Report. The hydrogeologic gradient flow is assumed to mimic the local topographic gradient in the vicinity of the target property, which is generally to the south-southeast. It should be noted that hydraulic gradient

may vary with depth, regional groundwater flow direction, and be influenced by seasonal changes, geology, or local groundwater pumping patterns.

Records Review

BC conducted a review of standard environmental (regulatory) records and specified historical records for the target property.

BC's review of historical aerial photographs (1972, 1977, 1985, 1992, and 2001) provided by EDR identified no RECs to the target property. The target property was shown as sugar cane land from 1972 to 1977. In the 1985 aerial photograph, the target property has been developed in to a macadamia nut orchard.

Based on the review of readily available historical aerial photographs, the surrounding areas consisted primarily of pasture land and vacant land in the 1972 aerial photograph. To the northeast of the target property is Ka'ū Sugar Mill. Hawai'i Belt Road and Maile Street intersect to the southwest of the target property and there is an unimproved roadway to the east. Beginning in the 1985 aerial photograph, the areas east, west, beyond Maile Street, and south of the target property, beyond Hawai'i Belt Road, have been developed as a macadamia nut orchard. Beginning in the 2001 aerial photograph, the majority of the structures that comprised the Ka'ū Sugar Mill have been demolished. BC identified no previous use of the adjoining properties that would represent a REC to the target property during the historical aerial photograph review.

BC's review of historical city directories (1992, 1995, 1999, 2003, 2008, and 2013) provided by EDR identified no RECs to the target property. The target property was not listed in any of the historical city directories searched by EDR. Roadways searched in the directories near the target property had residential listings.

BC's review of historical topographic maps (1923, 1930, 1981, 1995, and 2013) indicated that the target property was historically unimproved land. Properties in the general vicinity of the target property included unimproved land until 1995 when Maile Street and Hawai'i Belt Road were developed as well as commercial structures to the east. BC identified no previous use of the target property and/or adjoining properties that would represent an on-site or off-site REC during the historical topographic map review.

According to EDR, Sanborn maps are not available for the target property.

BC was provided with previous environmental reports for the target property to review. The findings of the previous reports are presented below.

- BC reviewed an Archaeological Field Investigation dated November 11, 2016 by Pacific Legacy Historic Perseveration that was prepared for County of Hawai'i Wastewater Division. According to the report, the majority of the target property is planted in macadamia nut trees. There is relatively little ground cover beneath the trees; therefore, visibility at the ground surface is excellent. The ground is mostly open soil with a few loose medium boulders. The edges of the inspection parcel are overgrown with high Guinea grass. No issues of environmental concern were discovered during the investigation. It should be noted that this report was not intended to identify RECs.

BC's review of readily available regulatory information provided by EDR indicated no on-site or off-site RECs to the target property. Results of the search of the various applicable government agencies by EDR resulted in one facility within the minimum search distance (msd) of the target property. The following facility was identified within 1,000 feet of the target property during BC's review of the EDR Report:

- **Ka'ū Sugar Mill**
  Number One Mill Road 96-3207
  Distance: 302 feet
  Direction: North-Northeast (corrected)
  Database listed on: LUST and UST
  Topographic Relationship: Upgradient
  Information in the leaking underground storage tank (LUST) and underground storage tank (UST) databases indicates there are two Permanently Out-of-Use USTs that were installed in 1998 at the site. One is a 1,000-gallon diesel UST and the other is a15,000-gallon used oil UST. A LUST incident was reported; however the facility received a No Further Action (NFA) in 2002. Based on regulatory status, this facility does not represent a REC to the target property.

No indications of vapor intrusion from nearby facilities were identified.

BC found no indications of RECs resulting from the review of environmental regulatory or historical records reviews.

Interviews

BC attempted to conduct an interview with the seller site contact, Ms. Marissa Harman of Bishop Estates, regarding the current and past uses of the target property during this Phase I ESA. Ms. Harman was unavailable for interviewing; however she helped BC contact the site asset manager, Mr. Kamakani Dancil, also of Bishop Estates. Mr. Dancil stated that to the best of his knowledge, no aboveground storage tanks (ASTs), USTs, water wells, or septic systems have ever been located on the target property. Mr. Dancil was not aware of any previous environmental investigations or assessments at the target property. (The Archaeological Investigation discussed herein was provided by the owner, Hawaii County.)

The results of this interview identified no RECs or environmental risks regarding current or past operations at the target property.

Findings, Opinions, and Conclusions

BC performed this assessment in general conformance with the scope and limitations of the ASTM International (ASTM) Standard E 1527-13 for the target property identified above to identify any RECs in connection with the target property, including the presence, or likely presence, of any hazardous substances or petroleum products on the target property under conditions that indicate an existing release, or past release, or a material threat of release into the ground, groundwater, surface water, or structures on the target property. This assessment included an evaluation to the extent practicable of the past and present land uses at the target property and on adjacent properties.

The results of this assessment have identified no evidence of on-site or off-site RECs; however, the following housekeeping and/or developmental conditions were identified:

- BC's site reconnaissance revealed evidence of solid waste on the southern portion of the target property, along Maile Street and Hawai'i Belt Road in the form of debris/trash. Items observed included miscellaneous household debris. All debris appeared to be surficial in nature.

  BC recommends that the debris be collected and disposed from the target property in accordance with state and local regulations. If indications of any potential regulated materials or releases are observed during removal, BC should be contacted to determine if additional assessment is warranted.

No further assessment of the target property is recommended at this time.

BC requests notification for further discussion or evaluation of any new conditions discovered during the development of the target property.

This executive summary is presented for convenience only. While the executive summary is an integral part of the report, it should not be used in lieu of reading the entire report, including the appendices.

Section 1

Introduction

1.1 Purpose

The County of Hawai'i has retained Brown and Caldwell (BC) to perform a Phase I Environmental Site Assessment (ESA) for the property located northeast of the intersection of Maile Street and Hawai'i Belt Road (target property). The target property consists of 42.5 acres of irregularly shaped land containing primarily macadamia trees. The County of Hawai'i stated that the specific reason for this Phase I ESA was to evaluate environmental conditions at the target property in support of the potential purchase of the target property. This Phase I ESA is intended to serve as an appropriate, commercially prudent, and reasonable inquiry regarding the potential for recognized environmental conditions (RECs) in connection with the target property. This Phase I ESA report is intended to satisfy "all appropriate inquiry" into the previous ownership and uses of the target property as defined under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) at Title 42 of the United States Code (U.S.C.) §9601(35)(B) and in accordance with 40 CFR Part 312, Standards and Practices for All Appropriate Inquiries; Final Rule (AAI Rule).

1.2 Scope of Services

Based on the requirements presented in the American Society for Testing and Materials (ASTM) Standard Practice E 1527-13 (ASTM E 1527-13), BC performed the following tasks as part of this Phase I ESA. At The County of Hawai'i's request, the scope of services included the following considerations to provide them with a baseline evaluation of the environmental conditions at the target property.

- **Task 1 – Records Review.** Obtained and reviewed records that identified potential RECs, historical RECs (HRECs), controlled RECs (CRECs), or *de minimis* conditions in connection with the target property. The minimum search distance (msd) followed ASTM E 1527-13 recommendations for standard and additional environmental record sources with the exception that State and municipal solid waste facilities will be extended to 1 mile. This may include a review of the target property's deed of record to identify environmental liens that may have been recorded for the target property. A 50-year Chain-of-Title report was reviewed as applicable, if provided by The County of Hawai'i.
- **Task 2 – Site Reconnaissance.** Conducted a site reconnaissance to determine the potential that a REC was present at the target property. Also, observed neighboring properties, to the degree possible, for land uses or other aspects that indicated potential RECs that could adversely affect the target property.
- **Task 3 – Interviews.** Interviewed individuals with knowledge of the target property to obtain information regarding the potential for RECs, HRECs, CRECs, or *de minimis* conditions.
- **Task 4 – Evaluation and Report Preparation.** BC prepared this report detailing the findings associated with each of the above-listed tasks.
- **Task 5 – Identify Environmental, Health, and Safety Programs.** BC will review environmental regulatory permits related to air, stormwater, wastewater, solid and hazardous waste waste/material management and review through observation health and safety and industrial

hygiene related programs such as hazard communication, hearing protection, machine guarding, etc.

1.3 Limiting Conditions

This Phase I ESA report has been prepared for the exclusive use of The County of Hawai'i and their assigns, in accordance with the standards of the environmental consulting industry at the time the services were performed, and in general accordance with the agreement between The County of Hawai'i and BC dated October 5, 2016. This work has been performed for the sole purpose of assisting in the evaluation of RECs associated with the target property. This Phase I ESA report is governed by the specific scope of work authorized by The County of Hawai'i and is not intended to be relied upon by any other party. The findings presented herein are based upon observations of target property conditions as of the date the assessment was performed and a review of reasonably ascertainable standard records sources. The findings and conclusions presented herein should not be assumed to apply to conditions or operating practices on this property occurring subsequent to BC's actual site reconnaissance.

The findings of the Phase I ESA, as represented within this report, must be viewed in recognition of certain limiting conditions. The scope of work commissioned for this project does not represent an exhaustive study, but rather a reasonable inquiry, consistent with good commercial practice, in general accordance with ASTM E 1527-13. In the course of this assessment, BC has relied on information provided by outside parties, such as regulatory agencies and interview sources. BC has made no independent investigation as to the validity, completeness, or accuracy of such information provided by third-party sources. For the purposes of this assessment, such third-party information is assumed to be accurate unless contradictory evidence is noted and BC does not express or imply any warranty regarding information provided by third-party sources. This Phase I ESA report makes no representation that environmental contamination does not exist at this target property beyond that described in this report.

In the following paragraphs italicized terms refer to specific definitions set forth in Section 3.2 of the ASTM Standard. The purpose of this Phase I ESA is to identify, to the extent feasible, pursuant to the scope and limitation of the guidelines set forth in the ASTM E 1527-13, RECs, HRECs, CRECs, or *de minimis* conditions in connection with the target property.

The term REC is defined by ASTM E 1527-13 as:

> The presence or likely presence of any *hazardous substances* or *petroleum products* in, on, or at the *property*: (1) due to release to the environment; (2) under conditions indicative of a *release* to the *environment*; or (3) under conditions that pose a *material threat* of a future *release* to the *environment*. *De minimis conditions* are not *recognized environmental conditions*.

The term HREC is defined by ASTM E 1527-13 as:

> A past *release* of any *hazardous substances* or *petroleum products* that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restriction, *activity and use limitations, institutional control,* or *engineering controls*). Before calling the past *release* a *historical recognized environmental condition*, the *environmental professional* must determine whether the past *release* is a *recognized environmental condition* at the time the *Phase I Environmental Site Assessment* is conducted (for example, if there has been a change

> in the regulatory criteria). If the EP considers the past *release*, to be a *recognized environmental condition* at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a *recognized environmental condition.*

The term CREC is defined by ASTM E 1527-13 as:

> A *recognized environmental condition* resulting from a past *release of hazardous substances* or *petroleum products* that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with *hazardous substance* or *petroleum products* allowed to remain in place subject to the implementation of required controls (for example, *property* use restrictions, *activity and use limitations, institutional controls,* or *engineering controls*). A condition considered by the *environmental professional* to be a *controlled recognized environmental condition* shall be listed in the findings section of the *Phase I Environmental Site Assessment* report, and as a *recognized environmental condition* in the conclusions section of the *Phase I Environmental Site Assessment report.*

The term *de minimis condition* is defined by ASTM E 1527-13 as:

> A condition that generally does not present a threat to human health or the *environment* and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis conditions* are not *recognized environmental conditions* or *controlled recognized environmental conditions.*

The term *reasonably ascertainable* is defined by ASTM E 1527-13 as:

> Information that is *publicly available* to anyone upon request, obtainable from its source within reasonable time and cost constraints, and *practically reviewable*.

The term *practically reviewable* is defined by ASTM E 1527-13 as:

> Information is provided by the source in a manner and in a form that, upon examination, yields information relevant to the *property* without the need for extraordinary analysis of irrelevant data. The form of the information shall be such that the user can review the records for a limited geographic area. Records that cannot be feasibly retrieved by reference to the location of the property or a geographic area in which the property is located are not generally *practically reviewable*.
>
> *Reasonable time and cost* means that the information will be provided by the source within 20 calendar days of receiving a written, telephone, or in-person request at no more than a nominal cost intended to cover the source's cost of retrieving and duplicating the information.

1.4 Exceptions or Deviations from Standard

Exceptions or deviations for this assessment include the following:

- An Environmental LienSearch was not conducted as part of this assessment. BC concludes that information obtained through an Environmental LienSearch would not materially alter the conclusions or recommendations of this report.
- The msd for State and municipal solid waste facilities in Section 4.4 was extended to 1 mile.

Section 2

User Provided Information

The 'User' is the party seeking to use ASTM E 1527-13 to complete an ESA of the target property. The User has specific obligations for completing a successful application of the Practice.

BC obtained a completed ASTM User Questionnaire from The County of Hawai'i. A copy of the completed form is included in Appendix F. The following summarizes the information provided to BC regarding the target property.

2.1 Reason for Performing Phase I ESA

The County of Hawai'i informed BC that the specific reason for this Phase I ESA was to evaluate the potential for RECs at the target property in support of the acquisition of the target property. This Phase I ESA is, therefore, intended to serve as an appropriate, commercially prudent, and reasonable inquiry regarding the potential for RECs in connection with the target property. This report will provide The County of Hawai'i an "all appropriate inquiry" into the previous ownership and uses of the target property defined under the CERCLA Title 42 of the U.S.C. §9601(35)(B), as clarified by the AAI Rule.

2.2 Commonly Known or Reasonably Ascertainable Information

Mr. Bill Kucharski of The County of Hawai'i completed the User Questionnaire and is unaware of any other commonly known or reasonably ascertainable information regarding the target property.

2.3 Property Value Comparison to Purchase Price

Mr. Kucharski reported to BC in the User Questionnaire that the anticipated purchase or lease price of the target property is comparable to the assessed property value. Therefore, this information appears to indicate that the price has not been lowered as a result of potential environmental concerns and/or contamination at the target property.

2.4 Specialized Knowledge

In the User Questionnaire, Mr. Kucharski indicated that he was unaware of any specialized knowledge regarding environmental conditions at the target property.

2.5 Title Records

At The County of Hawai'i's request, BC was not requested to obtain title records since these documents are obtained by the Client. The records will be provided to BC, if needed.

2.6 Environmental Liens or Activity and Use Limitations

The County of Hawai'i conducts title history research as part of their site acquisition process which would identify an environmental lien and will provide BC any information regarding environmental liens or activity use limitations, if identified. In the User Questionnaire, Mr. Kucharski indicated that he was unaware of any environmental liens or activity and use limitations (AULs) at the target property.

2.7 Owner, Property Manager, or Occupant Information

The County of Hawai’i personnel indicated that Bishop Estates is currently selling the target property. The contact information for the target property is as follows:

- Ms. Marissa Harman / Mr. Kamakani Dancil
  Bishop Estates
  Phone: (808) 982-0833

Section 3

Site Physical Setting Overview

3.1 Location

The target property is located northeast the intersection of Maile Street and Hawai'i Belt Road in Pāhala District of Ka'ū, County of Hawai'i, Hawai'i 96777. See Figure 1 for a Target Property Map.

Target Property Address: The property is not addressed. Access to the target property is from the southwest via Maile Street.

Property Uses in Surrounding Area: The area surrounding the target property contains residential and commercial property in the immediate vicinity.

3.2 Current Ownership

According to information provided by The County of Hawai'i, the current owner of the target property is Bishop Estates and the property is leased to ML Macadamia Orchards, LP. According to the County Tax Assessor's office, the property is listed as Assessor's Parcel Number (APN) number 96002018000.

3.3 Physical Characteristics

3.3.1 Physical Features and Topography

Approximate Size of Target Property: 42.5 acres

Approximate Shape of Target Property: Irregular

Target Property Topography: According to the United States Geological Survey (USGS) topographic map Pāhala, Hawai'i dated 2013, the target property slopes gently toward the south-southeast with a general topographic gradient to the south-southeast. Please refer to Figure 2, Topographic Map.

Approximate Elevation of Target Property: According to the Environmental Data Resources, Inc. (EDR) Report, surface elevation for the target property is approximately 691 feet above mean sea level (amsl).

Surface Drainage on the Target Property: The general flow direction of surface stormwater across the target property appears to be toward the south-southeast.

3.3.2 Geology and Hydrology

General Regional Geology: According to the U.S. Geological Survey, Geologic Map of the State of Hawai'i, Sheet 8 – Island of Hawai'i, dated 2007, the target property appeared to be in the Volcanic and Intrusive Rocks of the Quaternary Era, Pleistocene System, and Mauna Kea Volcano series.

Soil Conditions: According to the Soil Conservation Service information provided in the EDR Report, the soil component at the target property is Na'alehu. The soil surface texture is silty clay loam and noted to be a well-drained class of soils. Na'alehu soils have a reported moderate corrosion potential to uncoated steel and are not considered hydric. From 0 to 20 inches, Na'alehu soils are silty clay loam. And from 20 to 64 inches, the soils are silt loam.

Approximate Depth and Flow Direction of Groundwater: The reported depth to groundwater for wells located within 1.0 mile of the target property varied from 375 to 938 feet below ground surface (bgs) based on information obtained from the EDR Report. The shallow hydrogeologic gradient flow is assumed to mimic the local topographic gradient in the vicinity of the target property, which is generally to the south-southeast. It should be noted that hydraulic gradient may vary with depth, regional groundwater flow direction, and be influenced by seasonal changes, geology, or local groundwater pumping patterns.

Regional Groundwater Conditions: Based on review of hydrogeologic data provided in the EDR Report, there are two federal water wells, no federal public water supply systems, and four state water wells located within 1.0 mile of the target property. No water wells appear to be located on the target property.

Section 4

Records Review

4.1 Historical Use Information

BC reviewed reasonably ascertainable standard historical sources in an attempt to develop a history of the previous uses or occupancies of the target property and surrounding area. The objective was to identify those uses or occupancies that were likely to have led to RECs, CRECs, or HRECs in connection with the target property. BC attempted to identify uses or occupancies of the target property dating from the present back to when the property was first developed, or dating to at least 1940. These sources and findings are summarized in the sections that follow.

4.1.1 Chain-of-Title Report (50 Years)/Property Deed Review/Environmental Lien Search

A Chain-of-Title Report and an environmental lien search was not obtained for this report; BC does not believe that this deviation precludes the ability to render an opinion regarding potential RECs or de minimis conditions for the target property or the conclusions or recommendations of this report.

4.1.2 Historical Aerial Photographs

BC reviewed reasonably ascertainable aerial photographs depicting development of the target property and vicinity at a minimum of five-year intervals. The quality of evaluation of aerial photographs is controlled by the photograph's scale and quality. Copies of the aerial photographs are included in Appendix D.

Table 4-1. Historical Aerial Photographs

Resource	Date	Scale
1972	1972	1" = 500'
	1977	1" = 500'
	1985	1" = 500'
	1992	1" = 500'
	2001	1" = 500'

Review of the 1972 aerial photograph indicated that the target property contains sugar cane land. Vehicular access is available from the north, west, and south. The area north of the target property is shown as Maile Street, beyond which is pasture land, Kaalaiki Road, and wooded land. The area northeast of the target property is shown as the former Ka'ū Sugar Mill. The area east of the target property is shown as pasture land and an unimproved roadway, beyond which is residential and/or commercial development. The area south of the target property is shown as Hawai'i Belt Road, beyond which is vacant land. The area west of the target property is shown as Maile Street, beyond which is vacant, pasture land.

The 1977 aerial photograph differs from the 1972 aerial photograph in that the macadamia nut professing plant has been developed to the southeast of the target property, beyond the unimproved roadway.

The 1985 aerial photograph differs from the previous aerial photographs in that the target property and areas east, west, and south of the target property, beyond Hawaii Belt Road, have been developed into a macadamia nut orchard.

The 1992 aerial photograph does not differ significantly from the 1985 aerial photograph.

The 2001 aerial photograph differs from the 1992 aerial photograph in that the majority of the structures at the old sugar mill property to the northeast of the target property have been demolished.

BC identified no previous use of the target property and/or adjoining properties that would represent an on-site or off-site REC during the historical aerial photograph review. Aerial photographs are provided in Appendix D.

4.1.3 Historical City Directories

City directories have been published for cities and towns across the United States since the 1700s, and provide a tool for the location of individuals and businesses in three sections: a business index, a list of resident names and addresses, and a street index.

BC's review of historical city directories (1992, 1995, 1999, 2003, 2008, and 2013) provided by EDR identified no RECs to the target property. The target property was not listed in any of the historical city directories searched by EDR. Roadways searched in the directories near the target property had individual residential listings. Copies of the city directories are included in Appendix D.

4.1.4 Historical Topographic Maps

BC reviewed available historical topographic maps for the vicinity of the target property. The topographic maps were provided by EDR. Table 4-2 below provides the date, map name, and scale of the historical topographic maps reviewed. Copies of the maps are provided in Appendix D.

Table 4-2. Historical Topographic Maps

Resource	Date	Map Name	Scale
EDR	1923	Pāhala, HI	1:62500
	1930	Palimapoint, HI	1:31680
	1981	Pāhala, HI	1:24000
	1995	Pāhala, HI / Punalu'u, HI	1:24000
	2013	Pāhala, HI / Punalu'u, HI	1:24000

Review of the 1923 topographic map indicated that the target property is unimproved and contains vacant land. Vehicular access is available from the north. The area north of the target property is shown as a roadway, beyond which is vacant land. The area east of the target property is shown as vacant land and a structure. The area south of the target property is shown as vacant land. The area west of the target property is shown as vacant land and a stream oriented northwest to south.

The 1930 topographic map does not differ significantly from the 1923 topographic map.

The 1981 topographic map shows the target property as an unmapped area.

The 1995 topographic map differs from the previous topographic maps in that Maile Street has been developed, running along the north and west of the target property and Hawaiʻi Belt Road has been developed to the southeast of the target property. There are roadways and additional structures present to the east of the target property.

The 2013 topographic map does not differ significantly from the 1995 topographic map.

BC identified no previous use of the target property and/or adjoining properties that would represent an on-site or off-site REC during the historical topographic map review. Historical topographic maps are provided in Appendix D.

4.1.5 Sanborn Fire Insurance Maps

The Sanborn Fire Insurance Map series illustrates detailed historical development in some older sections of metropolitan areas. EDR maps were requested for the target property and the adjoining properties. EDR certified that there were no maps available for the target property and vicinity. The EDR document is provided in Appendix D.

4.2 Vapor Encroachment Screening

BC performed a Tier 1 Vapor Encroachment Screening (VES) for the target property in accordance with ASTM Standard Guide E 2600-10. This VES was completed in conjunction with ASTM E 1527-13 for Phase I ESAs. The purpose of the VES was to identify vapor encroachment conditions (VECs) for the target property.

The term VEC is defined by ASTM (2010) as:

> The presence or likely presence of contaminant vapors in the subsurface of the target property caused by the release of vapors from contaminated soil and/or groundwater either on or near the target property as identified by the Tier 1 or Tier 2 procedures in ASTM Standard Guide E 2600-10.

A Tier 1 VES identifies any known or suspect contaminated facilities with volatile or semi-volatile hazardous substances or petroleum products, referred to as chemicals of concern (COCs), within an area of concern (AOC). The AOC for non-petroleum hydrocarbon COCs is a 1,760-foot (1/3-mile) radius from the contaminated facility to the boundary of the target property. For facilities with petroleum hydrocarbon COCs, the AOC is a 528-foot (1/10-mile) radius. The AOC can be reduced if groundwater flow direction is known or inferred using approximate msd of a COC. A critical distance, the estimated linear distance in any direction in which COC vapors from contaminated groundwater or soil might migrate in the vadose zone to the target property, is 100 feet for non-petroleum hydrocarbon COCs and light non-aqueous phase liquid (LNAPL) petroleum hydrocarbon COCs. The critical distance for dissolved-phase petroleum hydrocarbons is 30 feet.

According to the EDR VES Report, one facility was identified by EDR within the AOC for the target property. All facilities were eliminated as presenting a potential VEC due to distance, topographic location from the target property, or because there had been no documented soil or groundwater contamination. No facilities were identified as potential concerns to the target property. The EDR VES Report is provided in Appendix E.

4.3 Previous Investigations and Assessments

BC was provided with previous environmental reports for the target property to review. The findings of the previous reports are presented below.

- BC reviewed an Archaeological Field Investigation dated November 11, 2016 by Pacific Legacy Historic Perseveration that was prepared for County of Hawai'i Wastewater Division. According to the report, the majority of the target property is planted in macadamia nut trees. There is relatively little ground cover beneath the trees; therefore, visibility at the ground surface excellent. The ground is mostly open soil with a few loose medium boulders. The edges of the inspection parcel are overgrown with high Guinea grass. No issues of environmental concern were discovered during the investigation. It should be noted that this report was not intended to identify RECs.

4.4 Standard Environmental Regulatory Record Sources

The purpose of the records review is to obtain and review reasonably ascertainable records that will help identify RECs, CRECs, or HRECs in connection with the target property. The EDR Report with a complete listing is included in Appendix C. Results of the search of the various applicable government agencies by EDR resulted in one facility within the msd of the target property. The facilities identified in the EDR Report were listed in the following databases:

- Leaking Underground Storage Tanks (LUST): The LUST list contains an inventory of reported LUST incidents.
- Underground Storage Tanks (UST): USTs are regulated under Subtitle I of Resource Conservation and Recovery Act (RCRA) and are registered with the state department responsible for administering the UST program.

The facilities identified in the EDR Report are discussed below.

- Ka'ū Sugar Mill

  Number One Mill Road 96-3207

  Distance: 302 feet

  Direction: North-Northeast (corrected)

  Database listed on: LUST and UST

  Topographic Relationship: Upgradient

  Information in the LUST and UST database indicates there are two Permanently Out-of-Use USTs, that were installed in 1998, at the site. One is a 1,000-gallon diesel UST and the other is a 15,000-gallon used oil UST. A LUST incident was reported; however the facility received a No Further Action (NFA) in 2002. Based on regulatory status, this facility does not represent a REC to the target property.

4.5 Orphan Summary

The orphan or unmapped site list consists of sites currently listed in Federal or State databases that have inadequate address information. However, if street addresses are available, the site locations are checked against the known location of the target property to determine their relative location to the minimum ASTM search distance from the target property. The EDR Orphan Summary identified no orphan sites with a poor or unconfirmed address, or business listing that may be in proximity to the target property.

4.6 Additional Environmental Record Sources

Additional sources of records that were reviewed for this assessment are briefly discussed below.

4.6.1 Local Fire Department

BC contacted the Hawai'i County Fire Department regarding hazardous materials incidents, fires, or hazardous materials storage permits at the target property. At the time of report production, a response had not been received. Should information be received which alters the conclusions of this report, The County of Hawai'i shall be immediately notified and an addendum will be prepared.

4.6.2 Department of Health/Environmental Division

BC contacted the Hawai'i Department of Health regarding incidents of environmental concern at the target property. According to the Hawai'i Department of Health, no spills or other environmental issues have been reported for the target property.

4.6.3 Building Permit/Inspection Department

No structures were present on the target property; therefore, no building permit records were requested.

Section 5

Interviews

The purpose of interviews is to obtain information indicating RECs, CRECs, or HRECs in connection with the target property, as described in ASTM E 1527-13. Selected individuals who were knowledgeable about current and past site operations were interviewed. The following is a brief summary of the information obtained about the target property.

5.1 Interviews with Owners, Occupants, and Others Knowledgeable of the Target Property

BC contacted Mr. Kamakani Dancil of Bishop Estates regarding current and past uses of the target property. Mr. Dancil stated that to the best of his knowledge, no aboveground storage tanks (ASTs), underground storage tanks (USTs), water wells, or septic systems have ever been located on the target property. Mr. Dancil was not aware of any previous environmental investigations or assessments at the target property.

The results of this interview identified no RECs or environmental risks regarding current or past operations at the target property.

Section 6

Site and Area Reconnaissance

6.1 Methodology and Limiting Conditions

The site and area reconnaissance was performed to identify obvious visual indications of present or past activities that have or could have contaminated the target property. The site reconnaissance was conducted on foot, unless otherwise noted, by Caitlin Shannon of BC on June 2, 2017. Maps, which illustrate the general location and configuration of the target property, are presented as Figures 1 and 2, respectively. Site and area reconnaissance photographs are provided in Appendix B.

6.2 Site Reconnaissance

At the time of the site reconnaissance, the property consisted of macadamia trees, with a line of mature pine trees along the western boundary. A portion of the southeastern corner of the target property forms part of the macadamia nut processing plant parking lot. The surface sloped gently toward the southeast. A dilapidated asphalt roadway through the central portion of the target property, oriented southwest to northeast, as well as unpaved, dirt roadways were present onsite. An irrigation system has been installed throughout the target property consisting of control valves, polyvinyl chloride (PVC) pipes and risers, and sprinkler heads. Water utilities are present on the target property.

Table 6-1. Conditions Observed During Site Reconnaissance

Underground Storage Tanks	No
Aboveground Storage Tanks	No
Hazardous Materials and Wastes	No
Solid Waste	**Yes**
Potential Polychlorinated Biphenyls Containing Equipment	No
Water Wells	No
Waste Water Sewage Disposal/Septic	No
Odors	No
Pits, Ponds, Lagoons, and Other Surface Waters	No
HVAC	No
Staining and Corrosion	No
Drains, Sumps, and Dry Wells	No
Stained Soils or Pavements	No
Stressed Vegetation	No
Oil and Gas Wells / Mine Shafts	No
Structures	No

6.2.1 Underground Storage Tanks

BC's site reconnaissance revealed no evidence of USTs containing regulated substances on the target property. No evidence of historic USTs was observed on the target property. No unusual ground conditions, which might indicate the presence of USTs, waste oil tanks, hydraulic lifts, or other obvious

environmental concerns relating to USTs, were observed on the target property during BC's site reconnaissance.

6.2.2 Aboveground Storage Tanks

BC's site reconnaissance revealed no evidence of ASTs on the target property. No evidence of historic ASTs was observed on the target property.

6.2.3 Hazardous Materials and Waste

No hazardous materials or hazardous wastes were observed on the target property during BC's site reconnaissance.

6.2.4 Solid Waste

BC's site reconnaissance revealed evidence of solid waste on the southern, western, and central portions of the target property, along Maile Street and Hawai'i Belt Road in the form of debris/trash. Items observed included miscellaneous household debris, spent irrigation tubing, and brush piles.

6.2.5 PCB-Containing Fluids

Electrical transformers are often a source of environmental concern due to the potential presence of polychlorinated biphenyl (PCB)-containing cooling oils used in some units. Equipment containing hydraulic oil may also be PCB-containing. Utility companies will typically respond to reported spills associated with their equipment. BC did not observe any transformers on the target property during the site reconnaissance.

6.2.6 Water Supply/Utilities and Wells

Potable water, electricity, or natural gas does not appear to be supplied to the target property. No water wells were observed onsite.

6.2.7 Wastewater, Sewage Disposal, and Septic Tanks

Wastewater and sewage systems were not observed at the target property. No evidence of septic tanks was observed onsite.

6.2.8 Odors

No unusual odors were noted during BC's site reconnaissance of the target property.

6.2.9 Pits, Ponds, Lagoons, and Other Surface Waters

No evidence of pits, ponds, lagoons, or other surface waters were observed on the target property during BC's site reconnaissance.

6.2.10 Heating and Air Conditioning Systems

No heating, ventilation, or air conditioning (HVAC) systems were observed on the target property during BC's site reconnaissance.

6.2.11 Staining and Corrosion

No staining or corroded materials were observed on the target property during BC's site reconnaissance.

6.2.12 Drains, Sumps, and Dry Wells

No drains, sumps, or dry wells were observed on the target property during BC’s site reconnaissance.

6.2.13 Stained Soil or Pavement

No stained soil or pavement was observed during BC’s site reconnaissance.

6.2.14 Stressed Vegetation

No stressed vegetation was observed on the target property during BC’s site reconnaissance.

6.2.15 Oil and Gas Wells and Mine Shafts

No evidence of oil wells and gas wells, mine shafts, or related activities was observed on the target property during BC’s site reconnaissance.

6.2.16 Structures

No structures were observed on the target property during BC’s site reconnaissance.

6.3 Area Reconnaissance

An area reconnaissance was performed to identify obvious visual indications of present or past activities that have or could have contaminated the target property. The area reconnaissance was conducted by automobile, and/or on foot, unless otherwise noted. The findings of the area reconnaissance are presented according to the geographic relationship to the target property.

6.3.1 North

The target property is bordered to the north by a high-tension power line and Maile Street, beyond which are single family residences and wooded land.

6.3.2 Northeast

The target property is bordered to the northeast by Guinea grass overgrowth and the former Ka‘ū Sugar Mill operation.

6.3.3 East

The target property is bordered to the east by macadamia nut trees and a dirt road, beyond which is the macadamia nut processing plant.

6.3.4 South

The target property is bordered to the south by Hawai’i Belt Road, beyond which are macadamia nut trees.

6.3.5 West

The target property is bordered to the west by Maile Street, beyond which are macadamia nut trees.

Section 7

Findings, Opinions, and Conclusions

7.1 Summary of Findings

BC performed this assessment in general conformance with the scope and limitations of the ASTM Standard E 1527-13 to identify any RECs in connection with the target property, including the presence, or likely presence, of any hazardous substances or petroleum products on the target property under conditions that indicate an existing release, or past release, or a material threat of release into the ground, groundwater, surface water, or structures on the target property. This assessment included an evaluation to the extent practicable of the past and present land uses at the target property and on adjacent properties.

7.2 Data Failures and Gaps

Through the course of this assessment, BC may have encountered data failures or data gaps. These failures or gaps, if any, are discussed below. The following provides the opinion of the Environmental Professional (EP) as to the significance of the data gaps in terms of defining RECs at the target property. Data failures may or may not be significant data gaps, and the discussion also provides information pertaining to whether the data failures resulted in significant data gaps.

7.2.1 Data Failures

Data failure is a failure to achieve the historical (property use) research objectives specified in the ASTM Standard Practice even after reviewing the eight standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap. No data failure was encountered.

7.2.2 Data Gaps

A data gap is a lack of, or inability to obtain, information required by the ASTM Standard Practice, despite good faith efforts by the EP to gather such information. This could include any component of the Practice, e.g., standard environmental records, interviews, or a complete reconnaissance. A data gap by itself is not inherently significant, but if other information and/or the EP's experience raises reasonable concerns about the gap, it may be judged to be significant. Data gaps for this assessment include the following:

- Time gaps of more than five years were noted in available historical information. BC does not believe that this deviation precludes the ability to render an opinion regarding potential RECs or *de minimis* conditions for the target property or the conclusions or recommendations of this report.
- A search was not conducted for environmental liens as required under ASTM E 1527-13. BC does not believe that this deviation precludes the ability to render an opinion regarding potential RECs or *de minimis* conditions for the target property or the conclusions or recommendations of this report.

- BC contacted the Hawai'i County Fire Department regarding hazardous materials incidents, fires, or hazardous materials storage permits at the target property. At the time of report production, a response had not been received. BC does not believe that this deviation precludes the ability to render an opinion regarding potential RECs or *de minimis* conditions for the target property or the conclusions or recommendations of this report.

In summary, BC concludes that none of the above-identified data gaps are likely to alter the conclusions or concentrations of this report.

7.3 Conclusions and Recommendations

The results of this assessment have identified no evidence of on-site or off-site RECs; however, the following housekeeping and/or developmental conditions were identified:

- BC's site reconnaissance revealed evidence of solid waste on the southern portion of the target property, along Maile Street and Hawai'i Belt Road in the form of debris/trash. Items observed included miscellaneous household debris. All debris appeared to be surficial in nature.

  BC recommends that the debris be collected and disposed from the target property in accordance with state and local regulations. If indications of any potential regulated materials or releases are observed during removal, BC should be contacted to determine if additional assessment is warranted.

No further assessment of the target property is recommended at this time.

BC requests notification for further discussion or evaluation of any new conditions discovered during the development of the target property.

7.4 Environmental Professional's Statement and Signature

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

Caitlin Shannon
Geologist I

Julie R. Norrell, REM
Principal Scientist

Section 8

Environmental Professionals' Qualifications

BC personnel involved with this project are listed below along with pertinent information regarding their qualifications and specialized knowledge. Additional details regarding each listed professional have been included in Appendix G.

BC EPs conducting the assessment include: Caitlin Shannon and Julie Norrell.

Section 9

References

40 CFR 312, Standards and Practices for All Appropriate Inquiries; Final Rule, November 2005 (AAI Rule).

American Society for Testing and Materials (ASTM), November 2013. *Standard Practice E1527 13 for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

Environmental Data Resources, Inc., *The EDR Radius Map Report with Geocheck*. Inquiry number 4931603.2s. May 9, 2017.

Environmental Data Resources, Inc., *The EDR Aerial Photo Decade Package*. Inquiry number 4931603.9. May 9, 2017.

Environmental Data Resources, Inc., *EDR Historical Topo Map Report*. Inquiry number 4931603.4. May 9, 2017.

Environmental Data Resources, Inc., *The EDR-City Directory Image Report*. Inquiry number 4931603.5. May 10, 2017.

Environmental Data Resources, Inc., *Certified Sanborn Map Report*. Inquiry number 4931603.3. May 9, 2017.

Environmental Data Resources, Inc., *EDR Vapor Encroachment Screen.* Inquiry number 4931603.6s. June 28, 2017.

Federal Emergency Management Agency, http://msc.fema.gov/

Hawai'i County Property Appraiser, *http://qpublic9.qpublic.net/hi_hawaii_search.php*

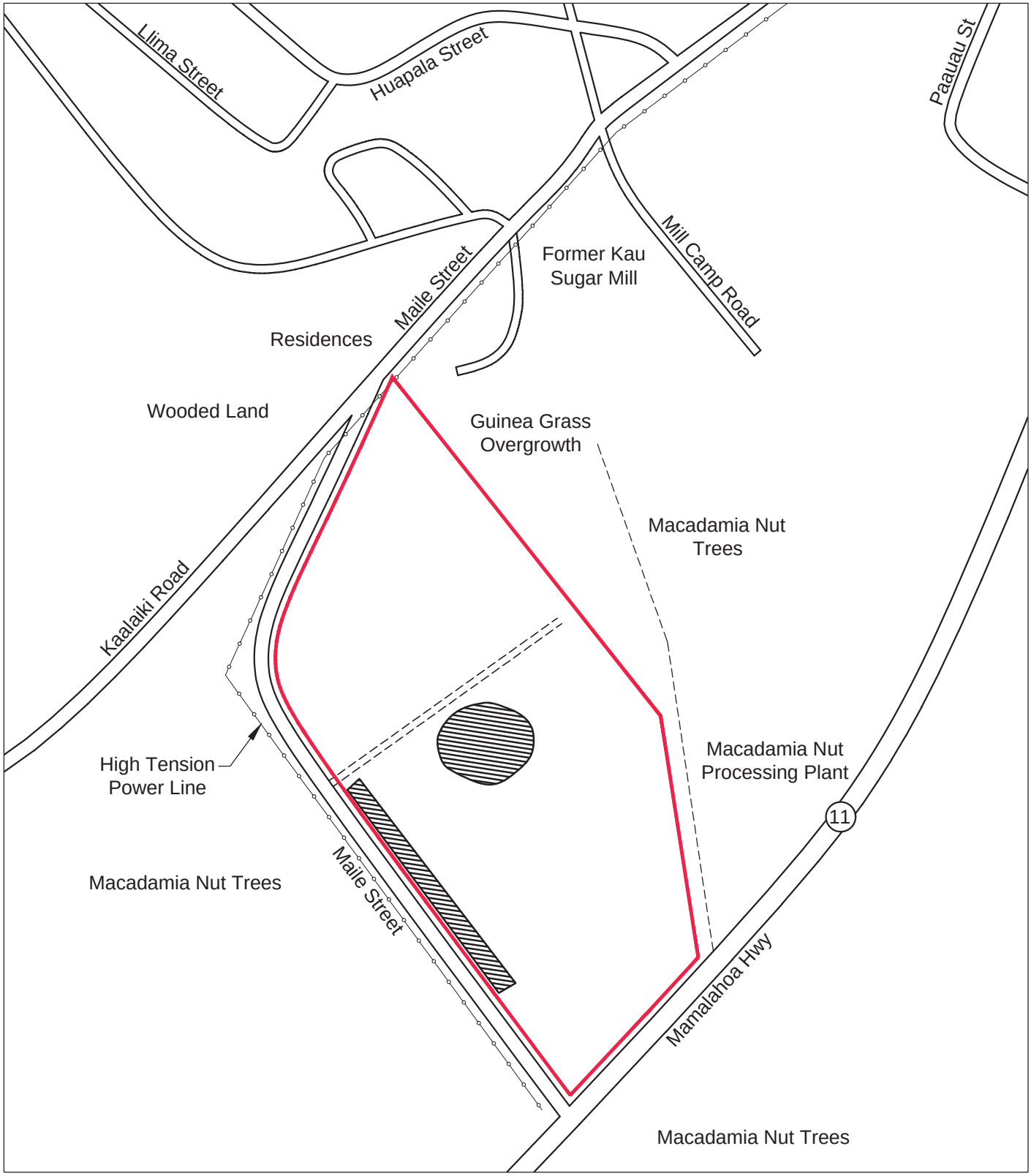
National Wetlands Inventory Maps, http://www.hawaiipropertytax.com/

Pacific Legacy Historic Preservation, *Archaeological Field Investigation*. November 11, 2016.

U.S. Fish and Wildlife, Threatened and Endangered Species, *http://ecos.fws.gov/tess_public/*

U.S Geological Survey, Sherrod, David R.; Sinton, John M.; and Brunt, Kelly M.; *Geologic Map of the State of Hawai'i, Sheet 8 – Island of Hawai'i.* U.S. Department of the Interior, USGS. 2007

Appendix A: Figures



N

0 250 500 Feet

LEGEND

Target Property Boundary

Debris

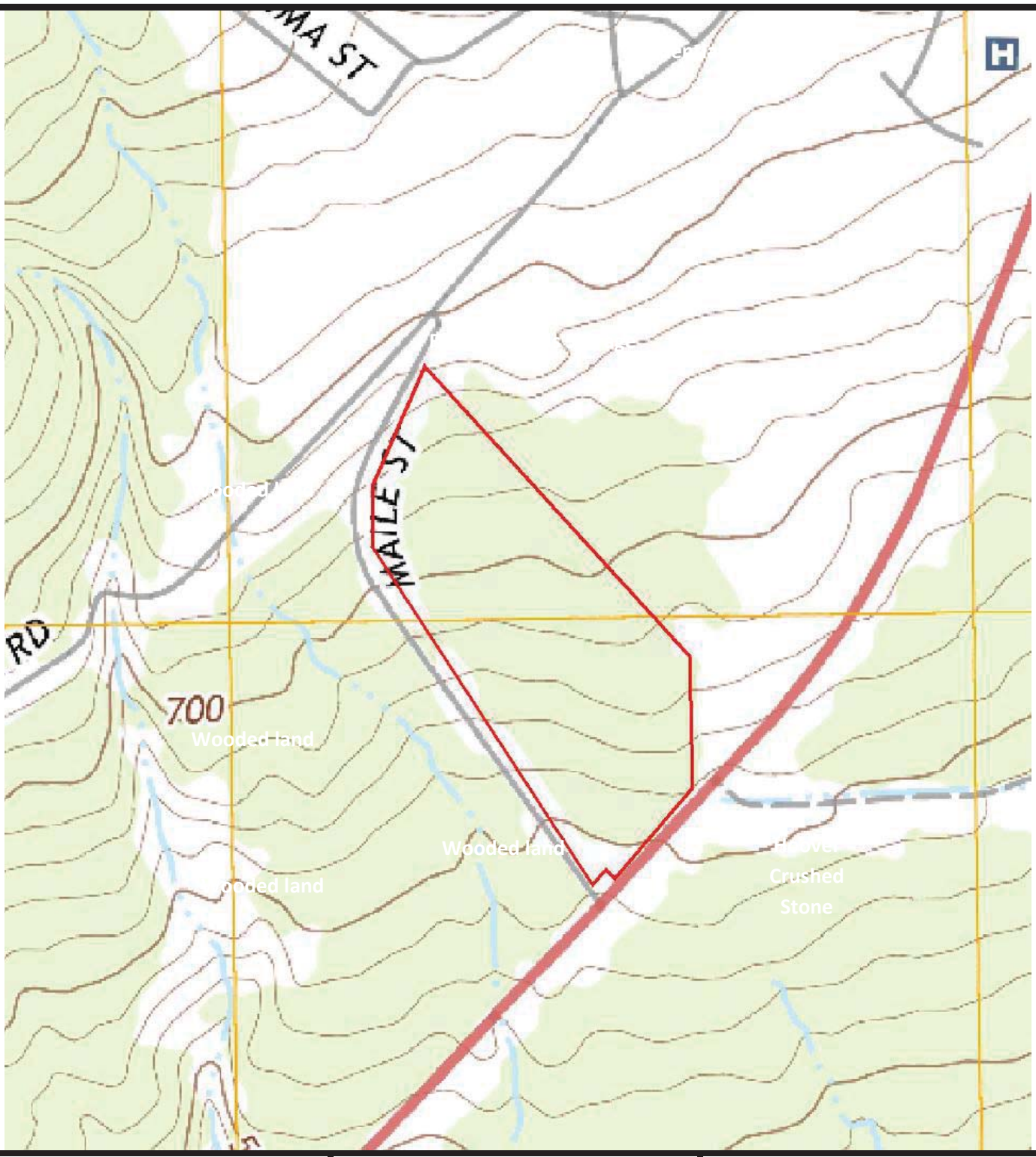
Dirt Road

Dilapidated Asphalt Roadway

FIGURE 1
Target Property Map

Pāhala WWTP
Pāhala, District of Ka' ū
County of Hawaii, HI 96777

Brown AND Caldwell



Target Property Boundary

Basemap: USGS Topographic Quadrangle
Pahala, Hawaii, dated 2013

Scale: 1 = 24000

Figure 2
Topographic Map
Pāhala WWTP
Pāhala, District of Kaʻū
County of Hawai'i, HI 96777

Brown AND Caldwell

Appendix B: Site and Surrounding Area Photographs

Photo #1	
Description: Entrance to the target property from Maile Street	
Facing West	
Photo #2	
Description: Dilapidated asphalt roadway through central portion of the target property; oriented northwest to southeast	
Facing East	
Photo #3	
Description: Representative photograph of macadamia nut trees	
Facing Northwest	

Photo #4	
Description: Representative photograph of sprinkler component of irrigation system	
Facing NA	
Photo #5	
Description: Representative photograph of several regulators for drip irrigation system	
Facing Southwest	
Photo #6	
Description: Representative photograph of loose rocks on target property	
Facing NA	

Photo #7 Description: Representative photograph of drip irrigation components on target property Facing East	
Photo #8 Close-up of irrigation system piping Facing NA	
Photo #9 Description: Components of irrigation system along eastern property boundary Facing South	

Photo #10	
Description: Brush piles in central portion of the target property	
Facing South	
Photo #11	
Description: Brush piles in central portion of the target property	
Facing East	
Photo #12	
Description: Spent irrigation tubing debris on the western portion of the target property	
Facing NA	

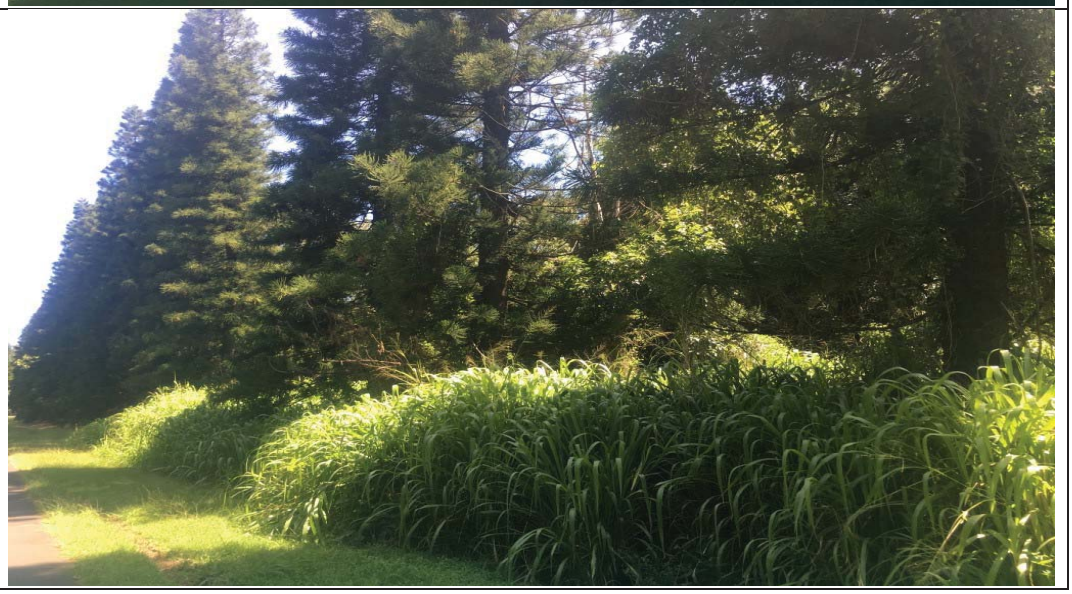
Photo #13 Description: Representative photograph of miscellaneous household debris on western portion of the target property Facing NA	
Photo #14 Description: High-tension power line along the northern property boundary Facing Northeast	
Photo #15 Description: Guinea grass overgrowth on the northeastern corner of the property Facing South-Southwest	

Photo #16 Description: Eastern portion of the target property at the macadamia nut processing plant parking lot Facing South	
Photo #17 Description: Northeastern adjacent property; guinea grass overgrowth Facing West-Southwest	
Photo #18 Description: Northeastern adjacent property beyond grassy overgrowth; dilapidated asphalt at former Ka'ū Sugar Mill Facing West-Southwest	

Photo #19	
Description: Eastern adjacent property; dirt road	
Facing North	
Photo #20	
Description: Eastern adjacent property; macadamia nut processing plant	
Facing East	
Photo #21	
Description: Southern adjacent property; Hawai'i Belt Road, beyond which are macadamia nut trees	
Facing North-Northeast	

Photo #22	
Description: Southwestern adjacent property; intersection of Hawai'i Belt Road and Maile Street	
Facing East-Northeast	
Photo #23	
Description: Western adjacent property; Maile Street with macadamia nut trees beyond	
Facing West	

Appendix C: EDR

Pahala WWTP
Hawaii Belt Road
Pahala, HI 96777

Inquiry Number: 4931603.2s
May 09, 2017

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	9
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-11
Physical Setting Source Map Findings	A-13
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

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

HAWAII BELT ROAD
PAHALA, HI 96777

COORDINATES

Latitude (North):	19.1929890 - 19˚ 11' 34.76''
Longitude (West):	155.4782830 - 155˚ 28' 41.81''
Universal Tranverse Mercator:	Zone 5
UTM X (Meters):	239395.1
UTM Y (Meters):	2123908.2
Elevation:	691 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5949406 PAHALA, HI
Version Date:	2013

MAPPED SITES SUMMARY

Target Property Address:
HAWAII BELT ROAD
PAHALA, HI 96777

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	KAU SUGAR MILL	NUMBER ONE MILL RD 9	LUST, UST	Higher	302, 0.057, NNW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

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

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
RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System
US ENG CONTROLS ..... Engineering Controls Sites List

EXECUTIVE SUMMARY

US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

SHWS..... Sites List

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

SWF/LF..... Permitted Landfills in the State of Hawaii

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

ENG CONTROLS..... Engineering Control Sites
INST CONTROL..... Sites with Institutional Controls

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing
VCP..... Voluntary Response Program Sites

State and tribal Brownfields sites

BROWNFIELDS..... Brownfields Sites

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... 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
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... Open Dump Inventory
IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register
CDL..... Clandestine Drug Lab Listing

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
SPILLS ..... Release Notifications
SPILLS 90 ..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ..... RCRA - Non Generators / No Longer Regulated
FUDS ..... Formerly Used Defense Sites
DOD ..... Department of 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
ABANDONED MINES ..... Abandoned Mines
FINDS ..... Facility Index System/Facility Registry System
UXO ..... Unexploded Ordnance Sites
DOCKET HWC ..... Hazardous Waste Compliance Docket Listing
ECHO ..... Enforcement & Compliance History Information
FUELS PROGRAM ..... EPA Fuels Program Registered Listing
AIRS ..... List of Permitted Facilities
DRYCLEANERS ..... Permitted Drycleaner Facility Listing
Financial Assurance ..... Financial Assurance Information Listing

EXECUTIVE SUMMARY

UIC..... Underground Injection Wells 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

RGA HWS..... Recovered Government Archive State Hazardous Waste Facilities List
RGA LF..... Recovered Government Archive Solid Waste Facilities List
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.

STANDARD ENVIRONMENTAL RECORDS

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Health's Active Leaking Underground Storage Tank Log Listing.

A review of the LUST list, as provided by EDR, and dated 11/18/2016 has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
KAU SUGAR MILL	***NUMBER ONE MILL RD 9***	***NNW 0 - 1/8 (0.057 mi.)***	***1***	***8***
Release ID: 990035				
Facility Id: 9-603443				
Facility Status: Site Cleanup Completed (NFA)				

EXECUTIVE SUMMARY

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Health's Listing of Underground Storage Tanks.

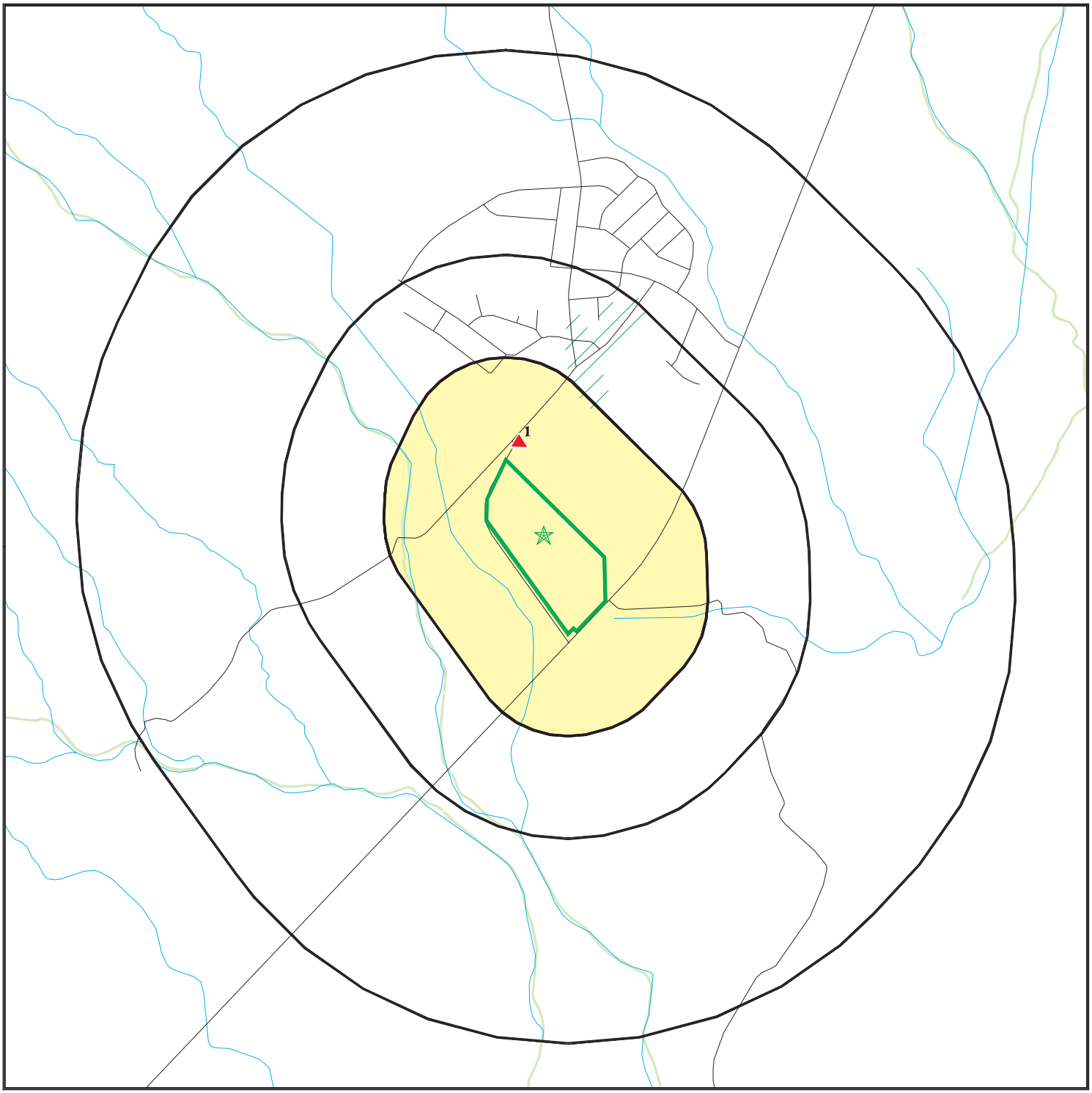
A review of the UST list, as provided by EDR, and dated 11/18/2016 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
KAU SUGAR MILL Tank Status: Permanently Out of Use Facility Id: 9-603443 Date Closed: 09/22/1998	***NUMBER ONE MILL RD 9***	***NNW 0 - 1/8 (0.057 mi.)***	***1***	***8***

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 4931603.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Pahala WWTP ADDRESS: Hawaii Belt Road Pahala HI 96777 LAT/LONG: 19.192989 / 155.478283	CLIENT: Brown & Caldwell CONTACT: Caitlin Shannon INQUIRY #: 4931603.2s DATE: May 09, 2017 12:56 pm

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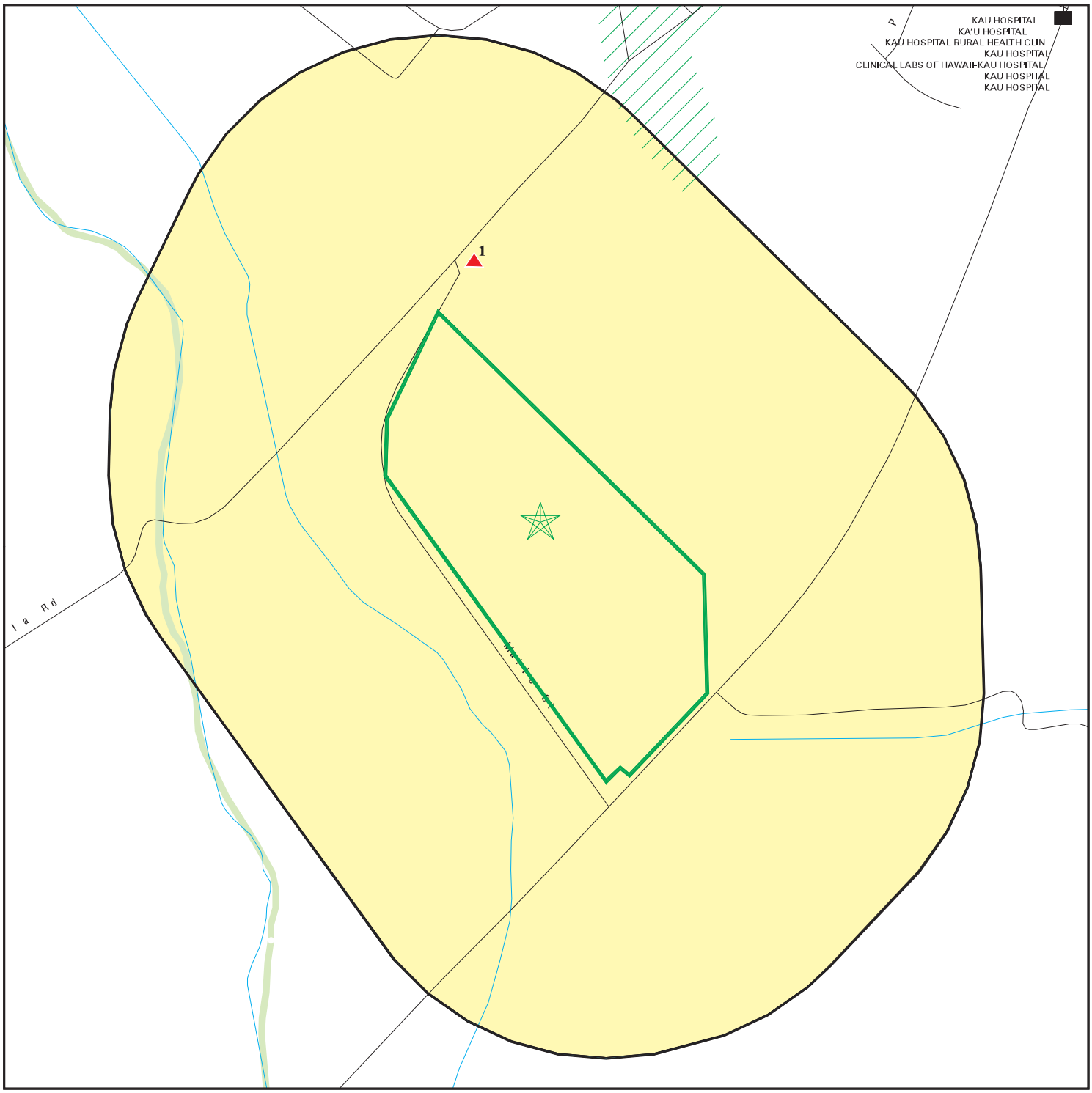
DETAIL MAP - 4931603.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

0 1/8 1/4 1/2 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Pahala WWTP	CLIENT: Brown & Caldwell
ADDRESS: Hawaii Belt Road Pahala HI 96777	CONTACT: Caitlin Shannon INQUIRY #: 4931603.2s
LAT/LONG: 19.192989 / 155.478283	DATE: May 09, 2017 12:56 pm

Copyright © 2017 EDR, Inc. © 2015 TomTom Rel. 2015.

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	0	0	NR	NR	1
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST	0.250		1	0	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	0.001		0	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
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								
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	2	0	0	0	0	2

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1 NNW < 1/8 0.057 mi. 302 ft.	**KAU SUGAR MILL NUMBER ONE MILL RD 96-3207 MAILE ST PAHALA, HI 96777**	**LUST UST**	**U003402991 N/A**

Relative:
Higher

Actual:
801 ft.

LUST:

Facility ID:	9-603443
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	02/08/2002
Release ID:	990035
Project Officer:	Jose Ruiz

UST:

Facility ID:	9-603443
Owner:	KA'U AGRIBUSINESS CO. INC.
Owner Address:	P.O. BOX 130
Owner City,St,Zip:	Pahala, 96777 96777
Latitude:	19.197461
Longitude:	-155.477864
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching
Tank ID:	R-2
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	09/22/1998
Tank Capacity:	10000
Substance:	Diesel
Tank ID:	R-3
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	09/22/1998
Tank Capacity:	15000
Substance:	Used Oil

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 12/05/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 29

Source: EPA
Telephone: N/A
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

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: 12/05/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 29

Source: EPA
Telephone: N/A
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Quarterly

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
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
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: 12/05/2016	Source: EPA
Date Data Arrived at EDR: 01/05/2017	Telephone: N/A
Date Made Active in Reports: 02/03/2017	Last EDR Contact: 04/21/2017
Number of Days to Update: 29	Next Scheduled EDR Contact: 07/17/2017
	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: 11/07/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/05/2017	Telephone: 703-603-8704
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 04/07/2017
Number of Days to Update: 92	Next Scheduled EDR Contact: 07/17/2017
	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: 02/07/2017	Source: EPA
Date Data Arrived at EDR: 04/19/2017	Telephone: 800-424-9346
Date Made Active in Reports: 05/05/2017	Last EDR Contact: 04/21/2017
Number of Days to Update: 16	Next Scheduled EDR Contact: 07/31/2017
	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.

Date of Government Version: 02/07/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/25/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

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

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

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.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

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.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small 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). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small 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). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
Data Release Frequency: Varies

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.

Date of Government Version: 12/28/2016
Date Data Arrived at EDR: 01/04/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 93

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/13/2017
Next Scheduled EDR Contact: 05/29/2017
Data Release Frequency: Varies

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 effect human health.

Date of Government Version: 11/15/2016
Date Data Arrived at EDR: 11/29/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/28/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: Varies

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.

Date of Government Version: 11/15/2016
Date Data Arrived at EDR: 11/29/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/28/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: Varies

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: 09/26/2016
Date Data Arrived at EDR: 09/29/2016
Date Made Active in Reports: 11/11/2016
Number of Days to Update: 43

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/29/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Sites List
Facilities, sites or areas in which the Office of Hazard Evaluation and Emergency Response has an interest, has investigated or may investigate under HRS 128D (includes CERCLIS sites).

Date of Government Version: 09/23/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 29

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 03/17/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Semi-Annually

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

SWF/LF: Permitted Landfills in the State of Hawaii
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: 09/17/2012
Date Data Arrived at EDR: 04/03/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 37

Source: Department of Health
Telephone: 808-586-4245
Last EDR Contact: 03/31/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Database
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: 11/18/2016
Date Data Arrived at EDR: 12/02/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 19

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 03/17/2017
Next Scheduled EDR Contact: 06/12/2017
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: 10/17/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 10/06/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

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: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Semi-Annually

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
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/11/2017
Next Scheduled EDR Contact: 07/24/2017
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: 11/18/2016
Date Data Arrived at EDR: 12/02/2016
Date Made Active in Reports: 01/27/2017
Number of Days to Update: 56

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 03/17/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: Semi-Annually

INDIAN UST R1: 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 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INDIAN UST R4: 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 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Semi-Annually

INDIAN UST R5: 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 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 01/14/2017
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
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: 09/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

INDIAN UST R8: 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 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/17/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

INDIAN UST R9: 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 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/06/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

INDIAN UST R10: 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 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Quarterly

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Control Sites
A listing of sites with engineering controls in place.

Date of Government Version: 09/23/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 29

Source: Department of Health
Telephone: 404-586-4249
Last EDR Contact: 03/17/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Varies

INST CONTROL: Sites with Institutional Controls
Voluntary Remediation Program and Brownfields sites with institutional controls in place.

Date of Government Version: 09/23/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 29

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 03/17/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Response Program Sites
Sites participating in the Voluntary Response Program. The purpose of the VRP is to streamline the cleanup process in a way that will encourage prospective developers, lenders, and purchasers to voluntarily cleanup properties.

Date of Government Version: 09/23/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 29

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 03/17/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Varies

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
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/27/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Varies

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

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites
With certain legal exclusions and additions, the term ‘brownfield site’ means 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.

Date of Government Version: 09/23/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 12/21/2016
Number of Days to Update: 29

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 03/17/2017
Next Scheduled EDR Contact: 06/05/2017
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.

Date of Government Version: 03/02/2017
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/02/2017
Next Scheduled EDR Contact: 07/03/2017
Data Release Frequency: Semi-Annually

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

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 05/01/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Varies

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

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/24/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: No Update Planned

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

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Varies

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: 09/30/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 36

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/28/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Lab Listing
A listing of clandestine drug lab site locations.

Date of Government Version: 08/04/2010
Date Data Arrived at EDR: 09/10/2010
Date Made Active in Reports: 10/22/2010
Number of Days to Update: 42

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 03/13/2017
Next Scheduled EDR Contact: 06/12/2017
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.

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 12/05/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 67

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/28/2017
Next Scheduled EDR Contact: 06/12/2017
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
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/28/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 37

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/29/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Annually

SPILLS: Release Notifications

Releases of hazardous substances to the environment reported to the Office of Hazard Evaluation and Emergency Response since 1988.

Date of Government Version: 01/14/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 04/06/2016
Number of Days to Update: 42

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 03/17/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Varies

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 03/10/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/11/2013
Number of Days to Update: 39

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

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: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 04/10/2017
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
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/24/2017
Next Scheduled EDR Contact: 06/05/2017
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
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/14/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/14/2017
Next Scheduled EDR Contact: 07/24/2017
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: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/03/2017
Next Scheduled EDR Contact: 05/29/2017
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: 10/11/2016
Date Data Arrived at EDR: 11/16/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 02/15/2017
Next Scheduled EDR Contact: 05/29/2017
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
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/08/2017
Next Scheduled EDR Contact: 08/21/2017
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
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
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
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/24/2017
Next Scheduled EDR Contact: 07/03/2017
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
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/24/2017
Next Scheduled EDR Contact: 06/05/2017
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
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/26/2017
Next Scheduled EDR Contact: 08/07/2017
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
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/06/2017
Next Scheduled EDR Contact: 06/19/2017
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.

Date of Government Version: 02/01/2017
Date Data Arrived at EDR: 02/09/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

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.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 04/25/2017
Next Scheduled EDR Contact: 05/22/2017
Data Release Frequency: Quarterly

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.

Date of Government Version: 01/20/2016
Date Data Arrived at EDR: 04/28/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 127

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Annually

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.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 02/17/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 02/17/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 05/08/2017
Next Scheduled EDR Contact: 08/21/2017
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/06/2017
Next Scheduled EDR Contact: 06/19/2017
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/06/2017
Next Scheduled EDR Contact: 06/19/2017
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/28/2017
Next Scheduled EDR Contact: 08/07/2017
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/04/2017
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/06/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Quarterly

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.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: 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.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

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

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/02/2017
Next Scheduled EDR Contact: 08/14/2017
Data Release Frequency: Varies

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.

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 11/18/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 77

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/27/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Varies

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.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 02/24/2015
Date Made Active in Reports: 09/30/2015
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/22/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Biennially

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: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/14/2017
Next Scheduled EDR Contact: 07/24/2017
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: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/05/2017
Next Scheduled EDR Contact: 08/21/2017
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
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/21/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 12/05/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/21/2017
Next Scheduled EDR Contact: 07/17/2017
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 1931and 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
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
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: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/07/2017
Next Scheduled EDR Contact: 07/10/2017
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/07/2017
Next Scheduled EDR Contact: 04/10/2017
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: 02/08/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 38

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/28/2017
Next Scheduled EDR Contact: 06/12/2017
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
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/03/2017
Next Scheduled EDR Contact: 06/12/2017
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
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/03/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/14/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 21

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/13/2017
Next Scheduled EDR Contact: 06/26/2017
Data Release Frequency: Quarterly

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: 07/15/2016
Date Data Arrived at EDR: 09/07/2016
Date Made Active in Reports: 11/11/2016
Number of Days to Update: 65

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 04/07/2017
Next Scheduled EDR Contact: 06/19/2017
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 12/11/2016
Date Data Arrived at EDR: 12/20/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/21/2017
Next Scheduled EDR Contact: 07/03/2017
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: 06/02/2016
Date Data Arrived at EDR: 06/03/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 91

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/24/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 67

Source: Department of Defense
Telephone: 571-373-0407
Last EDR Contact: 04/17/2017
Next Scheduled EDR Contact: 07/31/2017
Data Release Frequency: Varies

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: 11/21/2016
Date Data Arrived at EDR: 11/22/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 73

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/22/2017
Next Scheduled EDR Contact: 06/05/2017
Data Release Frequency: Quarterly

AIRS: List of Permitted Facilities
A listing of permitted facilities in the state.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/04/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 57

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 03/31/2017
Next Scheduled EDR Contact: 07/17/2017
Data Release Frequency: Varies

DRYCLEANERS: Permitted Drycleaner Facility Listing
A listing of permitted drycleaner facilities in the state.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/04/2017
Date Made Active in Reports: 03/08/2017
Number of Days to Update: 63

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 03/31/2017
Next Scheduled EDR Contact: 07/17/2017
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: 12/16/2016
Date Data Arrived at EDR: 12/20/2016
Date Made Active in Reports: 01/27/2017
Number of Days to Update: 38

Source: Department of Health
Telephone: 808-586-4226
Last EDR Contact: 03/13/2017
Next Scheduled EDR Contact: 06/26/2017
Data Release Frequency: Varies

UIC: Underground Injection Wells Listing
A listing of underground injection well locations.

Date of Government Version: 02/07/2013
Date Data Arrived at EDR: 02/12/2013
Date Made Active in Reports: 04/09/2013
Number of Days to Update: 56

Source: Department of Health
Telephone: 808-586-4258
Last EDR Contact: 02/24/2017
Next Scheduled EDR Contact: 06/12/2017
Data Release Frequency: Varies

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

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: 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
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: 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
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 191

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

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 Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/17/2014
Number of Days to Update: 200

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
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 Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
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.

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.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: Wetlands Inventory
Source: Office of Planning
Telephone: 808-587-2895

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

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

PAHALA WWTP
HAWAII BELT ROAD
PAHALA, HI 96777

TARGET PROPERTY COORDINATES

Latitude (North):	19.192989 - 19˚ 11' 34.76''
Longitude (West):	155.478283 - 155˚ 28' 41.82''
Universal Tranverse Mercator:	Zone 5
UTM X (Meters):	239395.1
UTM Y (Meters):	2123908.2
Elevation:	691 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5949406 PAHALA, HI
Version Date:	2013

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.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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).

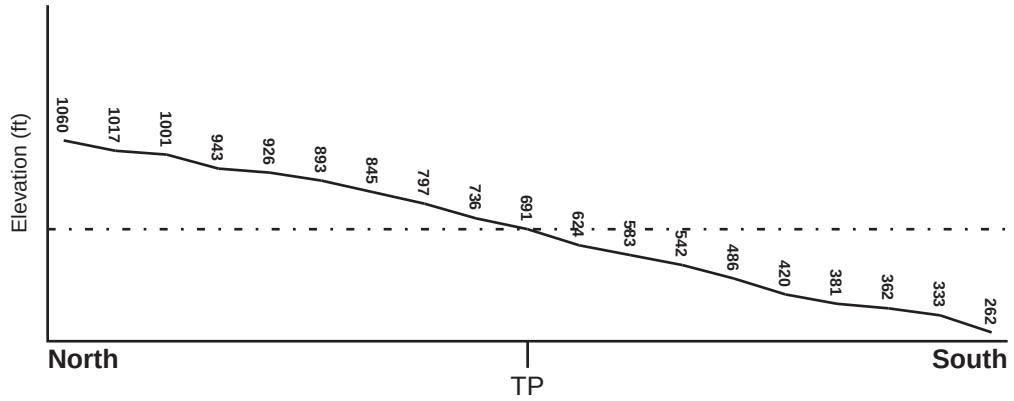
TOPOGRAPHIC INFORMATION

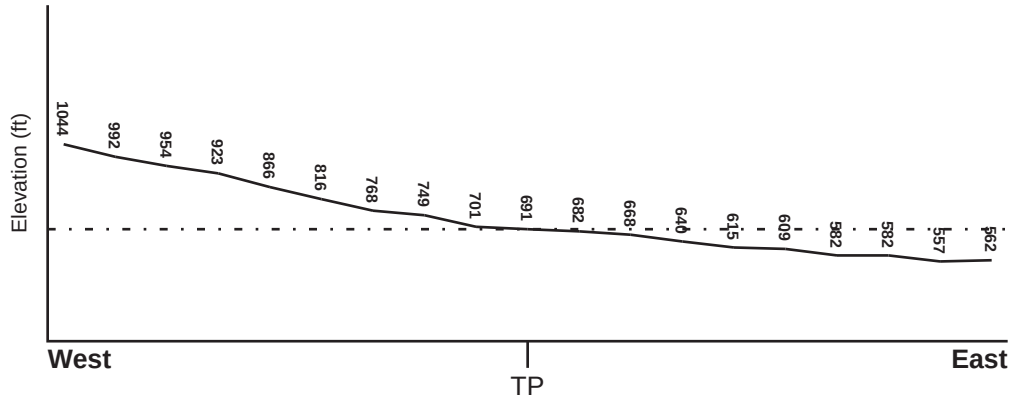
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient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

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 691 ft.

0 1/2 1 Miles

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.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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

Flood Plain Panel at Target Property	FEMA Source Type
1551661725C	FEMA Q3 Flood data

Additional Panels in search area:	FEMA Source Type
Not Reported	

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
PAHALA	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.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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

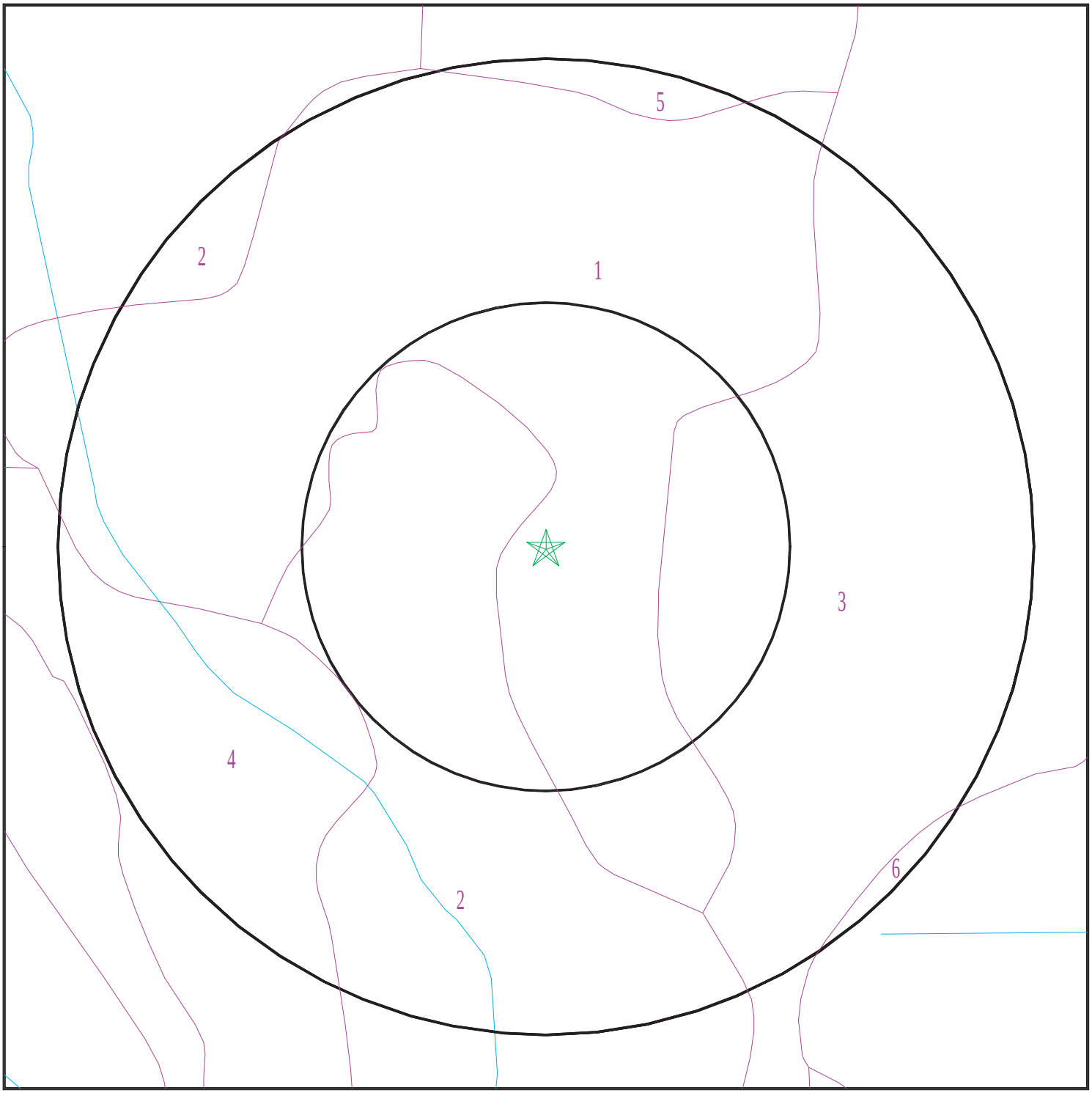
Era:	-
System:	-
Series:	-
Code:	N/A *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4931603.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME: Pahala WWTP ADDRESS: Hawaii Belt Road Pahala HI 96777 LAT/LONG: 19.192989 / 155.478283	CLIENT: Brown & Caldwell CONTACT: Caitlin Shannon INQUIRY #: 4931603.2s DATE: May 09, 2017 12:57 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Naalehu

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	20 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 4.23	Max: 6.5 Min: 5.6
2	20 inches	64 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 14.11 Min: 5	Max: 7.3 Min: 5.6

Soil Map ID: 2

Soil Component Name: Naalehu

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	20 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 4.23	Max: 6.5 Min: 5.6
2	20 inches	64 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 14.11 Min: 5	Max: 7.3 Min: 5.6

Soil Map ID: 3

Soil Component Name: Waiaha

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 6.5 Min: 6.1
2	3 inches	18 inches	stony silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 7.8 Min: 6.6
3	18 inches	27 inches	bedrock	Not reported	Not reported	Max: 0.42 Min: 0.02	Max: Min:

Soil Map ID: 4

Soil Component Name: Waiaha

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 46 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 6.5 Min: 6.1

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	3 inches	18 inches	very gravelly silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 7.8 Min: 6.6
3	18 inches	27 inches	bedrock	Not reported	Not reported	Max: 0.42 Min: 0.02	Max: Min:

Soil Map ID: 5

Soil Component Name: Waiaha

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 46 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 6.5 Min: 6.1
2	3 inches	18 inches	very gravelly silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 7.8 Min: 6.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	18 inches	27 inches	bedrock	Not reported	Not reported	Max: 0.42 Min: 0.02	Max: Min:

Soil Map ID: 6

Soil Component Name: Fill land

Soil Surface Texture: silty clay 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

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 14 Min: 4	Max: 7.3 Min: 5.6
2	11 inches	59 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 14 Min: 4	Max: 7.3 Min: 5.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A4	USGS40000268389	1/2 - 1 Mile NW
B5	USGS40000268387	1/2 - 1 Mile SE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

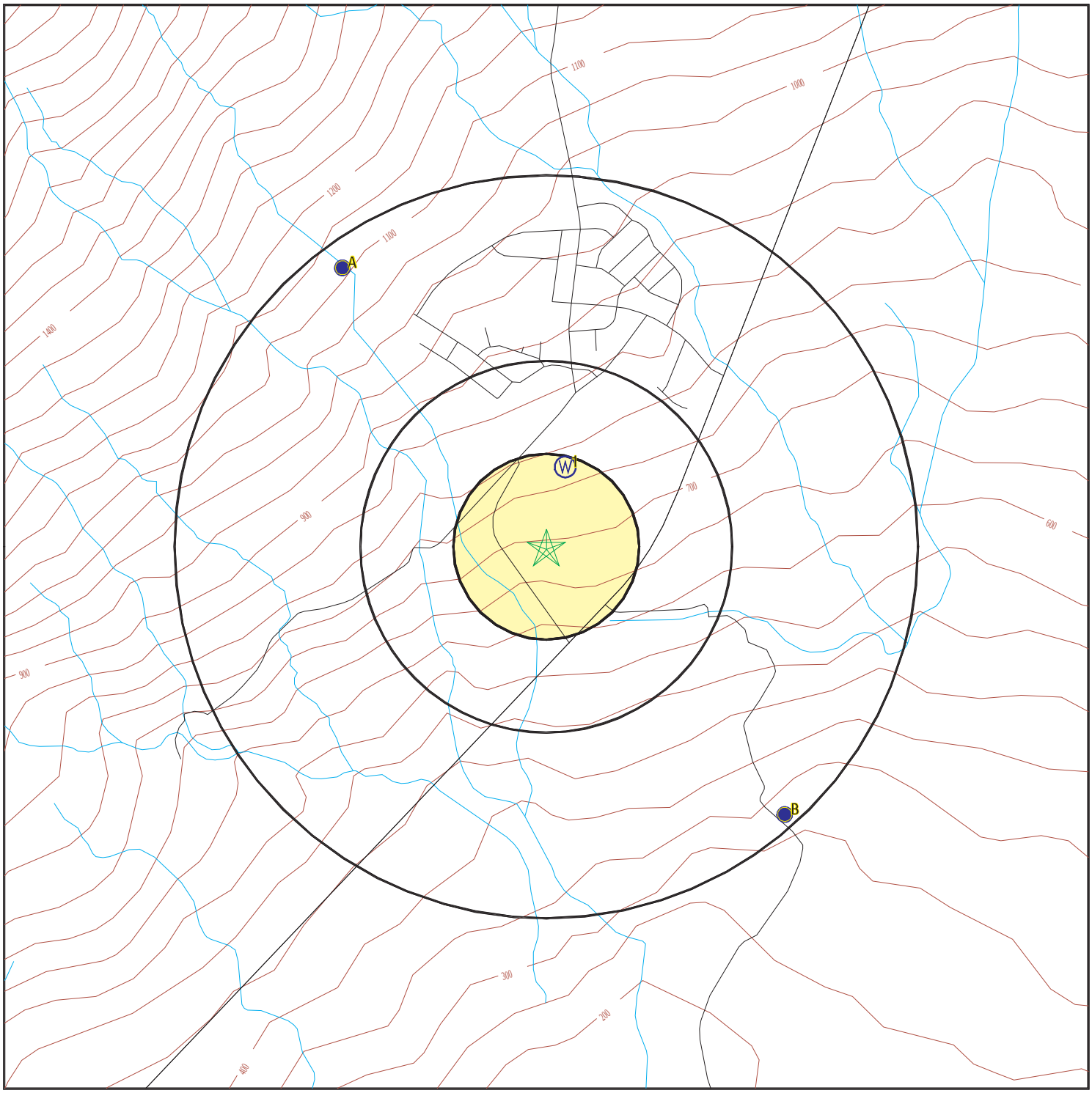
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

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

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	HI9000000003757	1/8 - 1/4 Mile NNE
A2	HI9000000003763	1/2 - 1 Mile NW
A3	HI9000000003762	1/2 - 1 Mile NW
B6	HI9000000003758	1/2 - 1 Mile SE

PHYSICAL SETTING SOURCE MAP - 4931603.2s



County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location

N

SITE NAME: Pahala WWTP ADDRESS: Hawaii Belt Road Pahala HI 96777 LAT/LONG: 19.192989 / 155.478283	CLIENT: Brown & Caldwell CONTACT: Caitlin Shannon INQUIRY #: 4931603.2s DATE: May 09, 2017 12:57 pm

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Map ID Direction Distance Elevation	Database	EDR ID Number
1 **NNE** **1/8 - 1/4 Mile** **Higher**	**HI WELLS**	**HI9000000003757**

Wid:	8-1128-001	Island:	Hawaii
Well name:	Pahala Shaft	Old name:	Not Reported
Yr drilled:	1947		
Driller:	H. Harada Contractor Inc.		
Quad map:	51		
Long83dd:	-155.4775		
Lat83dd:	19.196111		
Gps:	0	Utm:	-1
Owner user:	Kau Sugar		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	Not Reported	Well type:	SHF
Casing dia:	Not Reported	Ground el:	774
Well depth:	547		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	IND - Industrial		
Use year:	Not Reported		
Init head:	228	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	2500		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	QKL		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	227
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	80503		
Latest hd:	Not Reported	Wcr:	01-JAN-47
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000003757

A2 **NW** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI9000000003763**

Wid:	8-1229-002	Island:	Hawaii
Well name:	Pahala Deep 2	Old name:	Not Reported
Yr drilled:	0		
Driller:	Oasis Water Systems, Inc.		
Quad map:	50		
Long83dd:	-155.486667		
Lat83dd:	19.203889		
Gps:	0	Utm:	-1
Owner user:	Department of Water Supply Hawaii - Hilo, HDWS		
Land owner:	County of Hawaii		

Pump insta:	Not Reported		
Old number:	Not Reported	Well type:	Not Reported
Casing dia:	Not Reported	Ground el:	1112
Well depth:	260		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	Not Reported		
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(3) 9-6-005:048
Aqui code:	80503		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000003763

A3
NW
1/2 - 1 Mile
Higher

HI WELLS **HI9000000003762**

Wid:	8-1229-001	Island:	Hawaii
Well name:	Pahala Deepwell #1	Old name:	Pahala 1
Yr drilled:	1974		
Driller:	Water Resources International, Inc.		
Quad map:	50		
Long83dd:	-155.486667		
Lat83dd:	19.203889		
Gps:	-1	Utm:	0
Owner user:	Department of Water Supply Hawaii - Hilo, HDWS		
Land owner:	County of Hawaii		
Pump insta:	Not Reported		
Old number:	Not Reported	Well type:	ROT
Casing dia:	10	Ground el:	1112
Well depth:	938		
Solid case:	866	Perf case:	926
Use:	MUN - County		
Use year:	Not Reported		
Init head:	383.6	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	7		
Test date:	9/23/1974	Test gpm:	448

Test ddown:	3.5	Test chlor:	7
Test temp:	17.2	Test unit:	C
Pump gpm:	400		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	QKL		
Pump yr:	1976		
Draft yr:	Not Reported	Bot hole:	174
Bot solid:	246	Bot perf:	186
Spec capac:	128		
Pump mgd:	.576		
Draft mgd:	Not Reported	Pump elev:	228
Pump depth:	884	Tmk:	(3) 9-6-005:048
Aqui code:	80503		
Latest hd:	Not Reported	Wcr:	09-MAR-74
Pir:	1/17/2012		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000003762

A4
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000268389**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-191219155291601		
Monloc name:	8-1229-01 Pahala, HI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20010000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	19.2039311
Longitude:	-155.4866623	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1112.01
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19731201	Welldepth:	938
Welldepth units:	ft	Wellholedepth:	938
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B5
SE
1/2 - 1 Mile
Lower

FED USGS **USGS40000268387**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-191108155281701		
Monloc name:	8-1128-02 Palima, Hawaii, HI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20010000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	19.182544
Longitude:	-155.4686069	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	305.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Hawaii volcanic-rock aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19700209	Welldepth:	375
Welldepth units:	ft	Wellholedepth:	375
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B6
SE
1/2 - 1 Mile
Lower

HI WELLS **HI9000000003758**

Wid:	8-1128-002	Island:	Hawaii
Well name:	Palima	Old name:	Not Reported
Yr drilled:	1970		
Driller:	Roscoe Moss Hawaii Inc		
Quad map:	51		
Long83dd:	-155.468333		
Lat83dd:	19.1825		
Gps:	0	Utm:	-1
Owner user:	ML Macadamia Orchards, L.P.		
Land owner:	John Lee (IASCO Farms LTD)		
Pump insta:	William Godwin (Beylik Drilling & Pump Service Inc.)		
Old number:	Not Reported	Well type:	PER
Casing dia:	18	Ground el:	304
Well depth:	375		
Solid case:	305	Perf case:	335
Use:	AGR - Agriculture		
Use year:	Not Reported		
Init head:	8.7	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	9		
Test date:	Not Reported	Test gpm:	2200
Test ddown:	2.1	Test chlor:	9
Test temp:	18.9	Test unit:	C
Pump gpm:	3000		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	QKL		
Pump yr:	2008		
Draft yr:	Not Reported	Bot hole:	-71
Bot solid:	-1	Bot perf:	-31
Spec capac:	1048		

Pump mgd:	4.32		
Draft mgd:	Not Reported	Pump elev:	-25
Pump depth:	329	Tmk:	(3) 9-6-002:048
Aqui code:	80804		
Latest hd:	Not Reported	Wcr:	01-JAN-70
Pir:	4/24/2008		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000003758

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for HAWAII County: 3

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.

Federal Area Radon Information for HAWAII COUNTY, HI

Number of sites tested: 97

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.054 pCi/L	99%	1%	0%
Living Area - 2nd Floor	1.100 pCi/L	100%	0%	0%
Basement	-0.247 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

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 was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

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: Wetlands Inventory
Source: Office of Planning
Telephone: 808-587-2895

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] 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
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

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.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

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
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

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

Well Index Database
Source: Commission on Water Resource Management
Telephone: 808-587-0214
CWRM maintains a Well Index Database to track specific information pertaining to the construction and installation of production wells in Hawaii

OTHER STATE DATABASE INFORMATION

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.

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

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Appendix D: Historical Research Documentation

Pahala WWTP

Hawaii Belt Road

Pahala, HI 96777

Inquiry Number: 4931603.9

May 09, 2017

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

05/09/17

Site Name:

Pahala WWTP
Hawaii Belt Road
Pahala, HI 96777
EDR Inquiry # 4931603.9

Client Name:

Brown & Caldwell
220 Athens Way Suite 500
Nashville, TN 37228
Contact: Caitlin Shannon

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:

Year	Scale	Details	Source
2001	1"=500'	Acquisition Date: April 27, 2001	USGS/DOQQ
1992	1"=500'	Flight Date: September 23, 1992	USGS
1985	1"=500'	Flight Date: November 02, 1985	USGS
1977	1"=500'	Flight Date: March 25, 1977	USGS
1972	1"=500'	Flight Date: March 18, 1972	USGS

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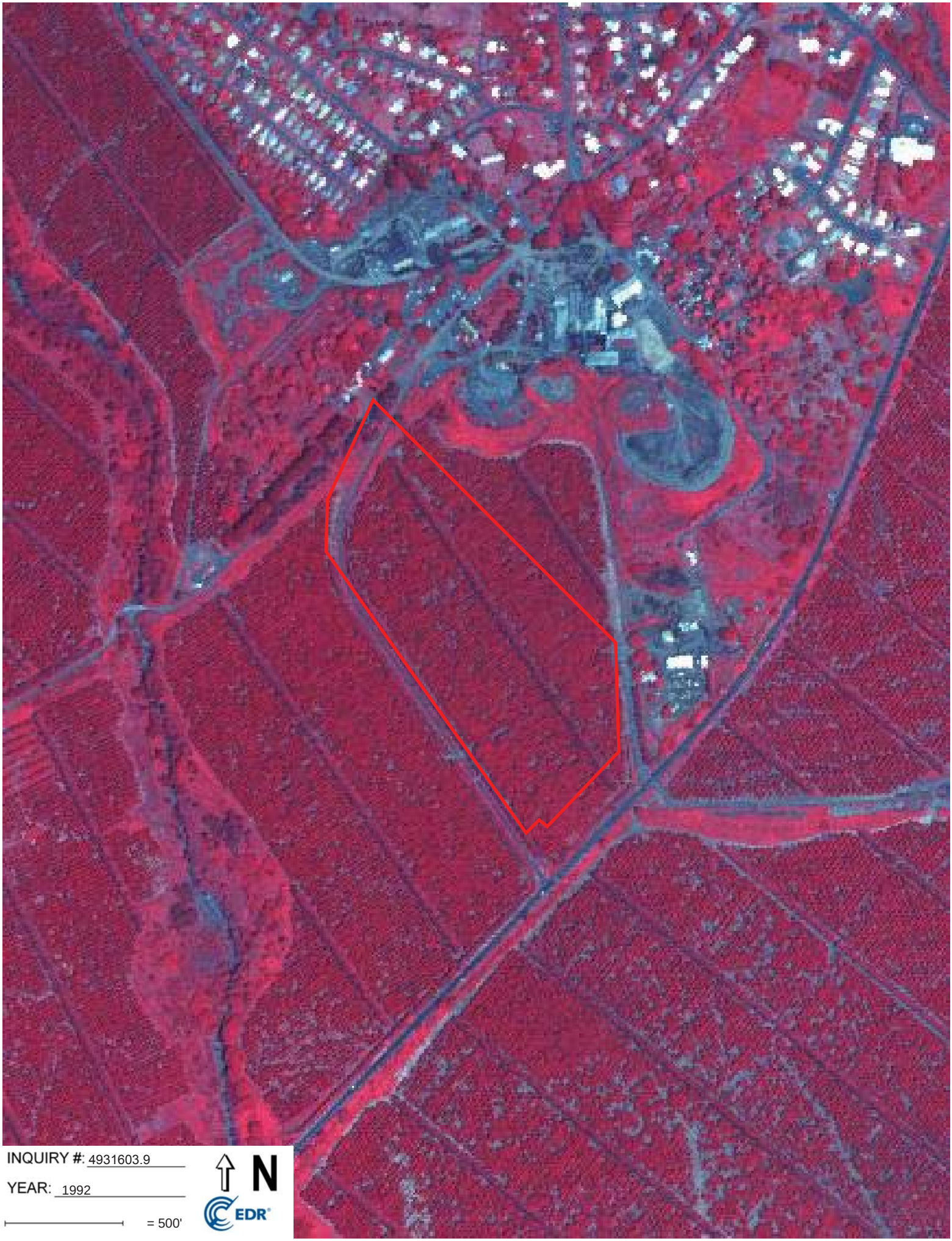
INQUIRY #: 4931603.9
YEAR: 2001
= 500'
N
EDR


INQUIRY #: 4931603.9
YEAR: 1992
= 500'
N
EDR

INQUIRY #: 4931603.9
YEAR: 1985
= 500'
N
EDR

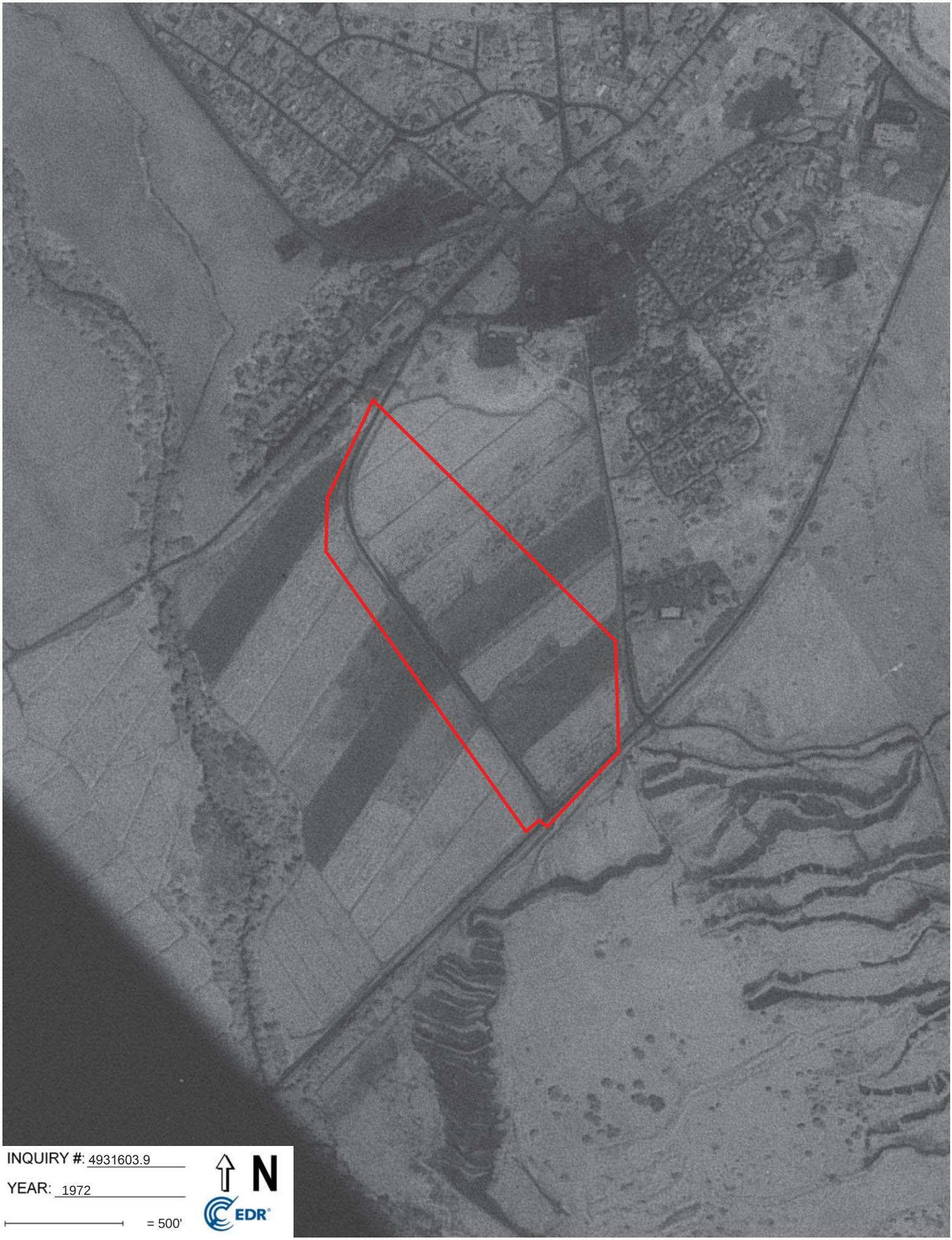
INQUIRY #: 4931603.9

YEAR: 1977

= 500'

N

EDR


INQUIRY #: 4931603.9
YEAR: 1972
= 500'
N
EDR

Pahala WWTP

Hawaii Belt Road

Pahala, HI 96777

Inquiry Number: 4931603.4

May 09, 2017

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

05/09/17

Site Name:	Client Name:
Pahala WWTP	Brown & Caldwell
Hawaii Belt Road	220 Athens Way Suite 500
Pahala, HI 96777	Nashville, TN 37228
EDR Inquiry # 4931603.4	Contact: Caitlin Shannon

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Brown & Caldwell 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:*	
P.O.#	150440.020	**Latitude:**	19.192989 19° 11' 35" North
Project:	Pahala WWTP	**Longitude:**	-155.478283 -155° 28' 42" West
		UTM Zone:	Zone 5 North
		UTM X Meters:	239399.03
		UTM Y Meters:	2124035.15
		Elevation:	691.44' above sea level

Maps Provided:

2013
1995
1981
1930
1923

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Topo Sheet Key

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

2013 Source Sheets

Pahala

7.5-minute, 24000

Punaluu

7.5-minute, 24000

1995 Source Sheets

Pahala

7.5-minute, 24000
Aerial Photo Revised 1995

Punaluu

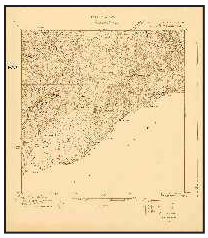
7.5-minute, 24000
Aerial Photo Revised 1995

1981 Source Sheets

Pahala

7.5-minute, 24000
Aerial Photo Revised 1977

1930 Source Sheets



PALIMAPOINT

7.5-minute, 31680

Topo Sheet Key

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

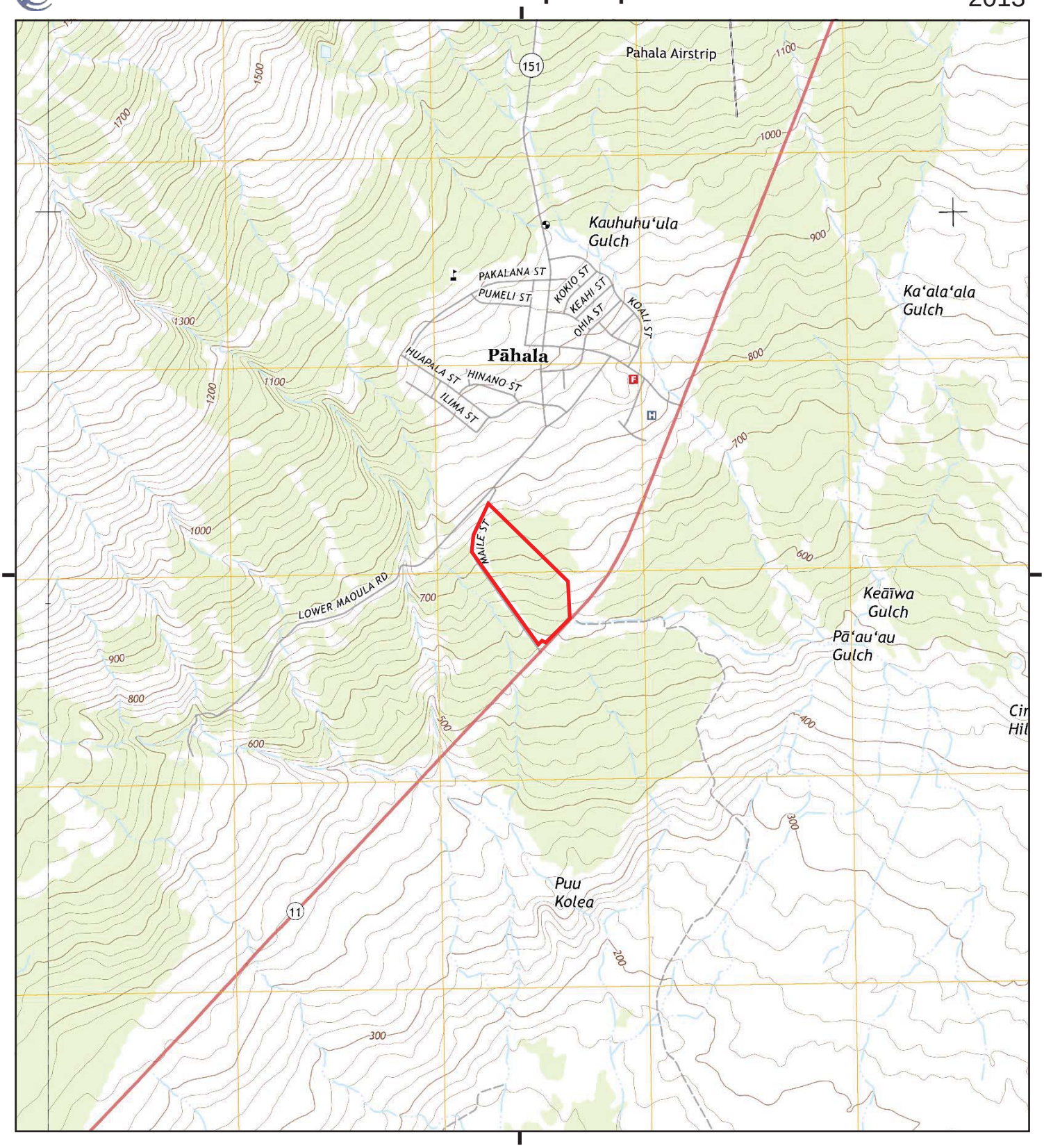
1923 Source Sheets

Pahala

15-minute, 62500

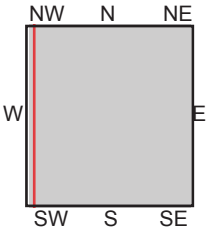
Historical Topo Map

2013



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

0 Miles 0.25 0.5 1 1.5



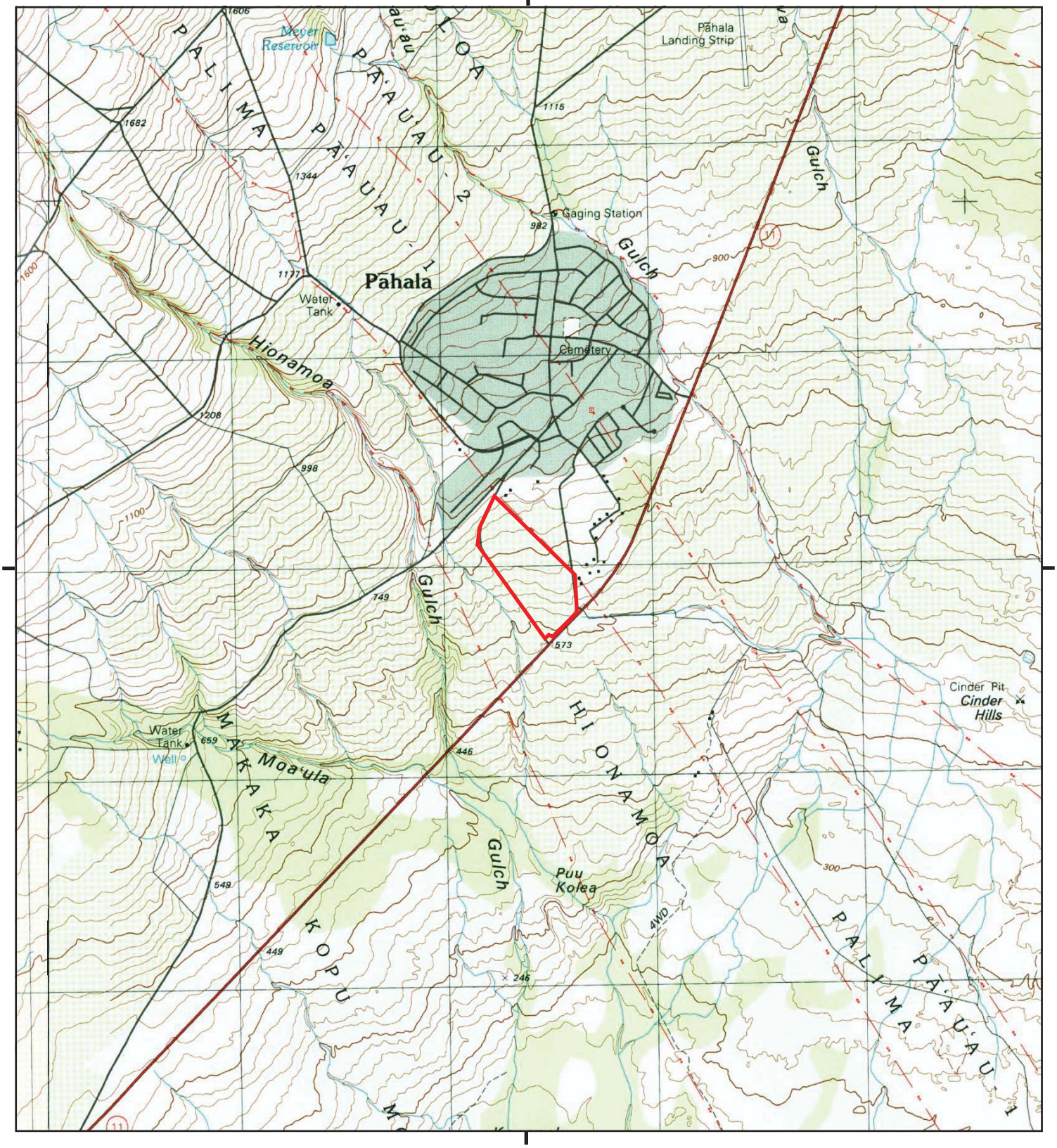
TP, Pahala, 2013, 7.5-minute
W, Punaluu, 2013, 7.5-minute

SITE NAME: Pahala WWTP
ADDRESS: Hawaii Belt Road
Pahala, HI 96777
CLIENT: Brown & Caldwell

N

Historical Topo Map

1995



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

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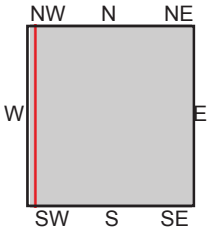


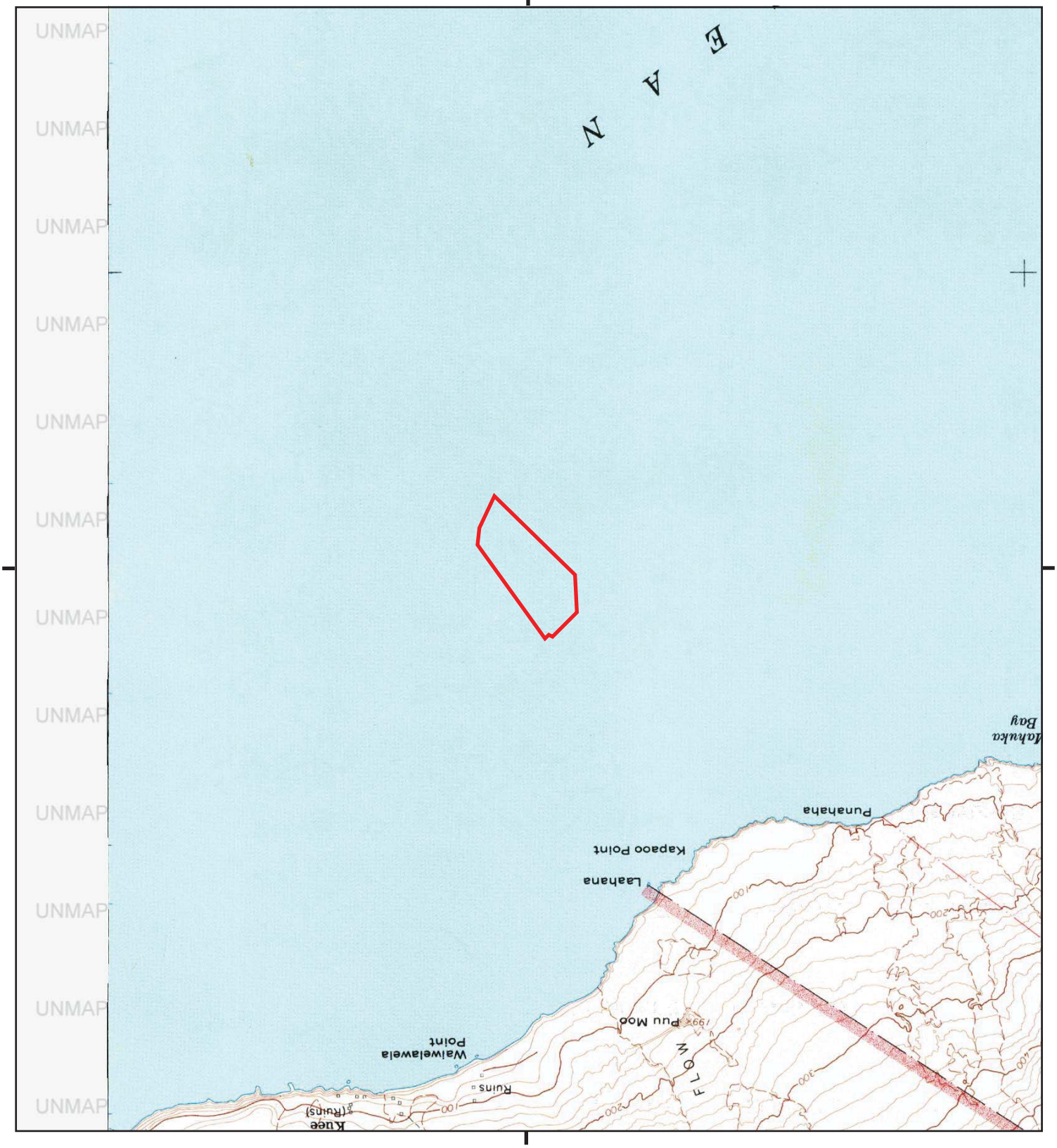
TP, Pahala, 1995, 7.5-minute
W, Punaluu, 1995, 7.5-minute

SITE NAME: Pahala WWTP
ADDRESS: Hawaii Belt Road
Pahala, HI 96777
CLIENT: Brown & Caldwell

N

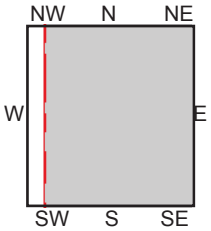
Historical Topo Map

1981



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

0 Miles 0.25 0.5 1 1.5



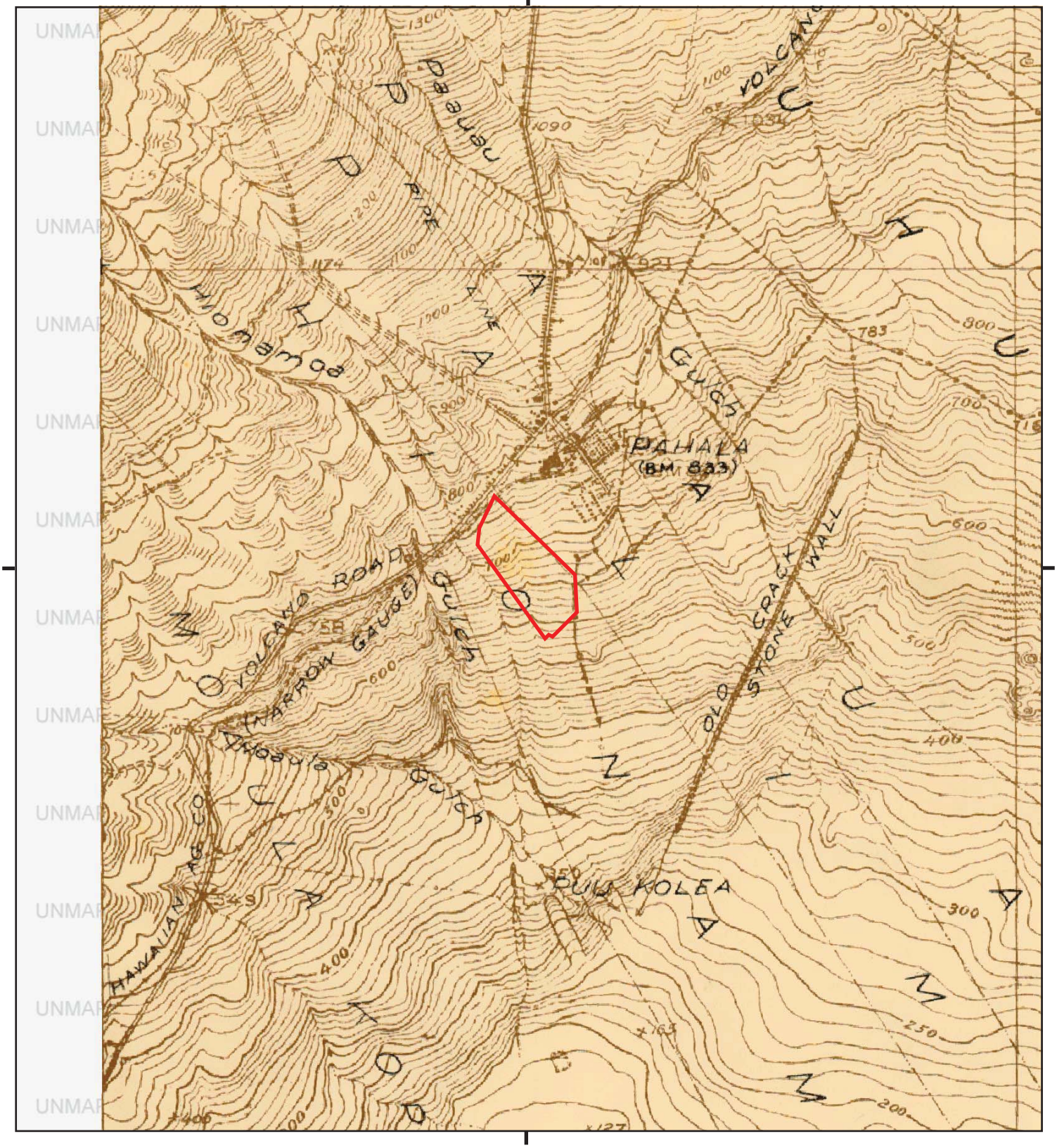
TP, Pahala, 1981, 7.5-minute

SITE NAME: Pahala WWTP
ADDRESS: Hawaii Belt Road
Pahala, HI 96777
CLIENT: Brown & Caldwell

N

Historical Topo Map

1930



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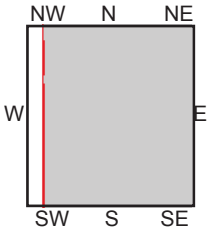


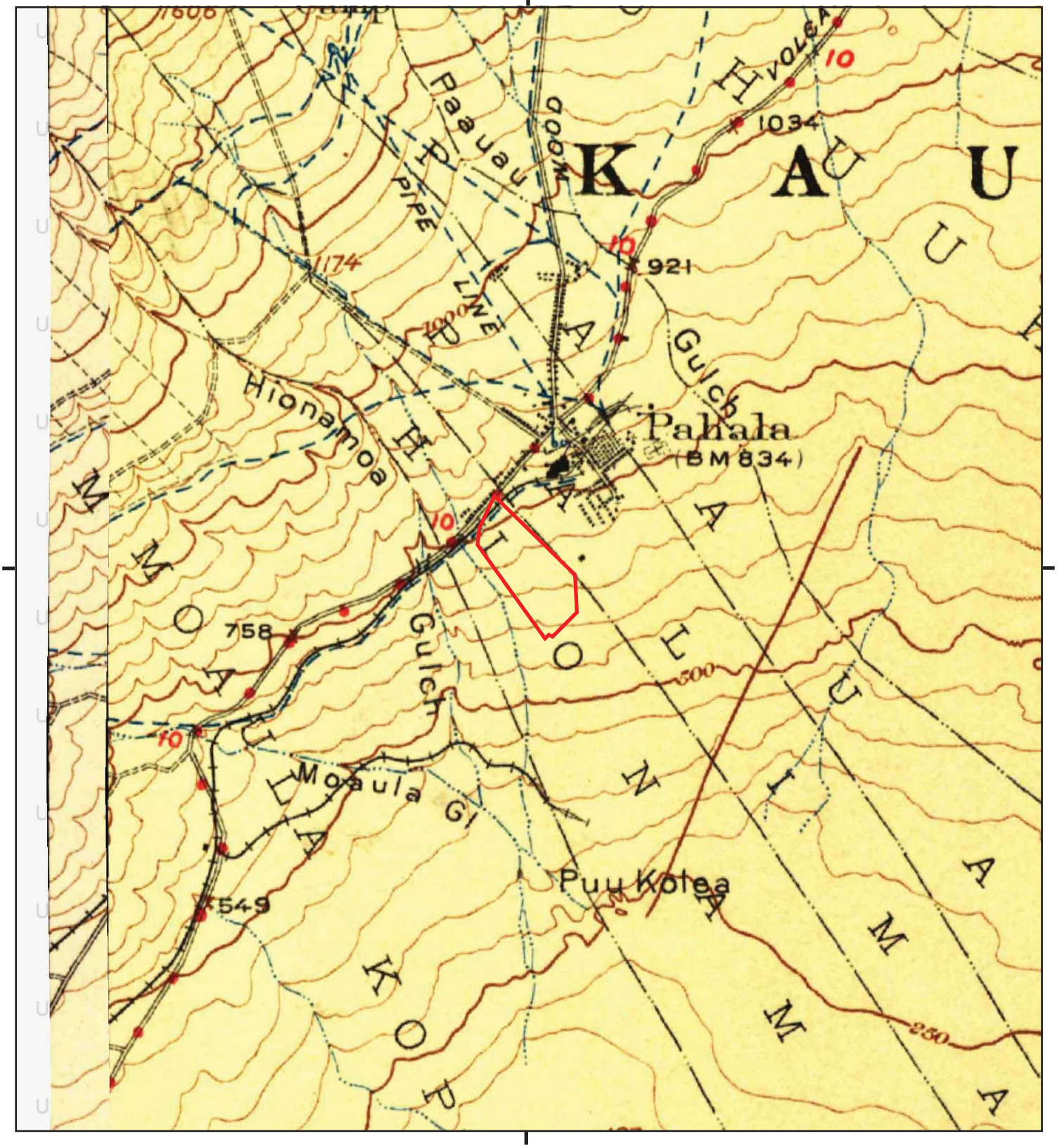
TP, PALIMAPOINT, 1930, 7.5-minute

SITE NAME: Pahala WWTP
ADDRESS: Hawaii Belt Road
Pahala, HI 96777
CLIENT: Brown & Caldwell

N

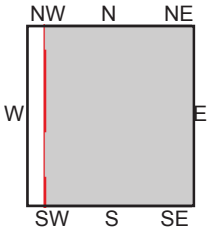
Historical Topo Map

1923



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

0 Miles 0.25 0.5 1 1.5



TP, Pahala, 1923, 15-minute

SITE NAME: Pahala WWTP
ADDRESS: Hawaii Belt Road
Pahala, HI 96777
CLIENT: Brown & Caldwell

N

Pahala WWTP
Hawaii Belt Road
Pahala, HI 96777

Inquiry Number: 4931603.5
May 10, 2017

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report 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 Report includes a search of available city directory data at 5 year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2013	☑	☑	Cole Information Services
2008	☐	☑	Cole Information Services
2003	☐	☑	Cole Information Services
1999	☐	☑	Cole Information Services
1995	☐	☑	Cole Information Services
1992	☐	☑	Cole Information Services

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FINDINGS

TARGET PROPERTY STREET

Hawaii Belt Road
Pahala, HI 96777

Year	*CD Image*	*Source*	

HAWAII BELT RD

2013	pg A1	Cole Information Services	
2008	-	Cole Information Services	Target and Adjoining not listed in Source
2003	-	Cole Information Services	Target and Adjoining not listed in Source
1999	-	Cole Information Services	Target and Adjoining not listed in Source
1995	-	Cole Information Services	Target and Adjoining not listed in Source
1992	-	Cole Information Services	Target and Adjoining not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
MAILE			
2013	pg. A2	Cole Information Services	
2008	-	Cole Information Services	Target and Adjoining not listed in Source
2003	pg. A5	Cole Information Services	
1999	pg. A7	Cole Information Services	
1995	pg. A8	Cole Information Services	
1992	pg. A9	Cole Information Services	
MAILE ST			
2013	pg. A3	Cole Information Services	
2008	pg. A4	Cole Information Services	
2003	pg. A6	Cole Information Services	
1999	-	Cole Information Services	Target and Adjoining not listed in Source
1995	-	Cole Information Services	Target and Adjoining not listed in Source
1992	-	Cole Information Services	Target and Adjoining not listed in Source

City Directory Images

Target Street	Cross Street	Source
✓	-	Cole Information Services

HAWAII BELT RD 2013

98 (b)(6)/Privacy Act
981900 (b)(6)/Privacy Act

Target Street	Cross Street	Source
-	✓	Cole Information Services

MAILE 2013

96 (b)(6)/Privacy Act [redacted]

Target Street	Cross Street	Source
-	✓	Cole Information Services

MAILE ST 2013

96	(b)(6)/Privacy Act
963182	(b)(6)/Privacy Act
963196	(b)(6)/Privacy Act
	PAHALA QUILTING
963207	PAHALA PLANTATION COTTAGES & STORE
	PAHALA WISEHEART

Target Street	Cross Street	Source
-	✓	Cole Information Services

MAILE ST 2008

963172 (b)(6)/Privacy Act
963173 (b)(6)/Privacy Act
963207 PAHALA WISEHEART

Target Street	Cross Street	Source
-	✓	Cole Information Services

MAILE 2003

963164 (b)(6)/Privacy Act
963172 (b)(6)/Privacy Act
963179 (b)(6)/Privacy Act

Target Street	Cross Street	Source
-	✓	Cole Information Services

MAILE ST 2003

963173 (b)(6)/Privacy Act
963186 (b)(6)/Privacy Act
963196 (b)(6)/Privacy Act

Target Street	Cross Street	Source
-	✓	Cole Information Services

MAILE 1999

963164 (b)(6)/Privacy Act
963172 (b)(6)/Privacy Act
963173 (b)(6)/Privacy Act
963179 (b)(6)/Privacy Act
963188 (b)(6)/Privacy Act

Target Street	Cross Street	Source
-	✓	Cole Information Services

MAILE 1995

963172 [redacted]

Target Street	Cross Street	Source
-	✓	Cole Information Services

MAILE 1992

0 (b)(6)/Privacy Act

Pahala WWTP

Hawaii Belt Road

Pahala, HI 96777

Inquiry Number: 4931603.3

May 09, 2017

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

05/09/17

Site Name:	Client Name:
Pahala WWTP	Brown & Caldwell
Hawaii Belt Road	220 Athens Way Suite 500
Pahala, HI 96777	Nashville, TN 37228
EDR Inquiry # 4931603.3	Contact: Caitlin Shannon

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Brown & Caldwell 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:

Certification # AF8F-415E-8945

PO # 150440.020

Project Pahala WWTP

UNMAPPED PROPERTY

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.

Sanborn® Library search results

Certification #: AF8F-415E-8945

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Appendix E: VES Report

Pahala WWTP
Hawaii Belt Road
Pahala, HI 96777

Inquiry Number: 4931603.6s
June 28, 2017

EDR Vapor Encroachment Screen

Prepared using EDR's Vapor Encroachment Worksheet

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	**ES1**
Primary Map	**2**
Secondary Map	**3**
Aerial Photography: Unavailable	
Map Findings	**4**
Record Sources and Currency	**GR-1**

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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The EDR Vapor Encroachment Worksheet enables EDR's customers to make certain online modifications that effects maps, text and calculations contained in this Report. As a result, maps, text and calculations contained in this Report may have been so modified. EDR has not taken any action to verify any such modifications, and this report and the findings set forth herein must be read in light of this fact. Environmental Data Resources shall not be responsible for any customer's decision to include or not include in any final report any records determined to be within the relevant minimum search distances.

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EXECUTIVE SUMMARY

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 the ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600).

ENVIRONMENTAL RECORDS	Maximum Search Distance*	Summary		
		property	1/10	1/10 - 1/3
Federal NPL site list	0.333	0	0	0
Federal CERCLIS list	0.333	0	0	0
Federal RCRA CORRACTS facilities list	0.333	0	0	0
Federal RCRA TSD facilities list	0.333	0	0	0
Federal RCRA generators list	property	0	-	-
Federal institutional controls / engineering controls registries	0.333	0	0	0
Federal ERNS list	property	0	-	-
State and tribal - equivalent NPL	not searched	-	-	-
State and tribal - equivalent CERCLIS	0.333	0	0	0
State and tribal landfill / solid waste disposal	0.333	0	0	0
State and tribal leaking storage tank lists	0.333	0	1	0
State and tribal registered storage tank lists	property	0	-	-
State and tribal institutional control / engineering control registries	property	0	-	-
State and tribal voluntary cleanup sites	0.333	0	0	0
State and tribal Brownfields sites	0.333	0	0	0
Other Records	0.333	0	0	0

HISTORICAL USE RECORDS				
Former Manufactured Gas Plants	0.333	0	0	0
Historical Gas Stations	0.125	0	0	0
Historical Dry Cleaners	0.125	0	0	0
Exclusive Recovered Govt. Archives	property	0	-	-

*Each category may include several separate databases, each having a different search distance. For each category, the table reports the maximum search distance applied. See the section 'Record Sources and Currency' for information on individual databases.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

PAHALA WWTP
HAWAII BELT ROAD
PAHALA, HI 96777

COORDINATES

Latitude (North):	19.192989 - 19° 11′ 34.761658″
Longitude (West):	155.478283 - 155° 28′ 41.832275″
Elevation:	691 ft. above sea level

EXECUTIVE SUMMARY

PHYSICAL SETTING INFORMATION

Flood Zone:	Available
NWI Wetlands:	Available

AQUIFLOW®

Search Radius: 0.333 Mile.

No Aquiflow sites reported.

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. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name:	Naalehu
Soil Surface Texture:	silty clay loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Well drained
Hydric Status:	Not hydric
Corrosion Potential - Uncoated Steel:	Moderate
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	20 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 4.23	Max: 6.5 Min: 5.6

EXECUTIVE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	20 inches	64 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 14.11 Min: 5	Max: 7.3 Min: 5.6

Soil Map ID: 2

Soil Component Name: Naalehu

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	20 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 4.23	Max: 6.5 Min: 5.6
2	20 inches	64 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 14.11 Min: 5	Max: 7.3 Min: 5.6

Soil Map ID: 3

Soil Component Name: Waiaha

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 6.5 Min: 6.1
2	3 inches	18 inches	stony silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 7.8 Min: 6.6
3	18 inches	27 inches	bedrock	Not reported	Not reported	Max: 0.42 Min: 0.02	Max: Min:

Soil Map ID: 4

Soil Component Name: Waiaha

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

EXECUTIVE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 46 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 6.5 Min: 6.1
2	3 inches	18 inches	very gravelly silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 7.8 Min: 6.6
3	18 inches	27 inches	bedrock	Not reported	Not reported	Max: 0.42 Min: 0.02	Max: Min:

Soil Map ID: 5

Soil Component Name: Waiaha

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 46 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 6.5 Min: 6.1
2	3 inches	18 inches	very gravelly silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 42 Min: 14	Max: 7.8 Min: 6.6
3	18 inches	27 inches	bedrock	Not reported	Not reported	Max: 0.42 Min: 0.02	Max: Min:

Soil Map ID: 6

Soil Component Name: Fill land

Soil Surface Texture: silty clay 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

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 14 Min: 4	Max: 7.3 Min: 5.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	11 inches	59 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	ML-A (proposed)	Max: 14 Min: 4	Max: 7.3 Min: 5.6

Soil Map ID: 7

Soil Component Name: Punaluu

Soil Surface Texture: peat

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	peat	A-8	Highly organic soils, Peat.	Max: 42 Min: 4	Max: Min:
2	3 inches	14 inches	bedrock	Not reported	Not reported	Max: 0.42 Min: 0.02	Max: Min:

Soil Map ID: 8

Soil Component Name: Rough broken land

Soil Surface Texture: silty clay 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

EXECUTIVE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Highly organic soils, Peat.	Max: 141 Min: 14	Max: 5 Min: 4.5
2	9 inches	29 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Highly organic soils, Peat.	Max: 141 Min: 14	Max: 6 Min: 5.1
3	29 inches	59 inches	bedrock	Not reported	Not reported	Max: 0.42 Min: 0.02	Max: Min:

Soil Map ID: 9

Soil Component Name: Kaimu

Soil Surface Texture: extremely stony peat

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 76 inches

Depth to Watertable Min: > 0 inches

EXECUTIVE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	extremely stony peat	A-8	Highly organic soils, Peat.	Max: 141 Min: 42	Max: Min:
2	3 inches	59 inches	extremely cobbly material	A-8	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel.	Max: 700 Min: 141.14	Max: Min:

EXECUTIVE SUMMARY

SEARCH RESULTS

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

ENVIRONMENTAL RECORDS

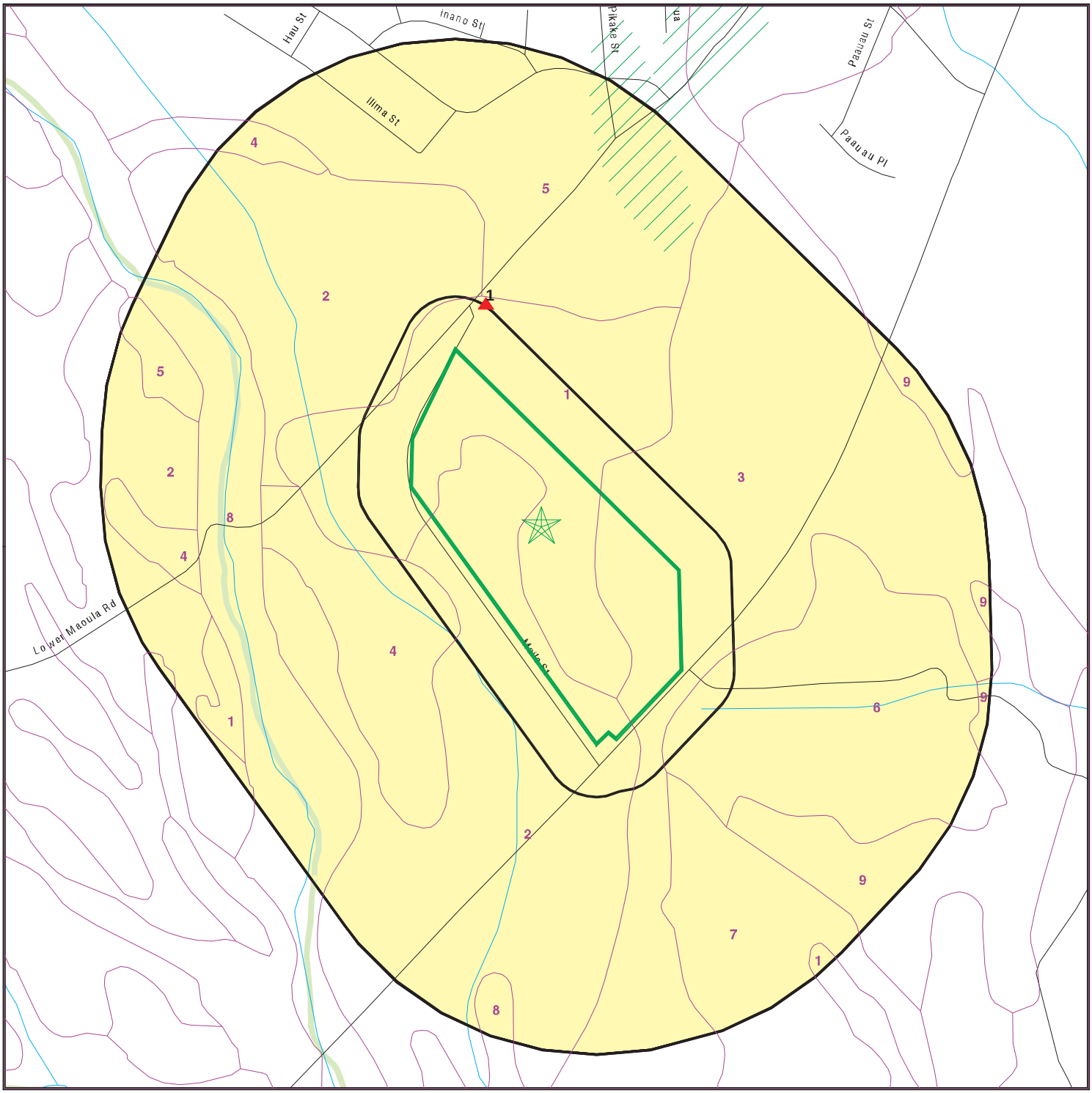
Name	Address	Dist/Dir	Map ID	Page
KAU SUGAR MILL	NUMBER ONE MILL RD 96-3207 MAILE ST	<1/10 NNW	▲ 1	15

UST: State and tribal registered storage tank lists
LUST: State and tribal leaking storage tank lists

HISTORICAL USE RECORDS

Name	Address	Dist/Dir	Map ID	Page
Not Reported				

PRIMARY MAP - 4931603.6S



0 300 1/3 1/2 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- SSURGO Soil

SITE NAME:	Pahala WWTP	CLIENT:	Brown & Caldwell
ADDRESS:	Hawaii Belt Road Pahala HI 96777	CONTACT:	Caitlin Shannon
LAT/LONG:	19.192989 / 155.478283	INQUIRY #:	4931603.6s
		DATE:	May 09, 2017 3:18 pm

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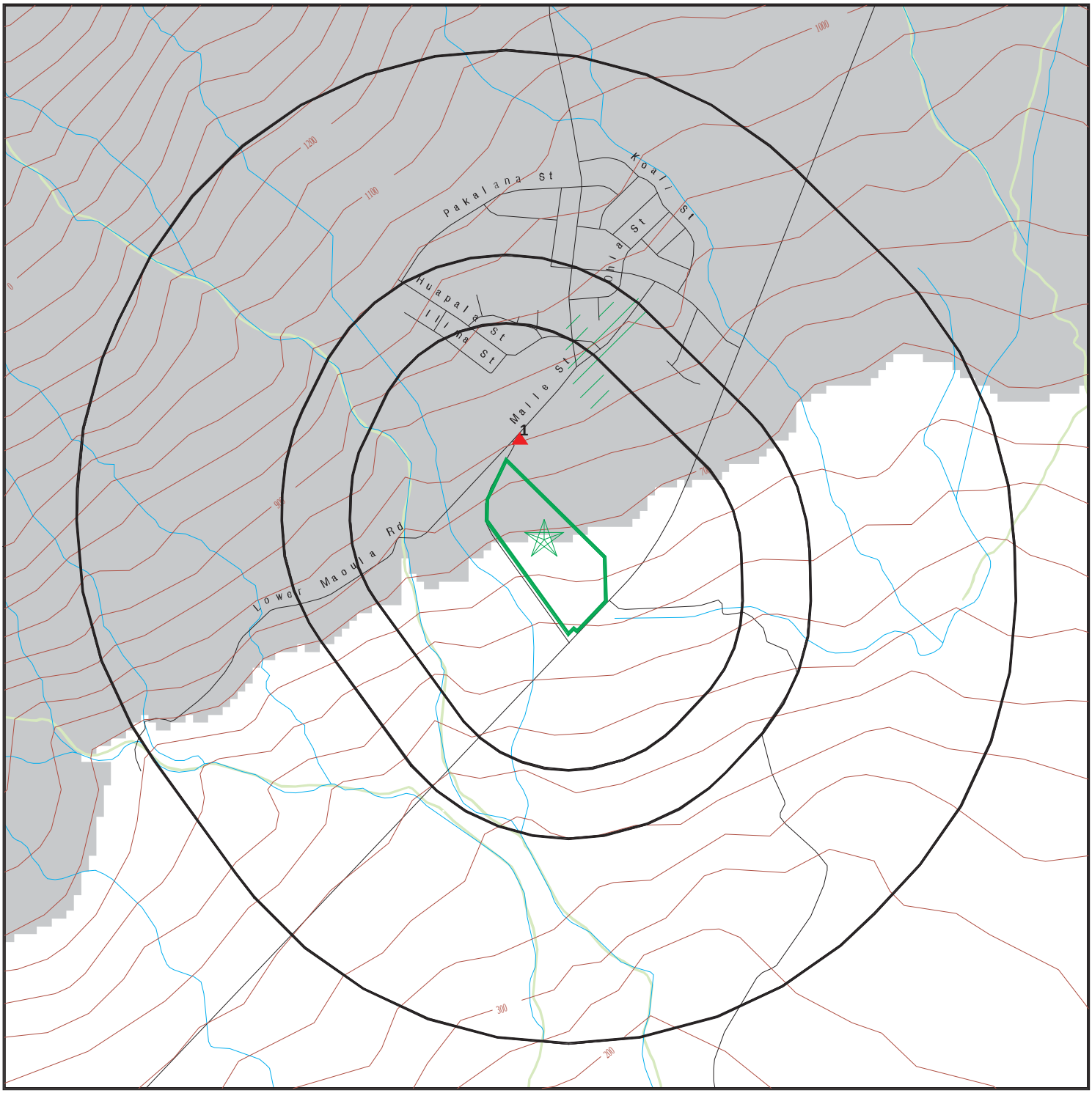
SECONDARY MAP - 4931603.6S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/3 1/2 1 Miles

Indian Reservations BIA

Contour Lines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

Upgradient Area

SITE NAME: Pahala WWTP ADDRESS: Hawaii Belt Road Pahala HI 96777 LAT/LONG: 19.192989 / 155.478283	CLIENT: Brown & Caldwell CONTACT: Caitlin Shannon INQUIRY #: 4931603.6s DATE: May 09, 2017 3:16 pm

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LEGEND

FACILITY NAME **FACILITY ADDRESS, CITY, ST, ZIP**			EDR SITE ID NUMBER
▼ MAP ID#	Direction Distance Range Relative Elevation	(Distance feet / miles) Feet Above Sea Level	ASTM 2600 Record Sources found in this report. Each database searched has been assigned to one or more categories. For detailed information about categorization, see the section of the report Records Searched and Currency.

Worksheet:

Comments:
Comments may be added on the online Vapor Encroachment Worksheet.

DATABASE ACRONYM: Applicable categories (A hoverbox with database description).

KAU SUGAR MILL NUMBER ONE MILL RD 96-3207 MAILE ST, PAHALA, HI, 96777			U003402991
▲ 1	NNW <1/10	(302 ft. / 0.057 mi.)	State and tribal leaking storage tank lists State and tribal registered storage tank lists
	110 ft. Higher Elevation	801 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist
Conditions:

Not Applicable: YES
Groundwater Flow Gradient:

Upgradient or Indeterminate: YES

Hydrogeologically: YES

UST: State and tribal registered storage tank lists

Facility ID:	9-603443
Owner:	KA'U AGRIBUSINESS CO. INC.
Owner Address:	P.O. BOX 130
Owner City,St,Zip:	Pahala, 96777 96777
Latitude:	19.197461
Longitude:	-155.477864
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching
Tank ID:	R-2
Date Installed:	Not Reported
Tank Status:	**Permanently Out of Use**
Date Closed:	09/22/1998
Tank Capacity:	10000
Substance:	Diesel
Tank ID:	R-3

KAU SUGAR MILL, NUMBER ONE MILL RD 96-3207 MAILE ST, PAHALA, HI 96777 (Continued)

Date Installed:	Not Reported
Tank Status:	**Permanently Out of Use**
Date Closed:	09/22/1998
Tank Capacity:	15000
Substance:	Used Oil

LUST: State and tribal leaking storage tank lists

Facility ID:	9-603443
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	02/08/2002
Release ID:	990035
Project Officer:	Jose Ruiz

RECORD SOURCES AND CURRENCY

To maintain currency of the following databases, EDR contacts the appropriate 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.

ENVIRONMENTAL RECORDS

PRP: Potentially Responsible Parties

Standard Environmental Record Source: Other Records

Search Distance: Property

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Number of Days to Update: 3
Last EDR Contact :04/25/2017

Source: EPA
Telephone: 202-564-6023

RMP: Risk Management Plans

Standard Environmental Record Source: Other Records

Search Distance: Property

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.

Date of Government Version: 02/01/2017
Number of Days to Update: 57
Last EDR Contact :04/21/2017

Source: Environmental Protection Agency
Telephone: 202-564-8600

AIRS: List of Permitted Facilities

Standard Environmental Record Source: Other Records

Search Distance: Property

A listing of permitted facilities in the state.

Date of Government Version: 12/31/2016
Number of Days to Update: 57
Last EDR Contact :03/31/2017

Source: Department of Health
Telephone: 808-586-4200

BROWNFIELDS: Brownfields Sites

Standard Environmental Record Source: State and tribal Brownfields sites

Search Distance: 0.333 Mile

With certain legal exclusions and additions, the term `brownfield site' means 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.

Date of Government Version: 09/23/2016
Number of Days to Update: 29
Last EDR Contact :03/17/2017

Source: Department of Health
Telephone: 808-586-4249

CDL: Clandestine Drug Lab Listing

Standard Environmental Record Source: Other Records

Search Distance: Property

A listing of clandestine drug lab site locations.

Date of Government Version: 08/04/2010
Number of Days to Update: 42
Last EDR Contact :03/13/2017

Source: Department of Health
Telephone: 808-586-4249

DRYCLEANERS: Permitted Drycleaner Facility Listing
Standard Environmental Record Source: Other Records
Search Distance: 0.25 Mile

A listing of permitted drycleaner facilities in the state.

Date of Government Version: 12/31/2016
Number of Days to Update: 63
Last EDR Contact :03/31/2017

Source: Department of Health
Telephone: 808-586-4200

ENG CONTROLS: Engineering Control Sites
Standard Environmental Record Source: State and tribal institutional control / engineering control registries
Search Distance: Property

A listing of sites with engineering controls in place.

Date of Government Version: 09/23/2016
Number of Days to Update: 29
Last EDR Contact :03/17/2017

Source: Department of Health
Telephone: 404-586-4249

Financial Assurance: Financial Assurance Information Listing
Standard Environmental Record Source: Other Records
Search Distance: Property

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: 12/16/2016
Number of Days to Update: 38
Last EDR Contact :03/13/2017

Source: Department of Health
Telephone: 808-586-4226

INST CONTROL: Sites with Institutional Controls
Standard Environmental Record Source: State and tribal institutional control / engineering control registries
Search Distance: Property

Voluntary Remediation Program and Brownfields sites with institutional controls in place.

Date of Government Version: 09/23/2016
Number of Days to Update: 29
Last EDR Contact :03/17/2017

Source: Department of Health
Telephone: 808-586-4249

LUST: Leaking Underground Storage Tank Database
Standard Environmental Record Source: State and tribal leaking storage tank lists
Search Distance: 0.333 Mile

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.

RECORD SOURCES AND CURRENCY

Date of Government Version: 11/18/2016
Number of Days to Update: 19
Last EDR Contact :03/17/2017

Source: Department of Health
Telephone: 808-586-4228

SHWS: Sites List

Standard Environmental Record Source: State and tribal - equivalent CERCLIS

Search Distance: 0.333 Mile

Facilities, sites or areas in which the Office of Hazard Evaluation and Emergency Response has an interest, has investigated or may investigate under HRS 128D (includes CERCLIS sites).

Date of Government Version: 09/23/2016
Number of Days to Update: 29
Last EDR Contact :03/17/2017

Source: Department of Health
Telephone: 808-586-4249

SPILLS: Release Notifications

Standard Environmental Record Source: Other Records

Search Distance: Property

Releases of hazardous substances to the environment reported to the Office of Hazard Evaluation and Emergency Response since 1988.

Date of Government Version: 01/14/2016
Number of Days to Update: 42
Last EDR Contact :03/17/2017

Source: Department of Health
Telephone: 808-586-4249

SWF/LF: Permitted Landfills in the State of Hawaii

Standard Environmental Record Source: State and tribal landfill / solid waste disposal

Search Distance: 0.333 Mile

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: 09/17/2012
Number of Days to Update: 37
Last EDR Contact :03/31/2017

Source: Department of Health
Telephone: 808-586-4245

UIC: Underground Injection Wells Listing

Standard Environmental Record Source: Other Records

Search Distance: Property

A listing of underground injection well locations.

Date of Government Version: 02/07/2013
Number of Days to Update: 56
Last EDR Contact :02/24/2017

Source: Department of Health
Telephone: 808-586-4258

UST: Underground Storage Tank Database

Standard Environmental Record Source: State and tribal registered storage tank lists

Search Distance: Property

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: 11/18/2016
Number of Days to Update: 56

Source: Department of Health
Telephone: 808-586-4228

Last EDR Contact :03/17/2017

VCP: Voluntary Response Program Sites

Standard Environmental Record Source: State and tribal voluntary cleanup sites

Search Distance: 0.333 Mile

Sites participating in the Voluntary Response Program. The purpose of the VRP is to streamline the cleanup process in a way that will encourage prospective developers, lenders, and purchasers to voluntarily cleanup properties.

Date of Government Version: 09/23/2016
Number of Days to Update: 29
Last EDR Contact :03/17/2017

Source: Department of Health
Telephone: 808-586-4249

2020 COR ACTION: 2020 Corrective Action Program List

Standard Environmental Record Source: Other Records

Search Distance: 0.25 Mile

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
Number of Days to Update: 6
Last EDR Contact :05/05/2017

Source: Environmental Protection Agency
Telephone: 703-308-4044

ABANDONED MINES: Abandoned Mines

Standard Environmental Record Source: Other Records

Search Distance: 0.333 Mile

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/14/2017
Number of Days to Update: 21
Last EDR Contact :03/13/2017

Source: Department of Interior
Telephone: 202-208-2609

COAL ASH DOE: Steam-Electric Plant Operation Data

Standard Environmental Record Source: Other Records

Search Distance: Property

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Number of Days to Update: 76
Last EDR Contact :03/06/2017

Source: Department of Energy
Telephone: 202-586-8719

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

Standard Environmental Record Source: Other Records

Search Distance: 0.333 Mile

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: Not Reported

Last EDR Contact :03/06/2017

CONSENT: Superfund (CERCLA) Consent Decrees

Standard Environmental Record Source: Federal NPL site list

Search Distance: 0.333 Mile

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.

Date of Government Version: 09/30/2016
Number of Days to Update: 77
Last EDR Contact :03/27/2017

Source: Department of Justice, Consent Decree Library
Telephone: Varies

CORRACTS: Corrective Action Report

Standard Environmental Record Source: Federal RCRA CORRACTS facilities list

Search Distance: 0.333 Mile

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/12/2016
Number of Days to Update: 44
Last EDR Contact :05/02/2017

Source: EPA
Telephone: 800-424-9346

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

Standard Environmental Record Source: State and tribal landfill / solid waste disposal

Search Distance: 0.333 Mile

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
Number of Days to Update: 137
Last EDR Contact :04/24/2017

Source: EPA, Region 9
Telephone: 415-947-4219

DOCKET HWC: Hazardous Waste Compliance Docket Listing

Standard Environmental Record Source: Other Records

Search Distance: Property

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 06/02/2016
Number of Days to Update: 91
Last EDR Contact :02/24/2017

Source: Environmental Protection Agency
Telephone: 202-564-0527

DOT OPS: Incident and Accident Data

Standard Environmental Record Source: Other Records

Search Distance: Property

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Number of Days to Update: 42
Last EDR Contact :05/02/2017

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595

Delisted NPL: National Priority List Deletions

Standard Environmental Record Source: Other Records

Search Distance: 0.333 Mile

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: 12/05/2016 Source: EPA
Number of Days to Update: 29 Telephone: Not Reported
Last EDR Contact :04/21/2017

ECHO: Enforcement & Compliance History Information
Standard Environmental Record Source: Other Records
Search Distance: Property

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 12/11/2016 Source: Environmental Protection Agency
Number of Days to Update: 59 Telephone: 202-564-2280
Last EDR Contact :03/21/2017

EPA WATCH LIST: EPA WATCH LIST
Standard Environmental Record Source: Other Records
Search Distance: Property

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
Number of Days to Update: 88 Telephone: 617-520-3000
Last EDR Contact :05/08/2017

ERNS: Emergency Response Notification System
Standard Environmental Record Source: Federal ERNS list
Search Distance: Property

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

Date of Government Version: 09/26/2016 Source: National Response Center, United States Coast Guard
Number of Days to Update: 43 Telephone: 202-267-2180
Last EDR Contact :03/29/2017

FEMA UST: Underground Storage Tank Listing
Standard Environmental Record Source: State and tribal registered storage tank lists
Search Distance: Property

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010 Source: FEMA
Number of Days to Update: 55 Telephone: 202-646-5797
Last EDR Contact :04/11/2017

FINDS: Facility Index System/Facility Registry System
Standard Environmental Record Source: Other Records

Search Distance: Property

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: 07/15/2016 Source: EPA
Number of Days to Update: 65 Telephone: Not Reported
Last EDR Contact :04/07/2017

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Standard Environmental Record Source: Other Records

Search Distance: Property

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009 Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Number of Days to Update: 25 Telephone: 202-566-1667
Last EDR Contact :02/17/2017

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Standard Environmental Record Source: Other Records

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009 Source: EPA
Number of Days to Update: 25 Telephone: 202-566-1667
Last EDR Contact :02/17/2017

FUDS: Formerly Used Defense Sites

Standard Environmental Record Source: Other Records

Search Distance: 0.333 Mile

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
Number of Days to Update: 97 Telephone: 202-528-4285
Last EDR Contact :02/24/2017

FUELS PROGRAM: EPA Fuels Program Registered Listing

Standard Environmental Record Source: Other Records

Search Distance: Property

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: 11/21/2016 Source: EPA
Number of Days to Update: 73 Telephone: 800-385-6164
Last EDR Contact :02/22/2017

FUSRAP: Formerly Utilized Sites Remedial Action Program

Standard Environmental Record Source: Other Records

Search Distance: 0.333 Mile

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: 12/23/2016
Number of Days to Update: 52
Last EDR Contact :05/05/2017

Source: Department of Energy
Telephone: 202-586-3559

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
Standard Environmental Record Source: Other Records
Search Distance: Property

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.

Date of Government Version: 10/19/2006
Number of Days to Update: 40
Last EDR Contact :12/17/2007

Source: Environmental Protection Agency
Telephone: 202-564-2501

HMIRS: Hazardous Materials Information Reporting System
Standard Environmental Record Source: Other Records
Search Distance: Property

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/28/2016
Number of Days to Update: 37
Last EDR Contact :03/29/2017

Source: U.S. Department of Transportation
Telephone: 202-366-4555

ICIS: Integrated Compliance Information System
Standard Environmental Record Source: Other Records
Search Distance: Property

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.

Date of Government Version: 11/18/2016
Number of Days to Update: 79
Last EDR Contact :04/10/2017

Source: Environmental Protection Agency
Telephone: 202-564-2501

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
Search Distance: 0.333 Mile

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 11/14/2016
Number of Days to Update: 99
Last EDR Contact :04/28/2017

Source: EPA Region 1
Telephone: 617-918-1313

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/07/2016 Source: EPA Region 10
Number of Days to Update: 99 Telephone: 206-553-2857
Last EDR Contact :04/28/2017

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2016 Source: EPA Region 4
Number of Days to Update: 98 Telephone: 404-562-8677
Last EDR Contact :04/28/2017

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/14/2016 Source: EPA, Region 5
Number of Days to Update: 99 Telephone: 312-886-7439
Last EDR Contact :04/28/2017

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/01/2016 Source: EPA Region 6
Number of Days to Update: 99 Telephone: 214-665-6597
Last EDR Contact :04/28/2017

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/01/2016 Source: EPA Region 7
Number of Days to Update: 99 Telephone: 913-551-7003
Last EDR Contact :04/28/2017

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/17/2016 Source: EPA Region 8
Number of Days to Update: 99 Telephone: 303-312-6271
Last EDR Contact :04/28/2017

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/06/2016 Source: Environmental Protection Agency
Number of Days to Update: 99 Telephone: 415-972-3372
Last EDR Contact :04/28/2017

RECORD SOURCES AND CURRENCY

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Standard Environmental Record Source: Other Records

Search Distance: 0.333 Mile

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Number of Days to Update: 52
Last EDR Contact :05/01/2017

Source: Environmental Protection Agency
Telephone: 703-308-8245

INDIAN UST R1: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

Search Distance: Property

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 11/14/2016
Number of Days to Update: 99
Last EDR Contact :04/28/2017

Source: EPA, Region 1
Telephone: 617-918-1313

INDIAN UST R10: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/07/2016
Number of Days to Update: 99
Last EDR Contact :04/28/2017

Source: EPA Region 10
Telephone: 206-553-2857

INDIAN UST R4: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2016
Number of Days to Update: 98
Last EDR Contact :04/28/2017

Source: EPA Region 4
Telephone: 404-562-9424

INDIAN UST R5: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 01/14/2017
Number of Days to Update: 99
Last EDR Contact :04/28/2017

Source: EPA Region 5
Telephone: 312-886-6136

INDIAN UST R6: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

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: 10/01/2016
Number of Days to Update: 99

Source: EPA Region 6
Telephone: 214-665-7591

Last EDR Contact :04/28/2017

INDIAN UST R7: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

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: 09/01/2016 Source: EPA Region 7
Number of Days to Update: 99 Telephone: 913-551-7003
Last EDR Contact :04/28/2017

INDIAN UST R8: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/17/2016 Source: EPA Region 8
Number of Days to Update: 99 Telephone: 303-312-6137
Last EDR Contact :04/28/2017

INDIAN UST R9: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/06/2016 Source: EPA Region 9
Number of Days to Update: 99 Telephone: 415-972-3368
Last EDR Contact :04/28/2017

INDIAN VCP R1: Voluntary Cleanup Priority Listing

Standard Environmental Record Source: State and tribal voluntary cleanup sites

Search Distance: Property

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
Number of Days to Update: 142 Telephone: 617-918-1102
Last EDR Contact :03/27/2017

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

Standard Environmental Record Source: State and tribal voluntary cleanup sites

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
Number of Days to Update: 27 Telephone: 913-551-7365
Last EDR Contact :04/20/2009

LEAD SMELTER 1: Lead Smelter Sites

Standard Environmental Record Source: Other Records

Search Distance: Property

A listing of former lead smelter site locations.

Date of Government Version: 12/05/2016 Source: Environmental Protection Agency
Number of Days to Update: 36 Telephone: 703-603-8787

Last EDR Contact :04/21/2017

LEAD SMELTER 2: Lead Smelter Sites

Standard Environmental Record Source: Other Records

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 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
Number of Days to Update: 36
Last EDR Contact :12/02/2009

Source: American Journal of Public Health
Telephone: 703-305-6451

LIENS 2: CERCLA Lien Information

Standard Environmental Record Source: Federal CERCLIS list

Search Distance: Property

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
Number of Days to Update: 37
Last EDR Contact :04/21/2017

Source: Environmental Protection Agency
Telephone: 202-564-6023

LUCIS: Land Use Control Information System

Standard Environmental Record Source: Federal institutional controls / engineering controls registries

Search Distance: 0.333 Mile

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/28/2016
Number of Days to Update: 93
Last EDR Contact :02/13/2017

Source: Department of the Navy
Telephone: 843-820-7326

MLTS: Material Licensing Tracking System

Standard Environmental Record Source: Other Records

Search Distance: Property

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Number of Days to Update: 43
Last EDR Contact :05/08/2017

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169

NPL: National Priority List

Standard Environmental Record Source: Federal NPL site list

Search Distance: 0.333 Mile

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: 12/05/2016
Number of Days to Update: 29

Source: EPA
Telephone: Not Reported

Last EDR Contact :04/21/2017

NPL Site Boundaries

Sources:

EPA"s Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-566-0690

EPA Region 1
Telephone: 617-918-1102

EPA Region 2
Telephone: 212-637-4293

EPA Region 3
Telephone: 215-814-5418

EPA Region 4
Telephone: 404-562-8681

EPA Region 5
Telephone: 312-353-1063

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6118

EPA Region 9
Telephone: 415-947-4579

EPA Region 10
Telephone: 206-553-4479

NPL LIENS: Federal Superfund Liens

Standard Environmental Record Source: Federal NPL site list

Search Distance: Property

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
Number of Days to Update: 56
Last EDR Contact :08/15/2011

Source: EPA
Telephone: 202-564-4267

ODI: Open Dump Inventory

Standard Environmental Record Source: Other Records

Search Distance: 0.333 Mile

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
Number of Days to Update: 39
Last EDR Contact :06/09/2004

Source: Environmental Protection Agency
Telephone: 800-424-9346

PADS: PCB Activity Database System

Standard Environmental Record Source: Other Records

Search Distance: Property

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.

Date of Government Version: 01/20/2016 Source: EPA
Number of Days to Update: 127 Telephone: 202-566-0500
Last EDR Contact :04/10/2017

PCB TRANSFORMER: PCB Transformer Registration Database
Standard Environmental Record Source: Other Records
Search Distance: Property

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011 Source: Environmental Protection Agency
Number of Days to Update: 83 Telephone: 202-566-0517
Last EDR Contact :04/28/2017

Proposed NPL: Proposed National Priority List Sites
Standard Environmental Record Source: Federal NPL site list
Search Distance: 0.333 Mile

A site that has been proposed for listing on the NationalPriorities 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 therequirements for listing.

Date of Government Version: 12/05/2016 Source: EPA
Number of Days to Update: 29 Telephone: Not Reported
Last EDR Contact :04/21/2017

RAATS: RCRA Administrative Action Tracking System
Standard Environmental Record Source: Other Records
Search Distance: Property

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.

Date of Government Version: 04/17/1995 Source: EPA
Number of Days to Update: 35 Telephone: 202-564-4104
Last EDR Contact :06/02/2008

RADINFO: Radiation Information Database
Standard Environmental Record Source: Other Records
Search Distance: Property

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/04/2017 Source: Environmental Protection Agency
Number of Days to Update: 35 Telephone: 202-343-9775
Last EDR Contact :04/06/2017

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
Standard Environmental Record Source: Other Records
Search Distance: Property

RECORD SOURCES AND CURRENCY

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: 12/12/2016
Source: Environmental Protection Agency
Number of Days to Update: 44
Telephone: 703-308-8895
Last EDR Contact :05/02/2017

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

Standard Environmental Record Source: Federal RCRA generators list

Search Distance: Property

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). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/12/2016
Source: Environmental Protection Agency
Number of Days to Update: 44
Telephone: 703-308-8895
Last EDR Contact :05/02/2017

RCRA-LQG: RCRA - Large Quantity Generators

Standard Environmental Record Source: Federal RCRA generators list

Search Distance: Property

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.

Date of Government Version: 12/12/2016
Source: Environmental Protection Agency
Number of Days to Update: 44
Telephone: 703-308-8895
Last EDR Contact :05/02/2017

RCRA-SQG: RCRA - Small Quantity Generators

Standard Environmental Record Source: Federal RCRA generators list

Search Distance: Property

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). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/12/2016
Source: Environmental Protection Agency
Number of Days to Update: 44
Telephone: 703-308-8895
Last EDR Contact :05/02/2017

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

Standard Environmental Record Source: Federal RCRA TSD facilities list

Search Distance: 0.333 Mile

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.

Date of Government Version: 12/12/2016
Number of Days to Update: 44
Last EDR Contact :05/02/2017

Source: Environmental Protection Agency
Telephone: 703-308-8895

ROD: Records Of Decision

Standard Environmental Record Source: Federal NPL site list

Search Distance: 0.333 Mile

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
Number of Days to Update: 74
Last EDR Contact :03/06/2017

Source: EPA
Telephone: 703-416-0223

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

Standard Environmental Record Source: Other Records

Search Distance: 0.333 Mile

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: 01/01/2017
Number of Days to Update: 63
Last EDR Contact :02/03/2017

Source: Environmental Protection Agency
Telephone: 615-532-8599

SEMS: Superfund Enterprise Management System

Standard Environmental Record Source: Federal CERCLIS list

Search Distance: 0.333 Mile

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: 02/07/2017
Number of Days to Update: 16
Last EDR Contact :04/21/2017

Source: EPA
Telephone: 800-424-9346

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

Standard Environmental Record Source: Other Records

Search Distance: 0.333 Mile

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.

Date of Government Version: 02/07/2017 Source: EPA
Number of Days to Update: 16 Telephone: 800-424-9346
Last EDR Contact :04/25/2017

SSTS: Section 7 Tracking Systems
Standard Environmental Record Source: Other Records
Search Distance: Property

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
Number of Days to Update: 77 Telephone: 202-564-4203
Last EDR Contact :04/26/2017

TRIS: Toxic Chemical Release Inventory System
Standard Environmental Record Source: Other Records
Search Distance: Property

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
Number of Days to Update: 133 Telephone: 202-566-0250
Last EDR Contact :02/24/2017

TSCA: Toxic Substances Control Act
Standard Environmental Record Source: Other Records
Search Distance: Property

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
Number of Days to Update: 14 Telephone: 202-260-5521
Last EDR Contact :03/24/2017

UMTRA: Uranium Mill Tailings Sites
Standard Environmental Record Source: Other Records
Search Distance: 0.333 Mile

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
Number of Days to Update: 146 Telephone: 505-845-0011

Last EDR Contact :02/21/2017

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

Standard Environmental Record Source: Other Records

Search Distance: Property

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: 10/12/2016 Source: EPA

Number of Days to Update: 100 Telephone: 202-564-2496

Last EDR Contact :03/07/2017

US AIRS MINOR: Air Facility System Data

Standard Environmental Record Source: Other Records

A listing of minor source facilities.

Date of Government Version: 10/12/2016 Source: EPA

Number of Days to Update: 100 Telephone: 202-564-2496

Last EDR Contact :03/07/2017

US BROWNFIELDS: A Listing of Brownfields Sites

Standard Environmental Record Source: Other Records

Search Distance: 0.333 Mile

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.

Date of Government Version: 03/02/2017 Source: Environmental Protection Agency

Number of Days to Update: 36 Telephone: 202-566-2777

Last EDR Contact :03/02/2017

US CDL: Clandestine Drug Labs

Standard Environmental Record Source: Other Records

Search Distance: Property

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.

Date of Government Version: 09/30/2016 Source: Drug Enforcement Administration

Number of Days to Update: 67 Telephone: 202-307-1000

Last EDR Contact :02/28/2017

US ENG CONTROLS: Engineering Controls Sites List

Standard Environmental Record Source: Federal institutional controls / engineering controls registries

Search Distance: Property

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 effect human health.

Date of Government Version: 11/15/2016
Number of Days to Update: 66
Last EDR Contact :02/28/2017
Source: Environmental Protection Agency
Telephone: 703-603-0695

US FIN ASSUR: Financial Assurance Information
Standard Environmental Record Source: Other Records
Search Distance: Property

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: 10/11/2016
Number of Days to Update: 79
Last EDR Contact :02/15/2017
Source: Environmental Protection Agency
Telephone: 202-566-1917

US HIST CDL: National Clandestine Laboratory Register
Standard Environmental Record Source: Other Records
Search Distance: Property

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

Date of Government Version: 09/30/2016
Number of Days to Update: 36
Last EDR Contact :02/28/2017
Source: Drug Enforcement Administration
Telephone: 202-307-1000

US INST CONTROL: Sites with Institutional Controls
Standard Environmental Record Source: Federal institutional controls / engineering controls registries
Search Distance: Property

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.

Date of Government Version: 11/15/2016
Number of Days to Update: 66
Last EDR Contact :02/28/2017
Source: Environmental Protection Agency
Telephone: 703-603-0695

US MINES: Mines Master Index File
Standard Environmental Record Source: Other Records
Search Distance: Property

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/08/2017
Number of Days to Update: 38
Last EDR Contact :02/28/2017
Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing
Standard Environmental Record Source: Other Records

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
Number of Days to Update: 49 Telephone: 703-648-7709
Last EDR Contact :03/03/2017

US MINES 3: Active Mines & Mineral Plants Database Listing

Standard Environmental Record Source: Other Records

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
Number of Days to Update: 97 Telephone: 703-648-7709
Last EDR Contact :03/03/2017

DOD: Department of Defense Sites

Standard Environmental Record Source: Other Records

Search Distance: 0.333 Mile

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
Number of Days to Update: 62 Telephone: 888-275-8747
Last EDR Contact :04/14/2017

INDIAN RESERV: Indian Reservations

Standard Environmental Record Source: Other Records

Search Distance: Property

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: 12/31/2014 Source: USGS
Number of Days to Update: N/A Telephone: 202-208-3710
Last EDR Contact :04/14/2017

PWS: Public Water System Data

Standard Environmental Record Source: Other Records

Search Distance: Property

This Safe Drinking Water Information System (SDWIS) file contains public water systems name and address, population served and the primary source of water

Date of Government Version: 12/17/2013 Source: EPA
Number of Days to Update: 279 Telephone: Not Reported
Last EDR Contact :02/27/2017

RECORD SOURCES AND CURRENCY

HISTORICAL USE RECORDS

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

Standard Environmental Record Source: Exclusive Recovered Govt. Archives

Search Distance: Property

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: Not Reported
Source: Department of Health
Number of Days to Update: 191
Telephone: Not Reported
Last EDR Contact :06/01/2012

RGA LF: Recovered Government Archive Solid Waste Facilities List

Standard Environmental Record Source: Exclusive Recovered Govt. Archives

Search Distance: Property

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 Department of Health in Hawaii.

Date of Government Version: Not Reported
Source: Department of Health
Number of Days to Update: 200
Telephone: Not Reported
Last EDR Contact :06/01/2012

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

Standard Environmental Record Source: Exclusive Recovered Govt. Archives

Search Distance: Property

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 Department of Health in Hawaii.

Date of Government Version: Not Reported
Source: Department of Health
Number of Days to Update: 186
Telephone: Not Reported
Last EDR Contact :06/01/2012

EDR Hist Auto: EDR Exclusive Historic Gas Stations

Standard Environmental Record Source: Historical Gas Stations

Search Distance: 0.125 Mile

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: 02/20/2007
Source: EDR, Inc.
Number of Days to Update: 42
Telephone: Not Reported
Last EDR Contact :02/21/2007

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

Standard Environmental Record Source: Historical Dry Cleaners

Search Distance: 0.125 Mile

RECORD SOURCES AND CURRENCY

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: 02/20/2007
Number of Days to Update: 42
Last EDR Contact :02/21/2007

Source: EDR, Inc.
Telephone: Not Reported

EDR MGP: EDR Proprietary Manufactured Gas Plants

Standard Environmental Record Source: Former Manufactured Gas Plants

Search Distance: 0.333 Mile

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: 08/28/2009
Number of Days to Update: 55
Last EDR Contact :11/30/2012

Source: EDR, Inc.
Telephone: Not Reported

RECORD SOURCES AND CURRENCY

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.

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

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

HYDROGEOLOGIC INFORMATION

AQUIFLOW® 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

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services. 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 Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, 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.

STREET AND ADDRESS INFORMATION

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Appendix F: User Questionnaire

Brown AND Caldwell

ENVIRONMENTAL SITE ASSESSMENT USER QUESTIONNAIRE

Site/Project Name: Pahala WWTP

Location: District of Ka'u, County of Hawai'i, Hawai'i

In Order to qualify for one of the *Landowner Liability Protections (LLPs)*[1] offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *"Brownfields Amendments"*),[2] the *user* must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that *"all appropriate inquiry"* is not complete. Please explain your answers if appropriate.

1. **Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).**

   Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law?

   Yes _____ No ✓

2. **Activity and land use limitations (AULs) that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).**

   Are you aware of AULs, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

   Yes _____ No ✓

3. **Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).**

   As the *user* of this *Environmental Site Assessment (ESA)* do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an adjoining *property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?

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[1] *Landowner Liability Protections, or LLPs,* is the term used to describe the three types of potential defenses to Superfund liability in EPA's *Interim Guidance Regarding Criteria Landowners Must Meet in Order to Qualify for Bona Fide Prospective Purchaser, Contiguous Property Owner, or Innocent Landowner Limitations on CERCLA Liability ("Common Elements"* Guide) issued on March 6, 2003.

[2] P.L. 107-118.

Brown AND Caldwell

ENVIRONMENTAL SITE ASSESSMENT
USER QUESTIONNAIRE

Yes _____ No ✓

4. **Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29).**

   Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*?

   Yes ✓ No _____

   If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?

   Yes _____ No _____ NA ✓

5. **Commonly known or *reasonably ascertainable* information about the *property* (40 CFR 312.30).**

   Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases?

   Yes _____ No ✓

   For example, as *user*,

   (a) Do you know the past uses of the *property*? Yes ✓ No _____

   (b) Do you know of specific chemicals that are present or once were present at the *property*? Yes _____ No ✓

   (c) Do you know of spills or other chemical releases that have taken place at the *property*? Yes _____ No ✓

   (d) Do you know of any environmental cleanups that have taken place at the *property*? Yes _____ No ✓

Brown AND Caldwell

ENVIRONMENTAL SITE ASSESSMENT
USER QUESTIONNAIRE

6. **The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).**

   As the *user* of the *ESA* based on your knowledge and experience related to the *property* are there any obvious indicators that point to the presence or likely presence of contamination at the *property*?

   Yes _____ No ✓

   To enable Brown and Caldwell to complete your project, please also respond to the following items.

   (a) The reason why the Phase I is required:

   Standard procedure for purchase of new properties.

   (b) The type of *property* (e.g., industrial, commercial, vacant, agricultural, residential, etc.) and type of *property* transaction, for example, sale, purchase, exchange, etc.:

   Agricultural

   (c) The complete and correct address for the *property*, including county (a map or other documentation showing *property* location and boundaries is helpful):

   TAX MAP KEY (3) 9-6-002:018, County of Hawaii, State of Hawaii

   (d) The scope of services desired for the Phase I (including whether any parties to the *property* transaction may have a required standard scope of services or whether any considerations beyond the requirements of Practice E 1527 are to be considered):

   Standard. Refer Contract c.006231

   (e) Identification of all parties who will rely on the Phase I *report*:

   County of Hawaii

   (f) Identification of the site contact and how the contact can be reached:

   Bonnie Self, Director of Special Projects, Royal Hawaiian Orchards, 808-990-6464, bself@rhomac.com

ENVIRONMENTAL SITE ASSESSMENT
USER QUESTIONNAIRE

(g) Any special terms and conditions which must be agreed upon by the *environmental professional*:

No

(h) Any other knowledge or experience with the *property* that may be pertinent to the *environmental professional* (for example, copies of any available prior *environmental site assessment reports*, documents, correspondence, etc., concerning the *property* and its environmental conditions. These include, but are not necessarily limited to:

- ESA *reports,*
- Environment compliance audit *reports,*
- Environmental permits (for example, solid waste disposal permits, *hazardous waste* disposal permits, *wastewater* permits, NPDES permits, *underground injection* permits),
- Registrations for underground and above-ground storage tanks,
- Registrations for *underground injection* systems,
- *Material safety data sheets,*
- Community right-to-know plan,
- Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; etc.,
- *Reports* regarding hydrogeologic conditions on the *property* or surrounding area,
- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the *property* or relating to *environmental liens* encumbering the *property*,
- *Hazardous waste* generator notices or *reports,*
- Geotechnical studies,
- Risk assessments, and
- Recorded AULs.

No

(i) *Proceedings Involving the Property* – whether the User knows of:

(a) Any pending, threatened, or past litigation relevant to *hazardous substances* or *petroleum products* in, on, or from the *property*;

Yes _____ No ✓

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ENVIRONMENTAL SITE ASSESSMENT
USER QUESTIONNAIRE

(b) Any pending, threatened, or past administrative proceedings relevant to *hazardous substances* or *petroleum products* in, on, or from the *property*;

Yes _____ No ✓

(c) Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to *hazardous substances* or *petroleum products*;

Yes _____ No ✓

Please explain any "Yes" answers below.

Completed by:

Signature

Printed Name William A. Kucharski

Organization Director, Department of Environmental Management

Date 7/20/17

Please return this questionnaire to:

Caitlin Shannon
cshannon@brwncald.com

Brown and Caldwell
Fax – 615-256-8332
Phone – 615-250-1240

Appendix G: Qualifications of Environmental Professionals

Caitlin Shannon

Experience Summary

Caitlin Shannon is a multi-skilled professional scientist with two years experience. Her responsibilities at BC include regulatory compliance research, technical report preparation for private sector clients, regulatory site investigations, assisting with report writing and preparation, health and safety plan preparation.

Assignment

Private Sector Enterprise

Education

B.S. Geosciences, Middle Tennessee State University 2013

Experience

2 years

Joined Firm

2015

Relevant Expertise

- *Air Quality Permitting, Reporting, and Compliance*
- *Phase I Environmental Site Assessments*
- *Environmental Due Diligence*
- *Regulatory Compliance*
- *Regulatory Site Investigations*
- *Surface water Sampling*
- *Soil Sampling*
- *Underground Storage Tank Construction and Permitting Requirements*
- *Petrology field experience-Cascade Range*

Representative Compliance Projects

New Facility/Remodel/Logistics Regulatory Compliance and Permitting, Confidential Client, Nationwide

Permit Writer. Permit research and writing for a large nationwide retail client. The program was established to provide operations support to a nationwide retailer for their New Store, Store Remodel, Distribution Center, and Fueling Station programs in a 17 State region across the US. Permits researched and applied for were for all operations that require a local, State and federal environmental permit, registration, notification or inspection. Site walk-throughs of new and remodeled stores and distribution centers were completed to ensure environmental compliance. This large nationwide program has permitted over 2,000 locations over the past four years. [2015]

Phase I ESAs, DR Horton, Nationwide

Environmental Report Writer and Field Inspector. Completing Phase I ESAs by following *all appropriate inquiries* (AAI). Responsibilities include project coordination, technical report writing, historical and physical setting research, field investigations, review of prior assessments, and regulatory database analysis and reporting.

Regulatory Compliance and Permitting; Hubbell, Inc., Leeds, Alabama

Permit Writer. Completing air permits for existing sources and performing emissions inventory site visits to permit new sources as well as coordinating in revision of the facility's SPCC Plan and SWPPP. Responsibilities included technical report writing; regulatory research, compiling emissions calculation spreadsheets, and familiarity with environmental laws and policies.

Research and Field Studies

Middle Tennessee State University, Murfreesboro, Tennessee

Undergraduate Teaching Assistant. Assisting professors in assembling lab exercises and mineral identification in Honors Introduction to Earth Science and Mineralogy. [2012-2013]

Middle Tennessee State University, Murfreesboro, Tennessee

Undergraduate Laboratory Assistant. Laboratory research consisting of preparation of solid and liquid samples for geochemical analysis (X-Ray Fluorescence and Inductively Coupled Plasma Mass Spectrometry). [2008-2012]

Middle Tennessee State University, Murfreesboro, Tennessee

Undergraduate Research Assistant. Field research consisting of surface water and sediment sampling; and measurement and recording of sample properties such as pH, temperature, and turbidity. [2010]

Field work consisting of analysis of distribution of coal ash in surface waters and streams surrounding Tennessee Valley Authority coal-fired power plants. [2009]

Field work consisting of petrological analysis of volcanic rocks in the Central and Northern Cascade Range [2008-2009]

Memberships

1. Geological Society of America; Environmental and Engineering Geology Division
2. American Geophysical Union
3. Sigma Gamma Epsilon (National Earth Science Honor Society); Eta Sigma Chapter

Publications

Wylie, M., Pickering, J., Jones, M., Crombie, S., Shannon, C., and Cribb, W., 2009. Geochemical investigation of potential toxic metal releases from TVA coal ash surface impoundments into nearby river water and sediments. Geological Society of America Abstracts with Programs, Vol. 41 No. 7.Numbered publication list continues.

Pickering, J., Wylie, M., Jones, M., Crombie, S., Shannon, C., and Cribb, W., 2009. Geochemical investigation of potential toxic metal releases from TVA coal ash surface impoundments into nearby river water and sediments; MTSU StepMT Research Day.

Jones, M., Miller, W., Pickering, J., Shannon, C., Crombie, S., and Cribb, W., 2010. Geochemical investigation of potential toxic metal releases from TVA coal ash surface impoundments into nearby river waters and sediments. Journal of the Tennessee Academy of Sciences, Vol. 85 No. 1.

Project Manager
Senior Scientist

Julie R. Norrell, REM

Experience Summary

Julie Norrell has 19 years of experience in environmental project management and consulting. She has a diverse background in environmental planning, program and project management that includes environmental management systems, regulatory compliance, Phase I site assessments, hazardous material response, and permitting. Ms. Norrell has a broad range of technical expertise which has served clients in helping manage portfolios of environmentally impaired properties.

Assignment

Private Sector Enterprise

Education

M.S. Environmental Management, Samford University, 2001

B.S. Biology, Auburn University Montgomery, 1997

Registration

Registered Environmental Manager, since 2004

Experience

19 years

Joined Firm

2012

Relevant Expertise

- *Regulatory Compliance and Permitting*
- *Environmental Management Systems*
- *Environmental Site Assessments and Site Investigations*
- *NEPA Investigations*

New Facility Regulatory Compliance and Permitting, Confidential Client, Nationwide

Project Manager/Monitoring Manager/Senior Technical Lead. Manages a nationwide team of compliance specialists to conduct permit reviews for a large nationwide retail client. The program was established to provide operations support to a nationwide retailer for their New Store program in a 17 State region across the US. Permits researched and applied for were for all operations impacted by local, state, and federal environmental regulations.

Phase I ESAs, D.R. Horton, Nationwide

Senior Technical Lead. Provides project management leadership and technical expertise for Phase I environmental site assessments throughout the United States to determine potential environmental liabilities associated with property acquisitions and divestitures.

ISO 14001 EMS Implementation, US Army, Fort Rucker, Alabama

Program Manager. Developed and implemented an EMS at the Aviation Center Logistics Command. Developed and maintained ACLC's EMS standardized procedures through the updating of the EMS manual and created an EMS implementation plan in compliance with ISO standards; created and implemented procedures for the EMS to ensure that environmental issues are taken into consideration at all levels of the organization. -Conducted audits on the contractor's aviation processes to determine ISO 14001 conformance, as well as compliance in all programs, including air programs, P2 programs, water programs, aboveground storage tanks, hazardous material handling, solvent management, and hazardous waste handling. *(Individual Experience)*

Natural Gas Pipeline, Confidential Client, Baldwin County Alabama

Field Technician. Performed threatened and endangered species assessments, wetland assessments, historical assessments, and floodplain assessments for inclusion in the overall Environmental Assessment of an offshore natural gas pipeline and associated onshore facilities. *(Individual Experience)*

Phase I ESAs, Various Financial Institution Clients, Nationwide

Project Manager. Provided project management and conducted numerous Phase I environmental site assessments throughout the United States to determine potential environmental liabilities associated with property acquisitions and divestitures. *(Individual Experience)*

NEPA Investigations, American Tower and Signal One, LLC, Nationwide

Project Manager. Provided project management and conducted numerous NEPA investigations throughout the United States in conjunction with Phase I ESAs to meet documentation requirements of the national environmental

policy act for cellular tower sites. *(Individual Experience)*

NPDES Compliance Support, Various Clients, Southeastern United States

Project Manager. Submitted NPDES permits to regulatory agencies for construction stormwater projects, conducted compliance audits to maintain the permit, and implemented P2 measures to ensure permit compliance. Authored Best Management Practices (BMP) Plans for construction stormwater projects. *(Individual Experience)*

Mercury Remediation, Confidential Client, Birmingham, Alabama

Project Manager. Environmental manager responsible for the establishment, coordination, oversight, and execution of a mercury waste remediation project in a residential setting for a public utility. Conducted laboratory analysis to determine mercury content using an onsite DMA-80 instrument and a portable atomic absorption spectrometer. *(Individual Experience)*

Water System Efficiency Study, Birmingham Water Works, Birmingham, Alabama

Staff Scientist. Performed lifecycle data analysis of water system flow measurement to determine efficiency of the overall system. *(Individual Experience)*

SPCC Plans and Training, BellSouth Mobility, Mobile, Alabama

Project Manager. Developed SPCC plan for mobile data center and conducted annual training per SPCC guidelines. *(Individual Experience)*

Memberships

1. Registered Environmental Manager, National Registry of Environmental Professionals, since 2004
2. Women in Defense, since 2009

Publications

Demonstration/Validation for Federal Specification MMM-A-121 Hazardous Air Pollutant-Free Adhesive Replacement, Army Research Laboratory, April 2011.