REPORT OF
PHASE I
ENVIRONMENTAL SITE ASSESSMENT
U.S. HIGHWAY 301 SITE
DUVAL COUNTY AND BAKER COUNTY, FLORIDA
E&A PROJECT NO. 05JX-7195

Prepared for:

MHK of Volusia County, Inc.
2379 Beville Road
Daytona Beach, Florida 32119

Prepared by:

Ellis & Associates, Inc.
7064 Davis Creek Road
Jacksonville, Florida 32256

December 2, 2005

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

PHASE I ENVIRONMENTAL SITE ASSESSMENT

U.S. Highway 301 Site
Duval County & Baker County, Florida
E&A Project No. 05JX-7195

1.0 EXECUTIVE SUMMARY

During October and November 2005, Ellis & Associates, Inc. (E&A) performed a Phase I Environmental Site Assessment (ESA) of the U.S. Highway 301 & Interstate 10 Site, located in Duval County and Baker County, Florida, herein referred to as the "property." This assessment included a property reconnaissance visit, a review of environmental databases and related agency information for the property and surrounding properties, a review of aerial photographs, historical records, published geologic information, and interviews. This information was used to evaluate the property for potential impacts from hazardous substances or petroleum products due to the current or past use of the property and surrounding properties.

The property is located along the west side of U.S. Highway 301 from approximately 5,700 feet south of Interstate 10 to the intersection of U.S. Highway 301 and State Road 228, in, Duval County and Baker County, Florida, within Sections 3-10, 16-21, and 28-30, of Township 3 South, Range 23 East; and Sections 11-13, and 24-25 of Township 3 South, Range 22 East. The property is located south of Baldwin, Florida and north of Maxville, Florida. The property is located on the MacClenny East Quadrangle, Baldwin Quadrangle, and Maxville Quadrangle, Florida, USGS 7.5 Minute Topographic Maps.

The property currently consists of approximately 9,000 acres of both undeveloped wooded land and silvicultural land. The property contains one, single story structure. This apparent residential building is located on the southern portion of the property is currently utilized as a hunt club office. This structure is reportedly not heated. The structure's water is provided by an on-site well, and the sewer service is provided by an on-site septic tank and drainfield system. Numerous former borrow pits were located on the eastern and northeastern portions of the property.

Numerous dirt trail roads are located on the property. U.S. Highway 301 is located adjacent the property to the east. State Road 228 is located adjacent the property to the south and southwest.

Past uses of the property and adjoining properties were determined through a review of historical aerial photographs, city directories, interviews, and other sources documented in this report.

Currently and since at least 1977, the property has been occupied by a combination of undeveloped wooded land and silvicultural land as well as an apparent residential structure on the southern portion of the property utilized as an office for the hunt club. Prior to 1968, the property appeared to be undeveloped wooded land with an apparent residential structure on the southern portion of the property since at least 1960. Prior to 1960, the property appeared to be undeveloped wooded land with an apparent residential structure on the southern portion of the property and several small structures on the east-central portion of the property which were reported to be a former turpentine camp.

Present-day adjoining properties include a power line easement followed by a combination of undeveloped wooded land and silvicultural land to the north; State Road 228 followed by a combination of undeveloped wooded land, silvicultural land, an apparent rural residential property and a construction contractor's office to the south; U.S. Highway 301 followed by a combination of undeveloped wooded land and silvicultural land to the east; and silvicultural land to the northwest and State Road 228 followed by silvicultural land to the southwest. Several outparcels off the southern, southeastern, and central-western portions of the property are developed. The outparcels off the southern and southeastern portions of the property are developed with rural residential properties. One outparcel on the west-central portion of the property is developed as the Trail Ridge Landfill along with a second outparcel in this vicinity developed as a borrow pit.

Currently and since at least 1977, the northern adjoining property has been occupied by a power line easement followed by a Florida Power and Light substation to the northeast and a combination of undeveloped wooded land and silvicultural land to the north. Prior to 1977, the northern adjoining property was occupied by a power line easement followed by a combination of undeveloped wooded land and silvicultural land to the north with an apparent borrow pit area to the northeast since at least 1968, prior to which it appeared to be undeveloped wooded land since at least 1943. Currently and since at least 1977, the eastern adjoining property has been occupied by U.S. Highway 301 followed by railroad tracks and a combination of undeveloped wooded land and silvicultural land. Prior to 1977, the eastern adjoining property was occupied by U.S. Highway 301 followed by railroad tracks and undeveloped wooded land since at least 1943. Currently and since at least 1960, the southern adjoining property has been occupied by State Road 228 followed by a combination of undeveloped wooded land, silvicultural land, an apparent rural residential property, and a construction contractor's office to the south of the southeastern portion of the property. Prior to 1960, the property beyond State Road 228 appeared to be undeveloped wooded land with an apparent rural residential property since at least 1943. Currently and since at least 1943, the western adjoining property has been occupied by combination of undeveloped wooded land and silvicultural land to the west and State Road 228 followed by a combination of undeveloped wooded land and silvicultural land to the southwest.

Our investigation did not reveal evidence of on-site underground storage tanks (USTs), aboveground storage tanks (ASTs), polychlorinated biphenyls (PCBs), or environmental regulatory agency records of on-site actions or conditions that may have impacted the site.

Our investigation did reveal, however, evidence of potential on-site impact from the following conditions:

- Potential Cattle Dipping Vat – During the site visit, a road sign was observed indicating one of the on-site trail roads was known as Dipping Vat Road. The Florida Department of Environmental Protection's (FDEP's) list of known cattle dipping vats in Duval County has a listing for "Fiftone" and "Maxville" dipping vats. No dipping vat structure was observed on the property. Members of the property's hunt club were questioned regarding the road name and stated that they thought a dipping vat was formerly located in the area of Dipping Vat Road but were not aware of the exact location. A review of aerial photographs back to 1943 did not appear to show any large scale cattle usage on the property. Based on the information obtained, it is E&A's opinion that the potential presence of a cattle dipping vat on the property is a recognized environmental condition and a moderate to high potential threat to the property.

- Shooting Range – A small shooting range was observed on the central portion of the property. A dirt berm approximately 10 feet long by 5 feet wide by 4 feet high served as the backstop for the shooting range. Shooting ranges receive bullets that are largely comprised of lead. In E&A's opinion, the presence of a shooting range on the property is a recognized environmental condition and a moderate threat to the property in the immediate vicinity of the shooting range.
- Turpentine Camp – A review of historical aerial photographs indicated the presence of several small structures on the east-central portion of the property near U.S. Highway 301 in the 1940s and 1950s. Interviews with members of the on-site hunt club indicated that this was the former location of a turpentine camp. It is not known if turpentine was merely collected from the property or if distillation activities were also associated with the former camp. It is E&A's opinion that the former turpentine camp is a recognized environmental condition and a low to moderate potential threat to the property.
- Trail Ridge – This landfill is an outparcel located in the west-central portion of the property. An area of land approximately 930 acres on the west-central portion of the property is occupied by the Trail Ridge Landfill. The landfill facility occupies the southern portion of the 930 acre area. Additionally a borrow pit associated with the landfill is located approximately 2,300 feet south of the landfill property. The landfill has been in operation since approximately 1989, and accepts various waste stream types including asbestos-containing materials, domestic waste, yard waste, and non-hazardous petroleum impacted soils. According to the information on file with the FDEP's Northeast District Office, groundwater flow direction at the facility was to the east. The most recent semi-annual groundwater monitoring report for this facility indicated groundwater exceedances for iron. This facility is also listed in the regulatory database report as a registered petroleum storage tank site, the details of which are discussed in Section 4.1.2.4. Based on the information obtained, it is E&A's opinion that the Trail Ridge Landfill is a recognized environmental condition and a low to moderate threat to the property based on its operation as a landfill.
- Florida Steel Corporation – Florida Steel Corporation (a.k.a. Ameristeel) is listed in the regulatory database report as a State CERCLIS Site. The facility is located along the east side of U.S. Highway 301 near the intersection of U.S. Highway 301 and Interstate 10. The facility property extends south along the east side of U.S. Highway 301 and is approximately 1,500 feet northeast of the subject property. No additional information was provided for this facility in the regulatory database report. The case manager for this facility with the Florida Department of Environmental Protection's (FDEP's) Waste Cleanup Division, Mr. Rick Rachal, reported that he thought that the contamination issues for this facility were localized to the facility vicinity, but that a file review would be required to verify this. E&A was unable to complete a review of the regulatory files for this facility prior to the issuance of this report, however; upon completion of the file review, E&A will issue an addendum to this report if the file presents any information that would change the potential for impacts to the subject property. Based on this facility's distance from the property, it is E&A's opinion that this facility is a low potential threat to the property.
- Emergency Responses – Two emergency response incidents were listed in the vicinity of the property in the regulatory database report. Both listings involved truck accidents. In 1998, a truck crash off of U.S. Highway 301 was listed in which the truck's fuel tank ruptured. In 1994, a truck overturned at the Trail Ridge Landfill

facility and spilled fuel and hydraulic fluid. Due to the historic listings, the FDEP files for these incidents had been archived and were unable to be obtained for review. Based on the time elapsed since these incidents, and likely limited quantity released, in E&A's opinion these listings are a low potential threat to the property.

- Baldwin Substation – This Florida Power and Light (FPL) Substation is listed as a small quantity generator based on the operation of transformers and the use of transformer fluid which can contain PCBs. The substation has been located on the north side of the easement running along the northern property boundary approximately 150 feet from the property since the 1970s. According to personnel with the Florida Department of Environmental Protection (FDEP), Northeast District Office, there is no file for this facility, and it appears that FPL registered the substation as a small quantity generator, but never activated the registration. Based on this facility's distance from the property and the type of material potentially generated, along with its generally low migration potential, in E&A's opinion, this facility is a low potential threat to the property.

Based on these findings, in E&A's opinion, if a higher degree of confidence is required to discount the conditions revealed by this investigation, then additional assessment would be warranted.

2.0 INTRODUCTION

2.1 Purpose

On October 10, 2005 E&A was authorized by Ms. Cynthia C. Jones of MHK of Volusia County, Inc., to conduct a Phase I Environmental Site Assessment of the U.S. Highway 301 and Interstate 10 site, the property. The property is currently owned by RMK Timberland Group and is a combination of undeveloped wooded land and silvicultural land.

The purpose of this assessment was to identify, to the extent feasible pursuant to the processes prescribed herein, recognized environmental conditions in connection with the property. Recognized environmental conditions are the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum products into structures on the property or in the ground, groundwater, or surface waters of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies. This ESA was completed to meet the requirements of ASTM E-1527, and the scope of work identified in E&A Proposal No. 05JX-0833, dated October 6, 2005.

2.2 Limitations and Exceptions of Assessment

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This statement is in lieu of all other statements either expressed or implied. This company is not responsible for the independent conclusions, opinions, or recommendations made by others based on the records review, site observations, and interviews presented in this report.

It should be noted that all surficial environmental assessments are inherently limited in the sense that conclusions are drawn and recommendations developed from information obtained from limited research and site evaluation. For these types of evaluations, it is often necessary to use information prepared by others and E&A cannot be responsible for the accuracy of such information. Additionally, the passage of time may result in a change in the environmental characteristics of the site and surrounding properties. This report does not warrant against future operations or conditions, nor does this warrant operations or conditions present of a type or at a location not investigated. This report is not a regulatory compliance audit and is not intended to satisfy the requirements of any state, federal, or local real estate transfer laws.

In accordance with the specified scope of work, no screening or sampling for the possible presence of asbestos containing materials (ACMs), radon, or lead-based paints was included within the scope of services for this evaluation. Likewise, the scope of work for this project did not include investigation for the presence of threatened or endangered species, critical habitats, or of wetland species or conditions.

Subsurface conditions were not field investigated, as this was outside the scope of this study, and may differ from the conditions implied by the surficial observations. This study is not intended to quantify or otherwise determine if any soil contamination, waste emplacement, or groundwater contamination exists. These data are accessible only by subsurface material and

groundwater sampling through the completion of soil borings and the installation of monitoring wells with laboratory analysis.

E&A reviewed past ownership of the project site in an attempt to determine past site usage. E&A is not a professional title insurance firm and makes no guarantee, explicit or implied, that the listing that was reviewed represented a comprehensive delineation of past site ownership or tenancy for legal purposes.

E&A does not warrant the correctness, completeness, currentness, merchantability, or fitness of any information related to records review provided in this report. Such information is not the product of an independent review conducted by E&A, but is only publicly available environmental information maintained by federal, state, and local government agencies. Additionally, only information that was practically reviewable was reviewed for this report. Listings in publicly available records that do not have adequate address information to be located geographically are not generally considered to be practically reviewable.

It must be noted that no investigation, not matter how thorough, can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. This assessment has been based upon a review of prior site history and observable conditions. Although the results of this study suggest that there is a moderate potential that hazardous substances or petroleum products exist in soil or groundwater at the site, existing hazardous substances or petroleum products and contaminants can escape detection using these methods. Therefore, if a higher level of confidence is required than can be defined by the Phase I ESA scope of work, then additional evaluation would be required.

2.3 Limiting Conditions and Methodology Used

In accordance with customary practice, E&A performed a walk-through observation of the site, noted use of adjacent properties, and conducted a search of readily available historical and regulatory records. This ESA did not include a radon survey, asbestos survey, soil/ groundwater analysis, wetlands delineation, potential biological concerns (flora or fauna), lead paint survey, mold inspection, or chain-of-title report. More specifically, the scope of work included the following items:

Site and Adjacent Property Observations

Visual observations of the site and surrounding properties were made to identify potential sources or indications of recognized environmental conditions, such as underground storage tanks (USTs), aboveground storage tanks (ASTs), potential sources of polychlorinated biphenyls (PCBs), containers of petroleum products or hazardous substances, and areas with surface stains or distressed vegetation. The property was inspected by driving along all accessible trail roads and property boundaries. Various points along the trail roads and observed footpaths were chosen for walkthrough observation of portions of the property. These points were chosen to access portions of the property not accessible by vehicle. Outparcel areas were inspected from the outparcel boundaries and were not entered. Visual observation of the property was limited by the presence of dense vegetation and/or standing water on portions of the property. In addition, the immediately adjacent properties were observed from the site, without being entered, for possible sources of contamination or environmental impairment that could migrate to the site via surface water runoff, groundwater transport, or other pathways.

Geological Information

A review was made of available published geological and groundwater information obtained from the Soil Conservation Service, Florida Bureau of Geology Maps, and State Geological Surveys for the site vicinity.

Historical Review

Information to identify previous owners who possibly used, stored, generated, or disposed of hazardous substances or petroleum products on the site was reviewed. A review of historical aerial photographs and city directories for the site and adjacent properties was conducted to evaluate previous land use. Also, persons knowledgeable of site history were interviewed. Historical review information was only obtained back to 1943 through the review of historical aerial photographs.

Federal and State Regulatory Records Review

The following regulatory records were reviewed to identify use, generation, storage, treatment, or disposal of hazardous substances or petroleum products, or releases of such materials that may impact the site: Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), National Priorities List (NPL), Resource Conservation and Recovery Index System (RCRIS), the Emergency Response Notification System (ERNS), Florida Registered Underground Storage Tanks (USTs), Florida Leaking Underground Storage Tank reports (LUST), Florida Solid Waste Facilities/Landfill Sites (SWLF), and Florida State Hazardous Waste Sites (STATE).

2.4 User Reliance

This report is intended for the sole use of MHK of Volusia County, Inc. This report may not be used or relied upon by any other party without the written consent of E&A. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or reuse of this document or the findings, conclusions, or recommendations is at the risk of said users.

3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The property is located along the west side of U.S. Highway 301 from approximately 5,700 feet south of Interstate 10 to the intersection of U.S. Highway 301 and State Road 228, in, Duval County and Baker County, Florida, within Sections 3-10, 16-21, and 28-30, of Township 3 South, Range 23 East; and Sections 11-13, and 24-25 of Township 3 South, Range 22 East. The property is located south of Baldwin, Florida and north of Maxville, Florida. The property is located on the MacClenny East Quadrangle, Baldwin Quadrangle, and Maxville Quadrangle, Florida, USGS 7.5 Minute Topographic Maps (Figure 1).

3.2 Site and Vicinity Characteristics

The property currently consists of approximately 9,000 acres of both undeveloped wooded land and silvicultural land.

Present-day adjoining properties include a power line easement followed by a combination of undeveloped wooded land and silvicultural land to the north; State Road 228 followed by a combination of undeveloped wooded land, silvicultural land, an apparent rural residential property and a construction contractor's office to the south; U.S. Highway 301 followed by a combination of undeveloped wooded land and silvicultural land to the east; and silvicultural land to the northwest and State Road 228 followed by silvicultural land to the southwest. Several outparcels off the southern, southeastern, and central-western portions of the property are developed. The outparcels off the southern and southeastern portions of the property are developed with rural residential properties. One outparcel on the west-central portion of the property is developed as the Trail Ridge Landfill along with a second outparcel in this vicinity developed as a borrow pit.

3.3 Descriptions of Structures, Roads, and Other Improvements

The property contains one, single story structure. This apparent residential building is located on the southern portion of the property is currently utilized as a hunt club office. This structure is reportedly not heated. The structure's water is provided by an on-site well, and the sewer service is provided by an on-site septic tank and drainfield system. Numerous former borrow pits were located on the eastern and northeastern portions of the property.

Numerous dirt trail roads are located on the property. U.S. Highway 301 is located adjacent the property to the east. State Road 228 is located adjacent the property to the south and southwest.

3.4 Past Uses of the Property

Past uses of the property were determined through a review of historical aerial photographs, city directories, interviews, and other sources documented in this report.

Currently and since at least 1977, the property has been occupied by a combination of undeveloped wooded land and silvicultural land as well as an apparent residential structure on the southern portion of the property utilized as an office for the hunt club. Prior to 1968, the property appeared to be undeveloped wooded land with an apparent residential structure on the southern portion of the property since at least 1960. Prior to 1960, the property appeared to be undeveloped wooded land with an apparent residential structure on the southern portion of the property and several small structures on the east-central portion of the property which were reported to be a former turpentine camp.

3.5 Information Reported by the User Regarding Specialized Knowledge

No information regarding environmental liens was reported to E&A during our assessment.

3.6 Current and Past Uses of Adjoining Properties

Past uses of the adjoining properties were determined through a review of historical aerial photographs, city directories, interviews, and other sources documented in this report.

Currently and since at least 1977, the northern adjoining property has been occupied by a power line easement followed by a Florida Power and Light substation to the northeast and a combination of undeveloped wooded land and silvicultural land to the north. Prior to 1977, the northern adjoining property was occupied by a power line easement followed by a combination of undeveloped wooded land and silvicultural land to the north with an apparent borrow pit area to the northeast since at least 1968, prior to which it appeared to be undeveloped wooded land since at least 1943. Currently and since at least 1977, the eastern adjoining property has been occupied by U.S. Highway 301 followed by railroad tracks and a combination of undeveloped wooded land and silvicultural land. Prior to 1977, the eastern adjoining property was occupied by U.S. Highway 301 followed by railroad tracks and undeveloped wooded land since at least 1943. Currently and since at least 1960, the southern adjoining property has been occupied by State Road 228 followed by a combination of undeveloped wooded land, silvicultural land, an apparent rural residential property, and a construction contractor's office to the south of the southeastern portion of the property. Prior to 1960, the property beyond State Road 228 appeared to be undeveloped wooded land with an apparent rural residential property since at least 1943. Currently and since at least 1943, the western adjoining property has been occupied by combination of undeveloped wooded land and silvicultural land to the west and State Road 228 followed by a combination of undeveloped wooded land and silvicultural land to the southwest.

4.0 RECORDS REVIEW

4.1 Standard Environmental Record Sources

A review of databases and/or files from federal, state, and local environmental regulatory agencies was conducted to identify potential use, generation, storage, treatment, or disposal of hazardous substances and petroleum products, or release incidents of such materials that may impact the site. The federal and state database information was provided to E&A by Environmental Data Management, Inc. (EDM). Any records obtained from non-governmental sources are typically updated within 90 days of the date the government agency last made the information publicly available. Information is provided in the manner and spelling archived in the records as presented by the commercial database provider.

The records reviewed included: CERCLIS, NPL, RCRIS, ERNS, USTs, LUST, SWLF, and STATE lists. A summary of the government record report is included in Appendix C-Government Records Search Report.

4.1.1 Federal Agencies

4.1.1.1 CERCLIS List

The United States Environmental Protection Agency (USEPA) CERCLIS database listing, updated July 2005, is a list of sites compiled by EPA that the EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on the NPL list. A site's presence on the CERCLIS list does not imply federal activity at that site, nor does it indicate that hazardous conditions necessarily exist. The subject property was not listed. No facilities within a one-half mile approximate search distance of the site were listed in the CERCLIS database.

4.1.1.2 NPL Site List

The USEPA NPL database listing, updated October 2005, is a list compiled by EPA of properties with the highest priority for cleanup pursuant to EPA's Hazard Ranking System. The site was not listed. No facilities within a one-mile approximate search distance of the site were listed in the NPL database.

4.1.1.3 RCRA CORRACTS and TSD List

The USEPA RCRA Index System (RCRIS) database list was reviewed to identify corrective action (CORRACTS) facilities, updated September 2005 or non-corrective action facilities that generate, treat, store, and dispose (TSD) of hazardous waste, database updated August 2005. A facility's inclusion on this list does not necessarily indicate that hazardous conditions exist at that location. RCRIS CORRACTS facilities and RCRIS non-CORRACTS TSD facilities were searched out to a one mile radius. The site was not listed as a corrective or non-corrective action TSD facility. No facilities were listed within the approximate search distances on either database.

4.1.1.4 RCRA Generators List

The RCRA Generators List, updated August 2005, provides a listing of "large" and small" quantity generators of hazardous waste. The RCRA generators list was searched for the property and adjoining properties. The site was not listed as a RCRA generator. One adjoining facility was listed as a generating facility. Details are provided in Table 1 below.

Table 1 RCRA Generators List U.S. Highway 301 & Interstate 10 Site Jacksonville, Florida			
Facility Name	Address	Facility I.D. No.	Distance (miles), Direction from Site
Baldwin Substation	U.S. 301, 3 miles S of I-10	FLR000082685	Adj. N

- This Florida Power and Light (FPL) Substation is listed as a small quantity generator based on the operation of transformers at the facility and the use and storage of transformer fluid which can contain PCBs. The substation has been located approximately 150 feet from the property on the north side of the easement running along the northern property boundary since the 1970s. According to personnel with the Florida Department of Environmental Protection (FDEP), Northeast District Office, there is no file for this facility, and it appears that FPL registered the substation as a small quantity generator, but never activated the registration. Based on this facility's distance from the property and the type of material potentially generated, along with its generally low migration potential, in E&A's opinion, this facility is a low potential threat to the property.

4.1.2 State Agencies

4.1.2.1 State Equivalent Hazardous Sites List

Database files from the Florida Sites list, updated December 1989 and the State-Funded Action sites list, updated August 2005, were reviewed to identify sites on the Florida Department of Environmental Protection (FDEP) State equivalent CERCLIS and State equivalent NPL lists. These databases were searched out to a one mile radius. The subject property was not listed as a state-equivalent hazardous waste site. One facility was listed within the one-mile approximate search distance. Details are provided in Table 2 below.

Table 2 State Equivalent CERCLIS List U.S. Highway 301 & Interstate 10 Site Jacksonville, Florida			
Facility Name	Address	Facility I.D. No.	Distance (miles), Direction from Site
Florida Steel Corp.	Yellow Water Rd.	FLD083812537	0.96, NE

- Florida Steel Corporation – Florida Steel Corporation (a.k.a. Ameristeel) is listed in the regulatory database report as a State CERCLIS Site. The facility is located along the east side of U.S. Highway 301 near the intersection of U.S. Highway 301 and Interstate 10. The facility property extends south along the east side of U.S. Highway 301 and is approximately 1,500 feet northeast of the subject property. No additional information was provided for this facility in the regulatory database report. The case manager for this facility with the Florida Department of Environmental Protection's (FDEP's) Waste Cleanup Division, Mr. Rick Rachal, reported that he thought that the contamination issues for this facility were localized to the facility vicinity, but that a file review would be required to verify this. E&A was unable to complete a review of the regulatory files for this facility prior to the issuance of this report, however; upon completion of the file review, E&A will issue an addendum to this report if the file presents any information that would change the potential for impacts to the subject property. Based on this facility's distance from the property, it is E&A's opinion that this facility is a low potential threat to the property.

4.1.2.2 State Landfill and/or Solid Waste Disposal

The database files from the FDEP, updated October 2005, were reviewed regarding Solid Waste Facilities and Landfill Sites (SWLF). These records typically contain an inventory of active and inactive solid waste disposal facilities. The site was not listed as a SWLF facility. Two facilities within the approximate one-half mile search distance was listed in the database records. Details are provided in Table 3 below.

Table 3
State Landfill and/or Solid Waste Disposal
U.S. Highway 301 & Interstate 10 Site
Jacksonville, Florida

Facility Name	Address	Facility I.D. No.	Distance (miles), Direction from Site
Trail Ridge Landfill	U.S. 301, 1.5 miles N of Maxville	00034387	-
Pinecrest Landfill	U.S. 301, 1.5 miles N of Maxville	00033447	-

- Trail Ridge – This landfill is an outparcel located in the west-central portion of the property. An area of land approximately 930 acres on the west-central portion of the property is occupied by the Trail Ridge Landfill. The landfill facility occupies the southern portion of the 930 acre area. Additionally a borrow pit associated with the landfill is located approximately 2,300 feet south of the landfill property. The landfill has been in operation since approximately 1989, and accepts various waste stream types including asbestos-containing materials, domestic waste, yard waste, and non-hazardous petroleum impacted soils. According to the information on file with the FDEP's Northeast District Office, groundwater flow direction at the facility was to the east. The most recent semi-annual groundwater monitoring report for this facility indicated groundwater exceedances for iron. This facility is also listed in the regulatory database report as a registered petroleum storage tank site, the details of which are discussed in Section 4.1.2.4. Based on the information obtained, it is E&A's opinion that the Trail Ridge Landfill is a recognized environmental condition and a low to moderate threat to the property based on its operation as a landfill. File excerpts for this facility are provided as Appendix D.
- The Pinecrest Landfill – This is a secondary listing for the Class I portion of the Trail Ridge Landfill. According to the regulatory database report, the Pine Crest Landfill was permitted to accept non-hazardous waste from domestic, municipal, commercial, and industrial sources, however; the regulatory database report indicated that the Pinecrest portion of the landfill was never operational and that the permit was never used. Based on the lack of any landfilling operations based on the Pinecrest permit, in E&A's opinion, it is unlikely that the Pinecrest Landfill has impacted the property.

4.1.2.3 Leaking UST List

The FDEP list of leaking USTs (LUST), updated September 2005, was reviewed to identify registered storage tank facilities within approximately one-half mile of the site with reported petroleum releases. The site was not listed as a LUST facility. Five facilities within the one-half mile approximate search distance were listed in the database. Details are provided in Table 4 below.

Table 4
LUST List
U.S. Highway 301 & Interstate 10 Site
Jacksonville, Florida

Facility Name	Address	Facility I.D. No.	Distance (miles), Direction from Site
Island Food Store #336	8391 U.S. Highway 301	8732479	0.21, SE
Hatchers Auto Parts	8570 U.S. Highway 301	8507025	0.24, S
Daults Grocery	8790 U.S. Highway 301	8521378	0.51, S
Maxville Food Mart	8788 U.S. Highway 301	8521378	0.57, S
Bellsouth #31381	8455 Maxville Blvd.	8734291	0.60, SE

- Island Food Store #336 – This retail gas station facility is located on the east side of U.S. Highway 301 near the intersection of U.S. Highway 301 and State Road 228. This facility lies approximately 1,100 feet southeast of the property, and is listed as a leaking underground storage tank (LUST) site. According to the regulatory database report, the facility reported a discharge in 1988, and entered the State's Early Detection Incentive (EDI) cleanup program with a cleanup priority score of 50. According to the regulatory database report, as of 2004, remedial action is ongoing for this facility. Based on this facility's distance from the property, it is E&A's opinion that this facility is a low potential threat to the property.
- Hatchers Auto Parts – This former auto repair facility is located on the west side of U.S. Highway 301 approximately 1,300 feet south of the property. This facility is listed in the regulatory database report as a LUST site based on a discharge of gasoline reported in 1992. According to the regulatory database report, this facility was enrolled in the Petroleum Cleanup Participation Program (PCPP) with a cleanup priority score of 66. According to the regulatory database report, as of 2002, remedial action is ongoing at this facility. Based on this facility's distance from the property, it is E&A's opinion that this facility is not a likely threat to the property.
- Three Additional LUST facilities – Three additional LUST facilities were listed in the regulatory database report within the one half-mile approximate search distance. However, upon review of the Duval County Property Appraiser's website, and a drive by confirmation of these facilities' locations, these three facilities were found to be located at distances greater than one half-mile from the subject property. Based on their respective distances from the property, it is E&A's opinion that it is unlikely that these three facilities have impacted the property.

4.1.2.4 Registered Storage Tank List

The FDEP's list of registered storage tanks (RSTs), updated August 2005, was reviewed to identify facilities within an approximate one-quarter mile search distance of the site. The subject property was not listed as a RST facility. Two adjoining facility listings were in the database report. Details are provided in Table 5 below.

Table 5
Registered UST List
U.S. Highway 301 & Interstate 10 Site
Jacksonville, Florida

Facility Name	Address	Facility I.D. No.	Distance (miles), Direction from Site
Trail Ridge Landfill	5110 U.S. Highway 301	9300953	-
Trail Ridge Landfill	5110 U.S. Highway 301	9807234	-

- Trail Ridge Landfill – This landfill is an outparcel located in the west-central portion of the property. An area of land approximately 930 acres on the west-central portion of the property is occupied by the Trail Ridge Landfill. The landfill facility occupies the southern portion of the 930 acre area. Additionally a borrow pit associated with the landfill is located approximately 2,300 feet south of the landfill property. The landfill has been in operation since approximately 1989, and is registered as a petroleum storage tank site under two registration numbers for it vehicle refueling and maintenance operations. According to the information on file with the City of Jacksonville Environmental Resource Management Department (ERMD), the tanks at this facility are located on the eastern portion of the facility property. The regulatory database report indicated the presence of eight aboveground storage tanks (ASTs). Six of the tanks were installed in 1993 and are registered under the 9300953 registration number, and two of the tanks were installed later under the 9807234 registration number. There is a discrepancy between the information on file with ERMD and the information provided in the regulatory database report as to the installation date of the two newest tanks. The information on file with ERMD indicated that the tanks were installed in 2003, while the regulatory database report indicated that the tanks were installed in 2005. The six older tanks under the 9300953 registration number include: a 12,000-gallon diesel AST, a 500-gallon unleaded gasoline AST, three 550-gallon new oil ASTs, and a 550-gallon waste oil AST. The two newer tanks under the 9807234 registration number include two 10,000-gallon diesel ASTs. According to the file with ERMD, there are no open violations at this facility. Based on the information provided, in E&A's opinion, the operation of eight petroleum ASTs is a low potential threat to the property.

4.1.3 Dry Cleaners

The FDEP list of Dry Cleaners, updated September 2005, was reviewed to identify Dry Cleaning facilities within approximately one-half mile of the site. The database contains a listing of those Dry Cleaner sites (and suspected historical Dry Cleaning sites) who have registered with the FDEP for the Dry Cleaning Solvent Cleanup Program. The site was not listed as a Dry Cleaning facility. No facilities within the approximate one-half mile search distance were listed in the database report.

4.1.4 Records of Emergency Releases

The ERNS list, updated January 2005, is EPA's emergency response notification system list of reported CERCLA hazardous substance releases or spills greater than the reportable quantity. The ERNS list was searched for the subject property only. A review of the records indicated that the site was not listed on the ERNS list. Two emergency response incidents were listed in the vicinity of the property in the regulatory database report.

The two ERNS listings involved truck accidents. In 1998, a truck crash off of U.S. Highway 301 was listed in which the truck's fuel tank ruptured. In 1994, a truck overturned at the Trail Ridge Landfill facility and spilled fuel and hydraulic fluid. Due to the historic listings, the FDEP files for these incidents had been archived and were unable to be obtained for review. Based on the time elapsed since these incidents, and likely limited quantity release, in E&A's opinion these listings are a low potential threat to the property.

4.1.5 Previous Reports

No previous reports were provided to E&A for review for the subject property.

4.2 Physical Setting Sources

Based on our review of the MacClenny East, Baldwin, and Maxville, Florida, Quadrangle USGS 7.5 Minute Series Topographic Maps, the site appears to be in an area that drains generally to the east. The site has an approximate elevation of 80 to 175 feet, per the National Geodetic Vertical Datum (NGVD).

The site area's groundwater flow direction, interpreted from the MacClenny East, Baldwin, and Maxville, Florida, Topographic Maps, appears to be to the northeast on the northern portion of the property and to the southeast on the southern portion of the property. It must be noted that groundwater flow direction can be influenced by factors, such as surface topography, underground structures, tidal influences, seasonal fluctuations, soil and bedrock geology, and production wells, which were not considered in this interpretation. Therefore, actual groundwater flow direction can only be determined conclusively by using groundwater wells and collection of depth-to-water and surface elevation measurements.

Geologically, the site is located on the Coastal Plain with Quaternary surface deposits of unconsolidated shelly sand and clay. Below the surface deposits is the Miocene Hawthorn Group of interbedded sand, limestone, dolomite, and clay. Underlying the Hawthorn Group is the Eocene Ocala Limestone, which is comprised of limestones and dolomitic limestones.

A surficial aquifer or "water table aquifer" consisting of sands and clays extends from the ground surface to a depth of approximately 50 feet below land surface (bls). The water table aquifer is directly connected to the surface, and therefore, is highly susceptible to any contamination that occurs at the surface.

The intermediate aquifer or shallow rock aquifer can exist between 50 and 150 feet bls. The shallow rock aquifer is normally less susceptible to surface contamination because of a relatively impermeable clay bed which overlies the aquifer and prevents or retards any downward infiltration from the surface.

The Floridan Aquifer is located approximately 400 feet bls and is composed of approximately 1,500 feet of porous marine limestone. Little or no recharge to the Floridan Aquifer occurs in the area of the subject site. (Steward, J.W. "Areas of Natural Recharge to the Floridan Aquifer in Florida", FDNR Bureau of Geology). The Floridan Aquifer is the main source of potable water in Northeast Florida.

4.3 Historical Use Information

Past land uses were investigated to identify historical practices or conditions that may have impacted the property. This investigation included an analysis of local street directories, historical aerial photographs, topographic maps, and interviews.

4.3.1 Aerial Photographs

Copies of aerial photographs taken during 1943, 1952, 1960, 1968, 1977, 1988, 1993, 1995, 1998, 2001, and 2004 prepared for the Duval County Property Appraiser's Office and the City of Jacksonville's Engineering Office, were reviewed for aerial reconnaissance. These aerial photographs were evaluated to identify changes in land use and areas of potential environmental concern.

In the 1943 aerial photographs, the property and the surrounding properties appeared to be primarily undeveloped wooded land. U.S. Highway 301 appeared adjoining to the east, and State Road 228 appeared adjoining to the south and southwest. Several apparent rural residential properties were apparent as outparcels of the property on the eastern, southeastern,

and southern portions. Additionally the structure currently utilized as the hunt club office on the southern portion was apparent as a rural residential property. The area to the north of the structure, which is an outparcel within the property boundaries on the southern portion of the property, appeared to be maintained grassland or row crops. This area is currently occupied by the Trail Ridge borrow pit. Numerous structures were apparent on the property along U.S. Highway 301 approximately 9,000 feet south of the northeastern property corner. This area was reportedly used as a turpentine camp. It is not apparent as to the nature of the turpentine camp operations and if the area was merely for collecting turpentine from trees for shipping or if distillation activities were also associated with the area. Furthermore, this is the area indicated by hunt club members as the potential former location of a cattle dipping vat. Numerous trail roads were observed on the property with available access from U.S. Highway 301 and State Road 228.

The 1952 aerial photographs showed the property and the surrounding properties as similar to the 1943 photographs.

In the 1960 aerial photographs, the property and the surrounding properties appeared similar to previous years with the exception of several areas of apparent silviculture on the southwestern and west-central portions of the property.

In the 1968 aerial photographs, the property and surrounding properties appeared similar to the 1960 photographs. There were several cleared areas on the eastern and northeastern portions of the property that appeared to be borrow pits. Additionally, the turpentine camp area was no longer apparent, and the area appeared to be undeveloped wooded land. The property was bound to the north by an apparent power line easement, and a cleared area that appeared beyond the easement to the north of the northeastern portion.

In the 1977 aerial photographs, the property appeared to be a combination of undeveloped wooded land and silvicultural land. The borrow pit areas apparent in the 1968 photographs appeared to be depressional areas of standing water in the 1977 photographs. The previously cleared area adjoining to the northeast beyond the power line easement appeared to be developed as an electrical substation.

In the 1988 aerial photographs, the property and the surrounding properties appeared similar to the 1977 photographs.

In the 1993 aerial photographs, the property and the surrounding properties appeared similar to previous years with the exception of the development of the Trail Ridge Landfill off the west-central portion of the property.

In the 1995 aerial photographs, the property and the surrounding properties appeared similar to the 1993 photographs with the exception of a borrow pit on an outparcel off the southern portion of the property. In the area previously developed with rural residential property and either maintained grasslands or row crops on the southern portion of the property, a borrow pit had been developed that appeared to be associated with the Trail Ridge Landfill.

In the 1998, 2001, and 2004 aerial photographs, the property and the surrounding properties appeared similar to the 1995 photographs.

4.3.2 Fire Insurance Maps

No Sanborn fire insurance maps are available for this portion of Jacksonville.

4.3.3 Street Directories

Review of the City Publishing Company Cross Reference Directory (1964, 1969, 1974, 1979, 1984, 1989, 1994, 1999, and 2004 Editions) was made for State Road 228 and U.S. Highway 301 South for this report.

The property was not listed in the city directories reviewed. State Road 228 was listed in the city directories reviewed from at least 1964 until the present. Prior to 1964, there was no coverage for the Maxville area in the city directories reviewed. The listings for State Road 228 were residential listings, and appeared to be the outparcels of the southern portion of the property.

U.S. Highway 301 South was listed in the city directories reviewed from at least 1964 until the present. Prior to 1964, there was no coverage for the Maxville area in the city directories reviewed. Based on a review of the Duval County Property Appraiser's website, the subject property lies between the 1100 block and the 7800 block of U.S. Highway 301 South. The majority of the listings for the area of the subject property appeared to be residential. The three non-residential listings were Highland Baptist Church at 1409 U.S. Highway 301 South, Carson Griffis Grocery at 1431 U.S. Highway 301 South, and Trail Ridge Landfill at 5110 U.S. Highway 301 South. The listing for Trail Ridge Landfill was present in the city directories reviewed from 1994 until the present.

4.3.4 Topographic Maps

E&A reviewed the MacClenny East (1972), Baldwin (1964, Revised 1992), Maxville (1970, Photo-inspected 1984), and Fiftone (1993), Florida, Quadrangle, U.S.G.S. Topographic Maps (Figure 1). Based on the topographic maps, the northern portion of the property has remained undeveloped land (land containing no structures) since at least 1972, and the southern portion of the property has remained undeveloped land since at least 1970. The MacClenny East Quadrangle map showed several outparcels on the southern and southeastern portion of the property as developed with small apparent residential structures.

4.3.5 Chain-of-Title Report

No Chain-of-Title Report was made available for this report.

5.0 INFORMATION FROM SITE RECONNAISSANCE AND INTERVIEWS

The site visit was conducted by JC Waldron, a Project Scientist with E&A, on November 14-18 and 21, 2005. Permission to access the property was given by Mr. Sam Sparks of ICI Homes. At the time of the site visit, the weather was clear with good visibility. The site visit consisted of a walk-through of the accessible portions of the property. Records of all observations were recorded during the inspection and photographs were taken for documentation. Site photographs are exhibited in *Appendix A – Photographic Documentation*.

5.1 Hazardous Substances and Petroleum Products in Connection with Identified Uses

During the site visit, visual indications of current or past treatment, generation, or storage of hazardous wastes or materials were apparent. The site history and records review information did not reveal evidence of past generation, storage, treatment, or disposal of hazardous materials.

A small shooting range was observed on the central portion of the property. A dirt berm approximately 10 feet long by 5 feet wide by 4 feet high served as the backstop for the shooting range. Shooting ranges receive bullets that are largely comprised of lead. In E&A's opinion, the presence of a shooting range on the property is a recognized environmental condition and a moderate threat to the property.

5.2 Hazardous Substance and Petroleum Product Containers and Unidentified Substance Containers

No unidentified substance containers were observed during our site visit.

5.3 Storage Tanks

5.3.1 Underground Storage Tanks (USTs)

Visual evidence (i.e., pipes, vents, pumps, fill ports) indicating past or present USTs on-site was not apparent. In addition, regulatory records review did not indicate evidence of past or present USTs on-site.

5.3.2 Aboveground Storage Tanks (ASTs)

Visual evidence that would indicate past or present ASTs on-site, such as concrete foundations or containment walls, pedestals, or steel support structures, was not apparent during the site visit. In addition, the regulatory records review did not indicate evidence of past or present ASTs on-site.

5.4 Indications of PCBs

Equipment potentially containing PCBs, such as transformers, capacitors, or hydraulic lifts, was not observed on-site.

5.5 Indications of Solid Waste Disposal

Indications of solid waste disposal were evident during our site visit. Minor amounts of unregulated dumping were observed around the boundaries of the property. As is typical with undeveloped wooded land, small amounts of bottles, cans, and paper trash was observed near the property boundaries. Mattresses, household appliances, and sheet metal were also observed. No signs staining or stressed vegetation was observed in the areas of dumped trash.

5.6 Physical Setting Analysis

Based on review of the previously noted Physical Setting Sources (see Section 4.2), and our review of the uses of nearby properties, there is a low to moderate potential that adjacent properties have impacted the site due to physical setting.

5.7 Other Conditions of Concern

The following environmental concern indicators were investigated during our site visit.

Table 6
Environmental Concern Indicators
U.S. Highway 301 & Interstate 10 Site
Jacksonville, Florida

Indicators	Present On-site		Location	Source
	Yes	No		
Stains and/or corrosion		✓		
Drains and/or sumps		✓		
Pits, ponds, lagoons	✓		Eastern Portion	Borrow Pits
Stained soil and/or pavement		✓		
Stressed vegetation		✓		
Trash dumps	✓		Around Perimeter	Dumping
Effluent disposal systems		✓		
Unnatural odors		✓		
Sheen on water		✓		
Unnatural mounds or depressions		✓		
Spray rigs		✓		
Heavy machinery operation and/or maintenance		✓		
On-site wells		✓		
Septic system/drain field		✓		
In-ground hydraulic lifts		✓		
Cattle Dipping Vat Potential	✓		Eastern Portion	Reports of Former Dipping Vat

- Ponds – Several low areas were observed on the eastern portion of the property. A review of aerial photographs showed these areas as ponds or areas of standing water. Based on the visual observation, the low areas appeared marshy with standing water. Based on the shaped of these areas, they appear to have been man-made. Based on historical aerial photograph review, the areas of standing water were borrow pits which were likely associated with the nearby road construction.
- Trash Dumps – Minor amounts of unregulated dumping were observed around the boundaries of the property. As is typical with undeveloped wooded land, small amounts of bottles, cans, and paper trash was observed near the property boundaries. Mattresses, household appliances, and sheet metal were also observed. No signs staining or stressed vegetation was observed in the areas of dumped trash.
- Potential Cattle Dipping Vat – During the site visit, a road sign was observed indicating one of the on-site trail roads was known as Dipping Vat Road. The Florida Department of Environmental Protection's (FDEP's) list of known cattle dipping vats in Duval County has a listing for "Fiftone" and "Maxville" dipping vats. No dipping vat structure was observed on the property. Members of the property's

hunt club were questioned regarding the road name and stated that they thought a dipping vat was formerly located in the area of Dipping Vat Road but were not aware of the exact location. A review of aerial photographs back to 1943 did not appear to show any large scale cattle usage on the property. Based on the information obtained, it is E&A's opinion that the potential presence of a cattle dipping vat on the property is a recognized environmental condition and a moderate to high potential threat to the property.

5.8 Site Map/Photo Documentation

The site plan drawing is presented as Figure No. 2 and photo documentation is provided as *Appendix A-Photographic Documentation.*

5.9 Interviews

According to the client, the current owner of the property is an institutional owner who has only owned the property for two years and would not likely have any historical information pertinent to this investigation. The client reported that the previous owner was likely to have been similar to the current owner having owned the property only briefly.

E&A contacted Ms. Gracie Kennedy with the Florida Department of Environmental Protection's Emergency Response Division regarding the two emergency response incidents listed in the regulatory database report. Ms. Kennedy reported that there were no listings for the incidents in the log book, and that all files older than five years are archived.

E&A contacted Ms. Deneen Benefield with the Florida Department of Environmental Protection's Hazardous Waste Division regarding the Baldwin Substation listed in the regulatory database report as a RCRA small quantity generator. According to Ms. Benefield, the substation was registered as a generator but the registration was not active. Because there was reportedly no waste generation activity, no file was available for review for this facility.

E&A contacted Mr. Rick Rachal with the Florida Department of Environmental Protection's Waste Cleanup Division regarding the Florida Steel Corporation (a.k.a. Ameristeel) facility located to the northeast of the property. Mr. Rachal reported that he thought the contamination issues for this facility were localized to the facility but that a file review would be necessary to verify this.

During the site visit E&A encountered several members of the West Fiftone Hunt Club, which utilizes the property for hunting. Members of the property's hunt club were questioned regarding the on-site trail road named "Dipping Vat Road" and the potential presence of a former dipping vat in that vicinity. The members of the hunt club interviewed stated that they thought a dipping vat was formerly located in the area of Dipping Vat Road but were not aware of the exact location. The hunt club members interviewed also stated that a former turpentine camp was located in the vicinity of dipping vat road near U.S. Highway 301.

6.0 FINDINGS AND OPINIONS

This assessment has revealed evidence of potential on-site impact from the following conditions:

- Potential Cattle Dipping Vat – During the site visit, a road sign was observed indicating one of the on-site trail roads was known as Dipping Vat Road. The Florida Department of Environmental Protection's (FDEP's) list of known cattle dipping vats in Duval County has a listing for "Fiftone" and "Maxville" dipping vats. No dipping vat structure was observed on the property. Members of the property's hunt club were questioned regarding the road name and stated that they thought a dipping vat was formerly located in the area of Dipping Vat Road but were not aware of the exact location. A review of aerial photographs back to 1943 did not appear to show any large scale cattle usage on the property. Based on the information obtained, it is E&A's opinion that the potential presence of a cattle dipping vat on the property is a recognized environmental condition and a moderate to high potential threat to the property.
- Shooting Range – A small shooting range was observed on the central portion of the property. A dirt berm approximately 10 feet long by 5 feet wide by 4 feet high served as the backstop for the shooting range. Shooting ranges receive bullets that are largely comprised of lead. In E&A's opinion, the presence of a shooting range on the property is a recognized environmental condition and a moderate threat to the property in the immediate vicinity of the shooting range.
- Turpentine Camp – A review of historical aerial photographs indicated the presence of several small structures on the east-central portion of the property near U.S. Highway 301 in the 1940s and 1950s. Interviews with members of the on-site hunt club indicated that this was the former location of a turpentine camp. It is not known if turpentine was merely collected from the property or if distillation activities were also associated with the former camp. It is E&A's opinion that the former turpentine camp is a recognized environmental condition and a low to moderate potential threat to the property.
- Trail Ridge – This landfill is an outparcel located in the west-central portion of the property. An area of land approximately 930 acres on the west-central portion of the property is occupied by the Trail Ridge Landfill. The landfill facility occupies the southern portion of the 930 acre area. Additionally a borrow pit associated with the landfill is located approximately 2,300 feet south of the landfill property. The landfill has been in operation since approximately 1989, and accepts various waste stream types including asbestos-containing materials, domestic waste, yard waste, and non-hazardous petroleum impacted soils. According to the information on file with the FDEP's Northeast District Office, groundwater flow direction at the facility was to the east. The most recent semi-annual groundwater monitoring report for this facility indicated groundwater exceedances for iron. This facility is also listed in the regulatory database report as a registered petroleum storage tank site, the details of which are discussed in Section 4.1.2.4. Based on the information obtained, it is E&A's opinion that the Trail Ridge Landfill is a recognized environmental condition and a low to moderate threat to the property based on its operation as a landfill.
- Florida Steel Corporation – Florida Steel Corporation (a.k.a. Ameristeel) is listed in the regulatory database report as a State CERCLIS Site. The facility is located along the east side of U.S. Highway 301 near the intersection of U.S. Highway 301 and

Interstate 10. The facility property extends south along the east side of U.S. Highway 301 and is approximately 1,500 feet northeast of the subject property. No additional information was provided for this facility in the regulatory database report. The case manager for this facility with the Florida Department of Environmental Protection's (FDEP's) Waste Cleanup Division, Mr. Rick Rachal, reported that he thought that the contamination issues for this facility were localized to the facility vicinity, but that a file review would be required to verify this. E&A was unable to complete a review of the regulatory files for this facility prior to the issuance of this report, however; upon completion of the file review, E&A will issue an addendum to this report if the file presents any information that would change the potential for impacts to the subject property. Based on this facility's distance from the property, it is E&A's opinion that this facility is a low potential threat to the property.

- Emergency Responses – Two emergency response incidents were listed in the vicinity of the property in the regulatory database report. Both listings involved truck accidents. In 1998, a truck crash off of U.S. Highway 301 was listed in which the truck's fuel tank ruptured. In 1994, a truck overturned at the Trail Ridge Landfill facility and spilled fuel and hydraulic fluid. Due to the historic listings, the FDEP files for these incidents had been archived and were unable to be obtained for review. Based on the time elapsed since these incidents, and likely limited quantity released, in E&A's opinion these listings are a low potential threat to the property.
- Baldwin Substation – This Florida Power and Light (FPL) Substation is listed as a small quantity generator based on the operation of transformers and the use of transformer fluid which can contain PCBs. The substation has been located on the north side of the easement running along the northern property boundary approximately 150 feet from the property since the 1970s. According to personnel with the Florida Department of Environmental Protection (FDEP), Northeast District Office, there is no file for this facility, and it appears that FPL registered the substation as a small quantity generator, but never activated the registration. Based on this facility's distance from the property and the type of material potentially generated, along with its generally low migration potential, in E&A's opinion, this facility is a low potential threat to the property.

7.0 CONCLUSIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E-1527 of U.S. Highway 301 & Interstate 10 Site, Duval County and Baker County, Florida, the property. Any exceptions to, or deletions from, this practice are described in Sections 2.2 and 2.3 of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the property, except for the following:

- Potential Cattle Dipping Vat – During the site visit, a road sign was observed indicating one of the on-site trail roads was known as Dipping Vat Road. The Florida Department of Environmental Protection's (FDEP's) list of known cattle dipping vats in Duval County has a listing for "Fiftone" and "Maxville" dipping vats. No dipping vat structure was observed on the property. Members of the property's hunt club were questioned regarding the road name and stated that they thought a dipping vat was formerly located in the area of Dipping Vat Road but were not aware of the exact location. A review of aerial photographs back to 1943 did not appear to show any large scale cattle usage on the property. Based on the information obtained, it is E&A's opinion that the potential presence of a cattle dipping vat on the property is a recognized environmental condition and a moderate to high potential threat to the property.
- Shooting Range – A small shooting range was observed on the central portion of the property. A dirt berm approximately 10 feet long by 5 feet wide by 4 feet high served as the backstop for the shooting range. Shooting ranges receive bullets that are largely comprised of lead. In E&A's opinion, the presence of a shooting range on the property is a recognized environmental condition and a moderate threat to the property in the immediate vicinity of the shooting range.
- Turpentine Camp – A review of historical aerial photographs indicated the presence of several small structures on the east-central portion of the property near U.S. Highway 301 in the 1940s and 1950s. Interviews with members of the on-site hunt club indicated that this was the former location of a turpentine camp. It is not known if turpentine was merely collected from the property or if distillation activities were also associated with the former camp. It is E&A's opinion that the former turpentine camp is a recognized environmental condition and a low to moderate potential threat to the property.
- Trail Ridge – This landfill is an outparcel located in the west-central portion of the property. An area of land approximately 930 acres on the west-central portion of the property is occupied by the Trail Ridge Landfill. The landfill facility occupies the southern portion of the 930 acre area. Additionally a borrow pit associated with the landfill is located approximately 2,300 feet south of the landfill property. The landfill has been in operation since approximately 1989, and accepts various waste stream types including asbestos-containing materials, domestic waste, yard waste, and non-hazardous petroleum impacted soils. According to the information on file with the FDEP's Northeast District Office, groundwater flow direction at the facility was to the east. The most recent semi-annual groundwater monitoring report for this facility indicated groundwater exceedances for iron. This facility is also listed in the regulatory database report as a registered petroleum storage tank site, the details of which are discussed in Section 4.1.2.4. Based on the information obtained, it is

E&A's opinion that the Trail Ridge Landfill is a recognized environmental condition and a low to moderate threat to the property based on its operation as a landfill.

Based on these findings, in E&A's opinion, if a higher degree of confidence is required to discount the conditions revealed by this investigation, then additional assessment would be warranted.

8.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

JC Waldron, CFEA, REPA
Project Scientist

Eric B. Fuller, CFEA, REPA
Senior Project Scientist

9.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

NAME & TITLE	Eric B. Fuller, CFEA, REPA Senior Project Scientist
TECHNICAL ROLE	Project Manager
YEARS OF EXPERIENCE	10
EDUCATION	BS, Biological Sciences, Florida State University, 1993
PROFESSIONAL REGISTRATION	40-Hour Health & Safety Training (29-CFR 1910.120) updated yearly Certified Florida Environmental Assessor (CFEA #258) Registered Environmental Property Assessor (REPA #6101)
QUALIFICATIONS	Mr. Fuller's primary duties at Ellis & Associates, Inc. include conducting Contamination Assessments/Reports; coordination and senior review of Phase I Environmental Site Assessments (ESAs); Phase II Environmental Site Assessments; petroleum storage tank closure assessments; source removal investigations; and various other activities surrounding the assessment and remediation of contaminated properties. Mr. Fuller is experienced in soil and groundwater collection techniques, monitoring well installation, historical research investigations, and remediation activities. His experience includes working with city, county, and state regulatory personnel in order to provide beneficial solutions to clients' problems. Mr. Fuller has additional experience in wetland delineation, threatened species surveys, mitigation monitoring, tree surveys, archeological surveys, and aquatic vegetation control. Mr. Fuller's past field experiences have primarily been throughout Florida and southeastern Georgia.
REPRESENTATIVE PROJECT EXPERIENCE	▪ **Phase I ESAs** – *Coordinator and Senior Reviewer* for Phase I ESAs in accordance with ASTM standards. Mr. Fuller's duties include project setup, coordination, quality control, and final review of Phase I ESAs. *Senior Reviewer and Project Manager* for over 300 Phase I ESAs in accordance with ASTM standards of various properties ranging in size from less than .5 acre to over 500 acres. These projects have included undeveloped properties, silvicultural land, automobile dealerships, automobile repair facilities, industrial/manufacturing facilities, power supply operation facilities, shopping centers, hotels, office complexes, golf courses, warehouses, cellular communication sites, churches, and residential communities. Duties included site inspection, regulatory database review, historical aerial photograph review, property and occupant ownership interviews, Sanborn Fire Insurance Map review, historical directory and building plan review, regulatory file review, regulatory agency contact, and report preparation. ▪ **Phase II Environmental Site Assessments** – *Project Manager* for numerous Phase II Environmental Site Assessments. Duties included conducting field vapor screening of soils, collecting soil samples for laboratory analysis, installing, surveying, and sampling temporary and permanent monitoring wells; data interpretation; and report preparation for these projects. For Phase II Environmental Assessments that have detected contamination, Mr. Fuller has negotiated remediation solutions, engineering controls, and institutional controls with city and state regulatory agencies for the benefit of our clients. ▪ **Test Pit Exploration** – *Project Manager* for test pit exploration of developed and undeveloped properties. Duties included the supervision of backhoe operators, collection of soil and groundwater samples, determination of suitability and non-suitability of soil, determination of debris content, and report preparation. ▪ **Site Assessment Reports** – *Project Manager* for Site Assessment Reports conducted in accordance with Chapter 62-770, F.A.C. Project sites have included assessments for former service station facilities, industrial manufacturing facilities, engine repair facilities, and agricultural operations. Duties have included conducting and supervising sampling activities through the use of rotary drill rigs, direct push technology, and backhoe test pit exploration.

REPRESENTATIVE PROJECT EXPERIENCE (continued)

- **Contamination Remediation** – *Project Manager* for remediation on former gas station facilities, engine repair facilities, PCB-impacted sites, petroleum-impacted sites, hazardous waste sites, and residential properties. Duties have included waste characterization, contaminant source delineation, backhoe operation and supervision for removal activities, confirmatory sampling, and report preparation.
- **Emergency Response Actions:** *Project Manager* for emergency response actions for petroleum and transformer discharges. Duties have included project set up, coordination and direction of cleanup with remediation contractors, discharge notification on behalf of clients, confirmatory soil and water sampling, negotiation with regulatory agency personnel, and report preparation. Cleanup response actions have included backhoe removal of impacted soil, vacuum truck removal of free product, and the use of containment booms and absorbent pads.
- **Land Farm Remediation Activities** – *Project Manager* for land farm remediation activities of petroleum-impacted soils. Duties included preparation of a land farm plan for regulatory approval, monitoring remediation efforts of the land farm, and preparation of a land farm closure report.
- **Petroleum Storage Tank Closures** – *Project Manager* for petroleum storage tank closures for commercial, industrial, and residential properties. Duties included supervising petroleum contractors in the pumping, cleaning, and removal of underground storage tanks, performing soil vapor screening and confirmatory sampling in accordance with FDEP guidelines, source removal activities during tank closures, and report preparation.
- **Wetland Delineation** – *Staff Biologist* for wetland delineation of isolated and contiguous wetland systems. Duties included the field delineation of wetland systems in accordance with FDEP, SJRWMD, and COE guidelines. Additional duties included field verification of wetland lines with regulatory personnel.
- **Threatened Species Surveys** – *Staff Biologist* for threatened species surveys for gopher tortoises and the Florida scrub jay. Duties included the location of gopher tortoise habitat and burrows and the determination of population density based on active, inactive and abandoned burrows. Duties also included the determination of Florida scrub jay habitat through bird call replication.
- **Mitigation Monitoring and Maintenance** – *Staff Biologist* for mitigation monitoring and maintenance for shopping centers, office complexes, residential communities, and the Northeast Florida Mitigation Bank. Field duties included setting up sample transects, determination of tree and plant growth, determination of natural recruitment density, identification of wildlife utilization, and the identification and eradication of nuisance species. Additional duties included report preparation and regulatory agency negotiation.

NAME & TITLE	John C. (JC) Waldron Staff Scientist
TECHNICAL ROLE	Staff Scientist – Environmental Department
YEARS OF EXPERIENCE	3.5
EDUCATION	B.A., Economics, focus in Environmental Science, Washington & Lee University, 2001
QUALIFICATIONS	Mr. Waldron's primary duties include the completion of FCC/NEPA Compliance Summary Reports, Surface Water Discharge Permitting and compliance monitoring, and Phase I and Phase II Environmental Site Assessments, including regulatory interviews, site reconnaissance, data management and interpretation, and report writing for various clients.
REPRESENTATIVE PROJECT EXPERIENCE	▪ **Phase I ESAs:** *Project Manager* for Phase I Environmental Site Assessments (ESAs) in accordance with ASTM 1597. These assessments have been conducted at various types of facilities, ranging in size from less than one-half acre to **over 800 acres,** and have included undeveloped lots, cellular communications towers, corridor studies, and warehouse distribution centers, as well as properties located within industrial areas and downtown business districts. These projects have been performed for both private developers and the City of Jacksonville. ▪ **Phase II ESAs:** *Staff Scientist* on Phase II Environmental Site Assessments, which consisted of collecting soil and groundwater samples, and report preparation for projects ranging from corridor studies to former gas stations and automotive repair shops. ▪ **Waste Characterization & Delineation:** *Staff Scientist* on Waste Characterization and Delineation Projects, which consisted of digging of test pits, and the collection of soil and groundwater samples. These projects have included various private construction projects as well as those for the City of Jacksonville and the Jacksonville Electric Authority. ▪ **Remediation Projects:** *Staff Scientist* on Remediation Projects, including State DEP Reimbursement Projects, which consisted of the collection of soil and groundwater samples, and field analysis of soil samples using an OVA-FID. ▪ Waste Classification: *Staff Scientist* on Waste Classification Projects, for the Jacksonville Electric Authority, which included an analysis of ash samples from the burning of a new fuel mixture to determine any practical uses. The responsibilities consisted of the collection of samples of different types of ash. ▪ **Surface Water Discharge Permitting:** *Project Manager* on Surface Water Discharge Permitting Projects, which consist of the installation of monitoring wells, the collection of surface water and groundwater samples, the collection of surface water data from the surrounding areas, the preparation of reports, and monitoring for compliance. ▪ **Well Abandonment:** S*taff Scientist* during completion of a monitoring well abandonment. ▪ **Site Elevation Survey** – *Staff Scientist* during completion of a site elevation survey, as part of a Phase II Environmental Site Assessment. ▪ Spill Prevention, Control, and Counter Measure Plans: *Staff Scientist* for a spill prevention assessment for JEA. ▪ **FCC/NEPA Compliance:** Performed FCC/NEPA Compliance Checklists for cellular communications tower construction and design firms. ▪ **Well Delineation:** Collected public water well information, including well location, well depth, and approximate well yield, as part of a Phase II ESA.

10.0 REFERENCES

Brooks, H.K., 1981, Guide to the Physiographic Divisions of Florida. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, Special Publication, 11 pp.

Duval County Property Appraiser and Soil Survey Offices, Jacksonville, Florida.

Environmental Data Management, Inc. (EDM) –Largo, Florida

Healy, H.G., "Potentiometric Surface of the Floridan Aquifer in Florida," 1980, Florida Department of Natural Resources, Bureau of Geology, Map Series No. 104.

State of Florida Solid Waste Facilities (SWL).

State of Florida Hazardous Waste Sites (STATE).

Steward, J.W., "Areas of Natural Recharge to the Floridan Aquifer in Florida," FDNR Bureau of Geology, Map Series 98, 1980.

U.S. Environmental Protection Agency, Comprehensive Environmental Response, Compensation, and Liability Act Lists (CERCLIS); Superfund Program.

U.S. Environmental Protection Agency, Emergency Response Notification System (ERNS).

U.S. Environmental Protection Agency, Hazardous Waste Data Management System (HWDMS); Resource and Recovery Act.

U.S. Environmental Protection Agency, Stationary Storage Tank Inventory System (STI), Petroleum Contamination Tracking System (PCTS).

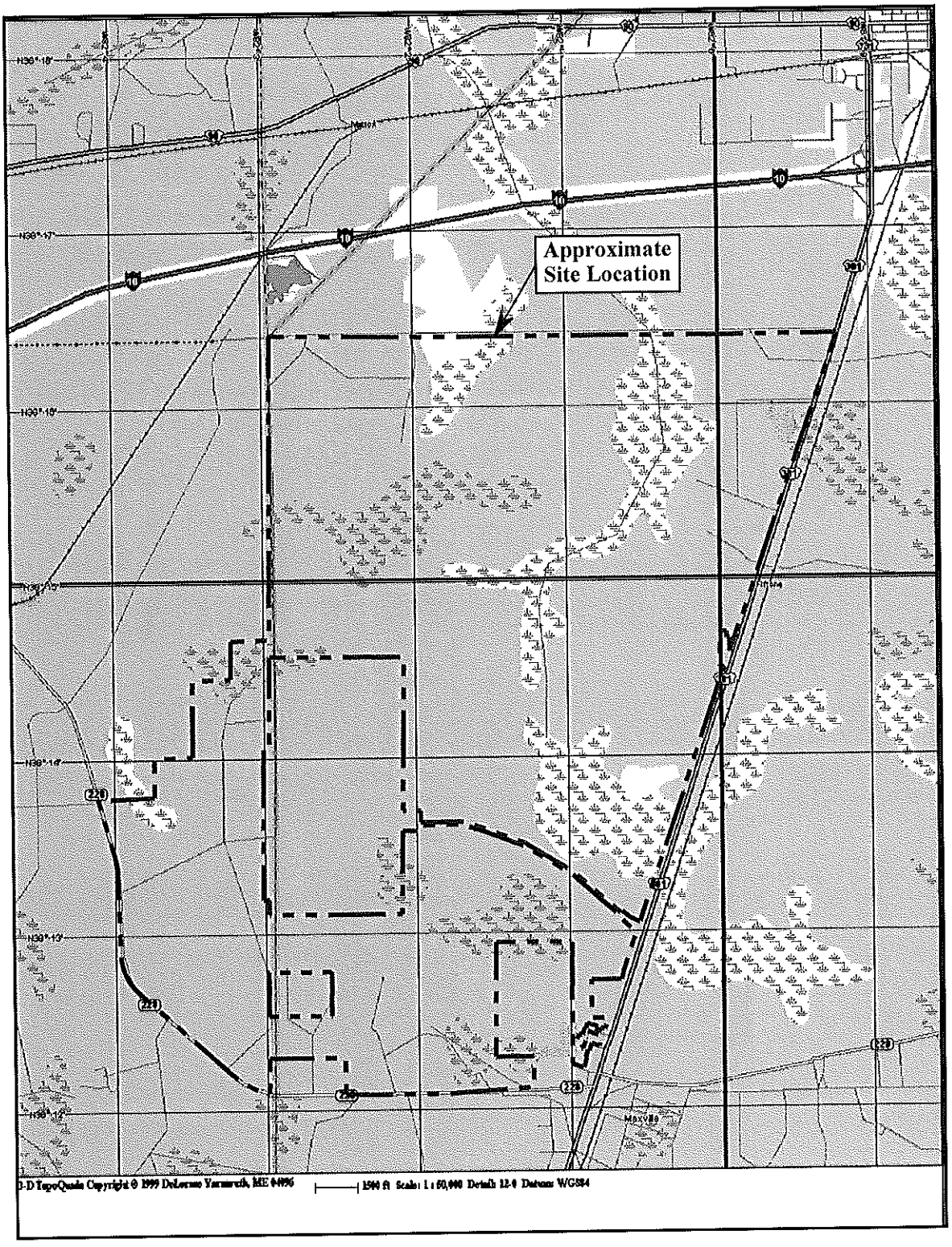
U.S. Geological Survey, Topographic Map Series, MacClenny East, Florida, Quadrangle, 1:24:0000, 1972.

U.S. Geological Survey, Topographic Map Series, Baldwin, Florida, Quadrangle, 1:24:0000, 1964, Revised 1992.

U.S. Geological Survey, Topographic Map Series, Maxville, Florida, Quadrangle, 1:24:0000, 1970, Photo-inspected 1984.

U.S. Geological Survey, Topographic Map Series, Fiftone, Florida, Quadrangle, 1:24:0000, 1993.

FIGURES



JSA - 05JX7195

Ellis & Associates inc.

Environmental ■ Geotechnical ■ Materials Testing

Integrated Engineering Services *EB: 998*

7064 Davis Creek Road Jacksonville, FL 32256
p: 904-880-0960 f: 904-880-0970 email: ellis@ellisassoc.com
Serving the Southeast since 1970.
Offices: Jacksonville, FL Titusville, FL Daytona, FL Brunswick, GA

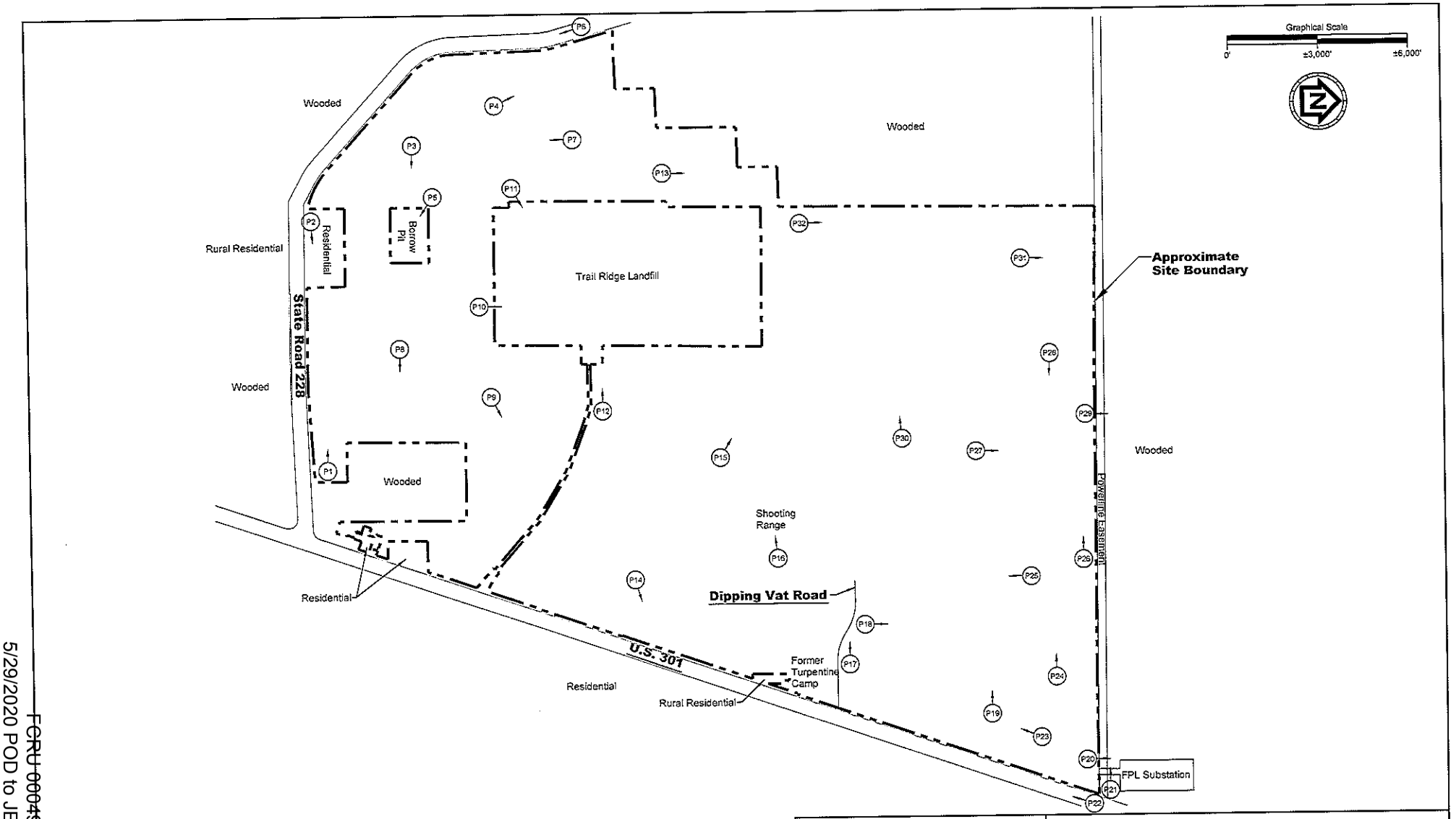
Site Vicinity / Topography Map

U.S. Highway 301 Site

U.S. Geological Survey 7.5 Minute - Topographic Map
Maxville, FL - Macclenny East (FL-GA) - Baldwin, FL - Fiftone, FL
1990 - 1990 - 1992 - 1993

Site boundaries depicted are approximate

Date: 12/01/05	Project No.: 05JX-7195	Figure 1



LEGEND

P1 Photograph Number and Direction (See Appendix A for Photograph)

Ellis & Associates Inc.
Environmental ■ Geotechnical ■ Materials Testing
Integrated Engineering Services EB: 998
7084 Davis Creek Road Jacksonville, FL 32256
p: 904-880-0960 f: 904-880-0970 email: ellis@ellisassoc.com
Serving the Southeast since 1970
Offices: Jacksonville, FL Titusville, FL Daytona, FL Brunswick, GA

Site Plan
U.S. Highway 301 Site
Baldwin, Florida

Date: 12/02/05	Project No.: 05JX-7195	Figure 2

JSA - 05JX7195

APPENDIX A

Photographic Documentation

Photograph 1 – View to the west along State Road 228 overlooking the southern property boundary.

Photograph 2 – View to the northeast showing a residentially developed outparcel off the southern portion of the property.

Photograph 3 – View to the east showing a trash pile observed on the southwestern portion of the property.

Photograph 4 – View to the northwest showing a typical view of the southwestern portion of the property.

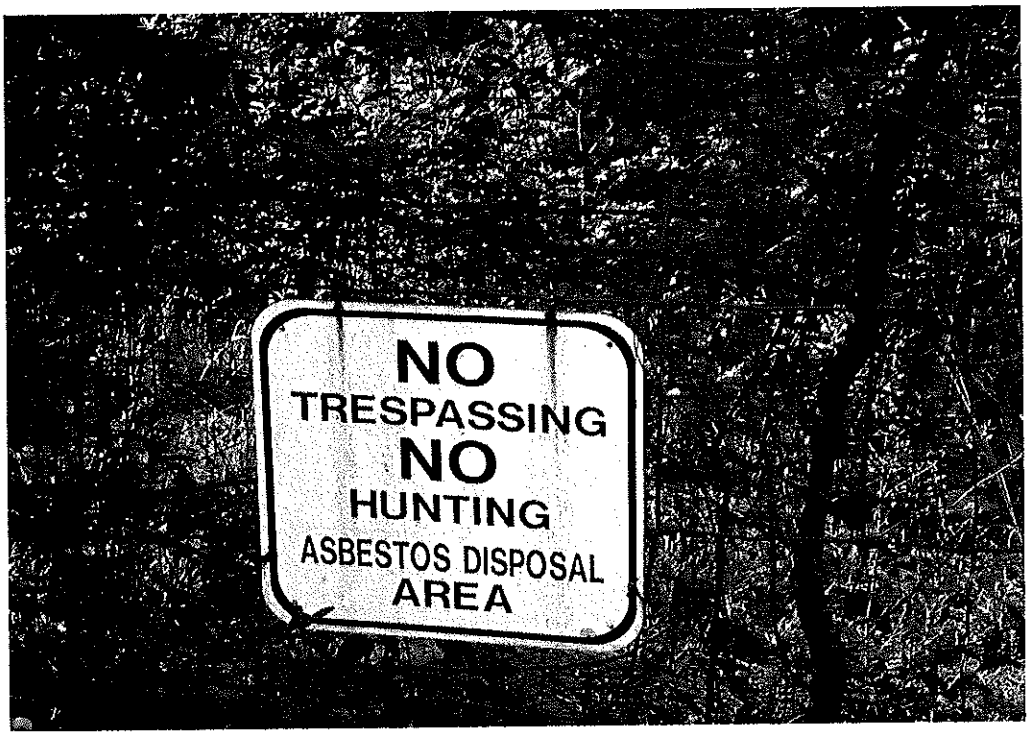
Photograph 5 – View to the southeast showing the outparcel developed as a borrow pit off the south-central portion of the property.

Photograph 6 – View to the south along State Road 228 overlooking the southwestern property boundary.

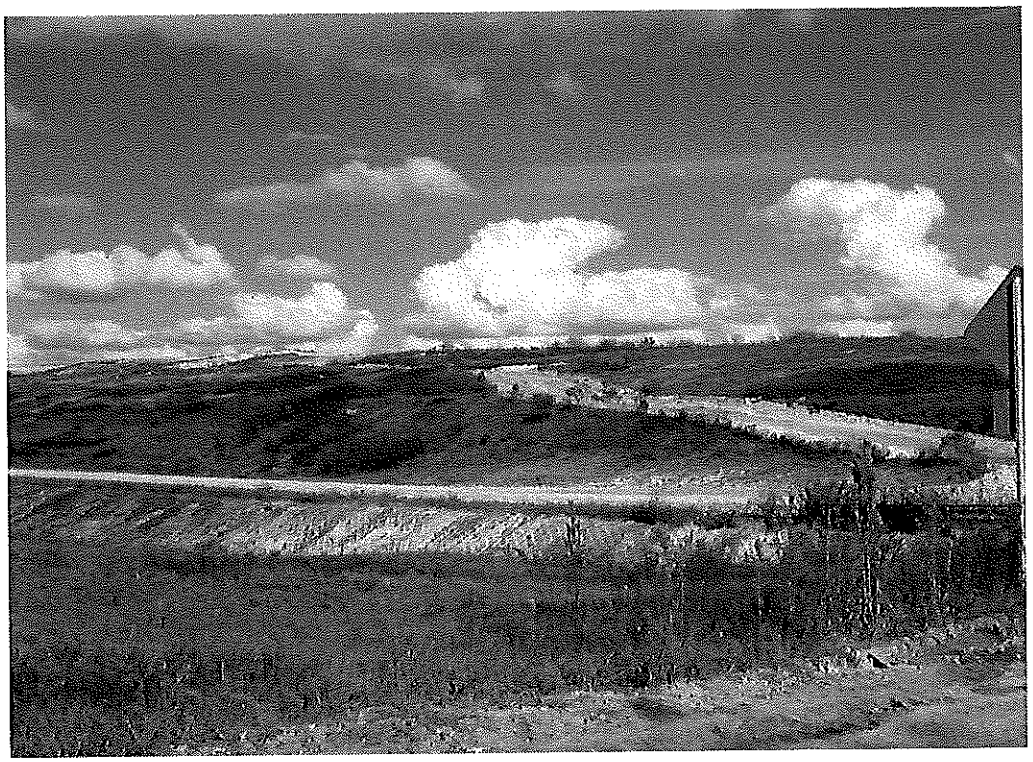
Photograph 7 – View to the south showing a typical view of the western portion of the property.

Photograph 8– View to the east showing a typical view of the southern portion of the property.

Photograph 9 – View to the northeast showing a typical view of the south-central portion of the property.



Photograph 10– View to the north showing a warning sign posted on the boundary of the Trail Ridge Landfill outparcel.

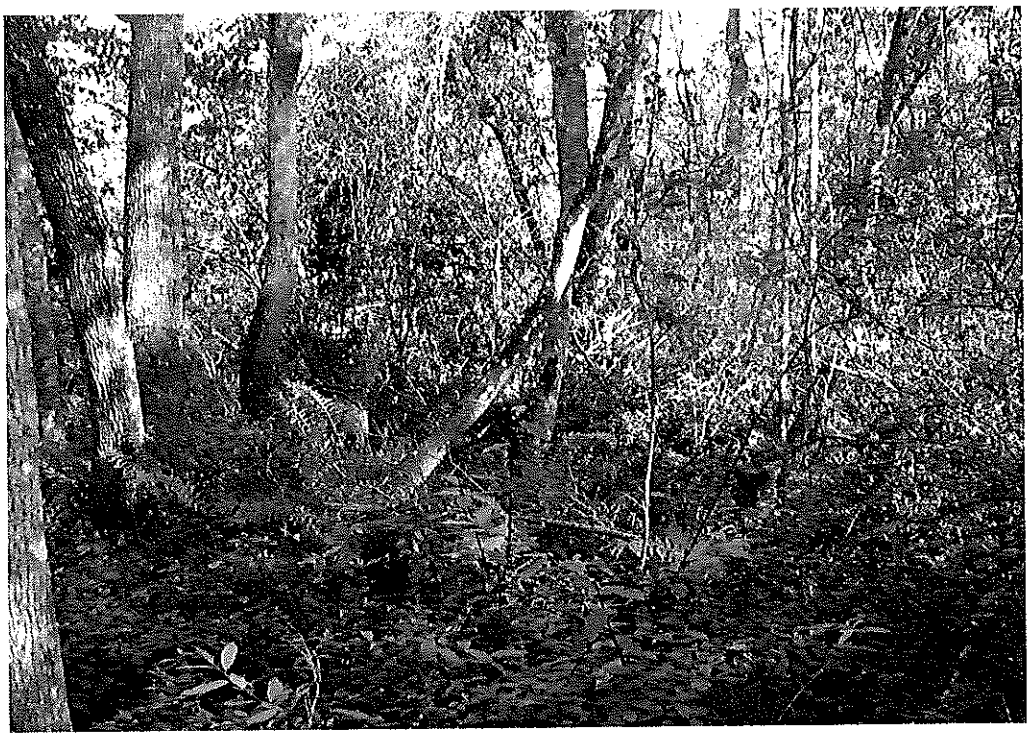


Photograph 11 – View to the northeast showing the Trail Ridge Landfill.

Photograph 12 – View to the west along the Trail Ridge Landfill access road.

Photograph 13 – View to the north along a trail road running through the western portion of the property.

Photograph 14 – View to the northeast showing a low area of standing water on the eastern portion of the property.



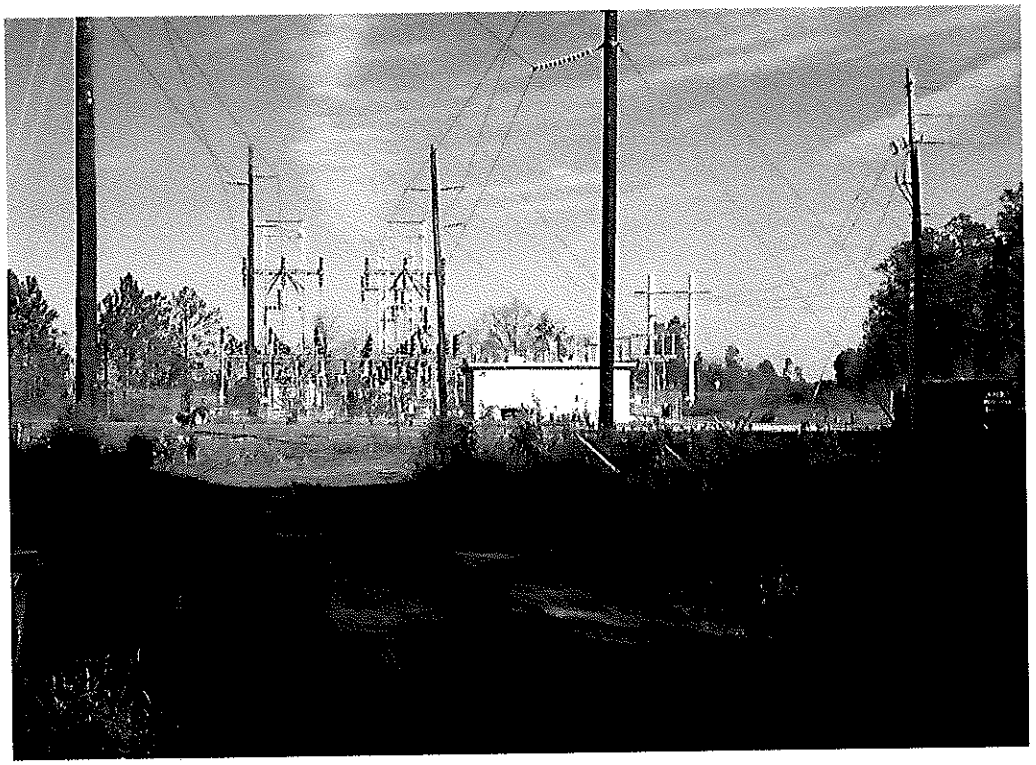
Photograph 15 – View to the northwest showing a typical view of the central portion of the property.

Photograph 16 – View to the west showing the shooting range observed on the central portion of the property.

Photograph 17 – View to the west showing the sign indicating a trail road on the east-central portion of the property as "Dipping Vat" Road.

Photograph 18 – View to the north showing a disturbed area along Dipping Vat Road that potentially may be the former location of a cattle dipping vat.

Photograph 19 – View to the west showing a trash pile observed along the easement road on the northeastern portion of the property.

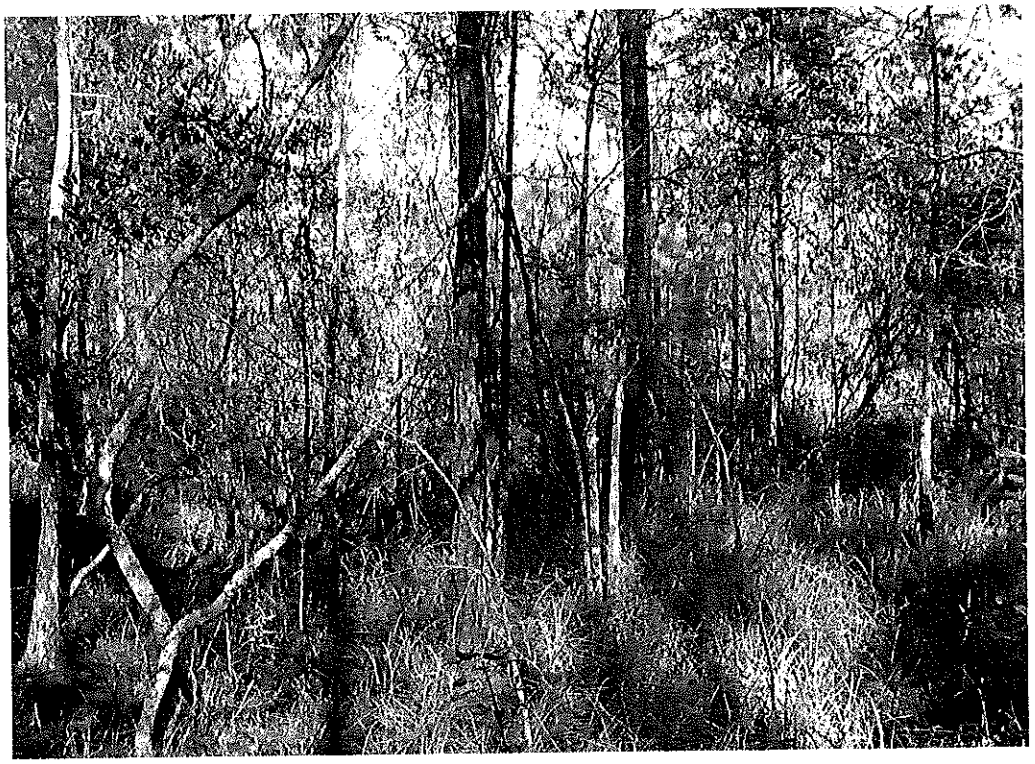


Photograph 20 – View to the north showing the Florida Power and Light Substation adjoining to the north of the northeastern portion of the property.

Photograph 21 – View to the west along the northern property boundary.

Photograph 22 – View to the south along U.S. Highway 301 overlooking the eastern property boundary.

Photograph 23 – View to the south along the easement road on the northeastern portion of the property.



Photograph 24 – View to the west showing a typical view of the northeastern portion of the property.

Photograph 25 – View to the south showing a typical view of the northern portion of the property.

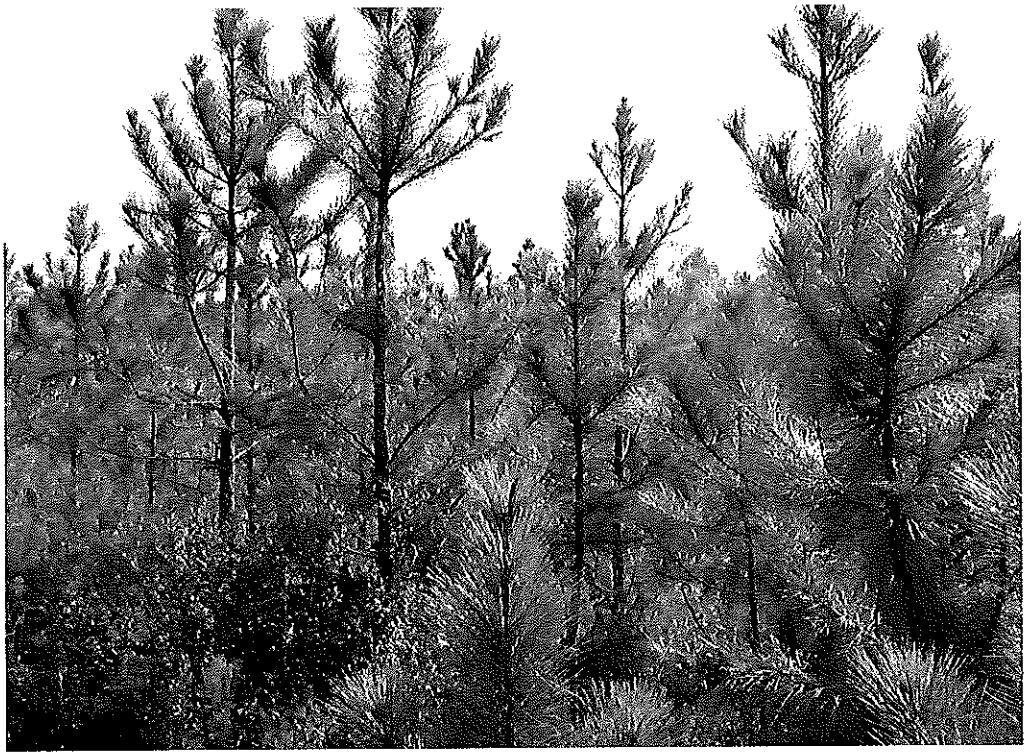
Photograph 26 – View to the west along the northern property boundary.

Photograph 27 – View to the north showing a typical view of the north-central portion of the property.

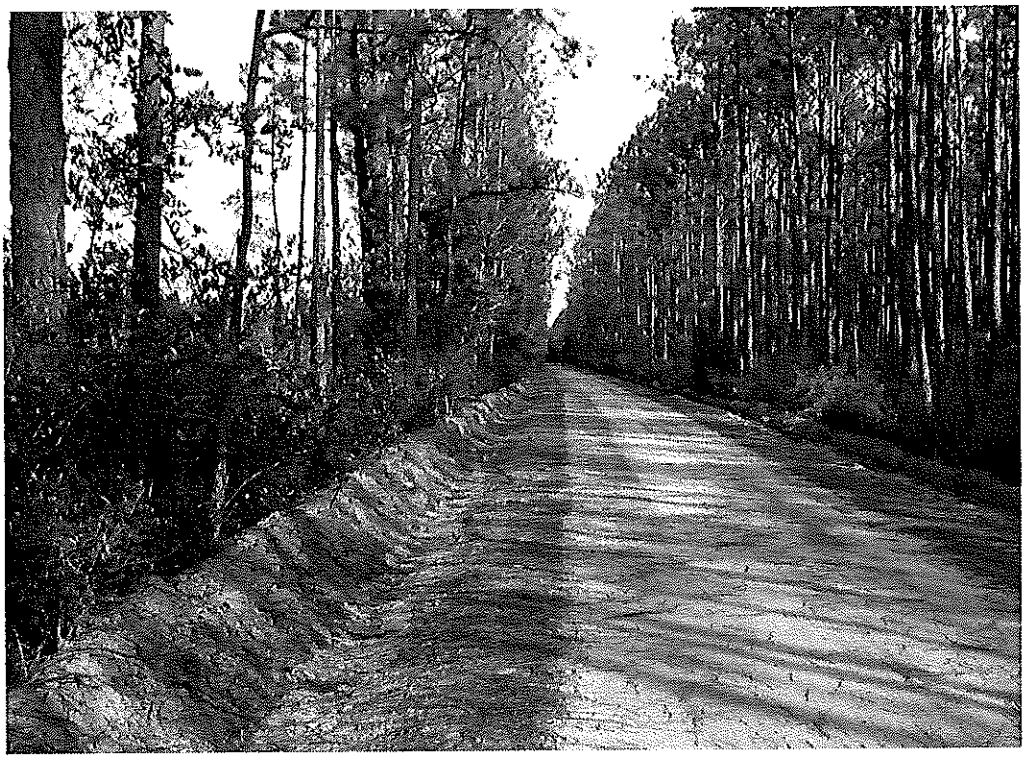
Photograph 28 – View to the east showing a typical view of the northwestern portion of the property.

Photograph 29 – View to the north showing the property adjoining to the north of the northwestern portion of the property.

Photograph 30 – View to the west showing a typical view of the central portion of the property.



Photograph 31 – View to the north showing a typical view of the northwestern portion of the property.



Photograph 32 – View to the north along the northwestern property boundary.

APPENDIX B

Government Records Search Report

ENVIRONMENTAL DATA REPORT

Standard ASTM Research+
Approximate 9000 Acre Property
Duval & Baker Counties, Florida
Client Project #: 05JX-7195

Prepared For:

Ellis & Associates, Inc.
7064 Davis Creek Road
Jacksonville, FL 32256

Prepared By:

ENVIRONMENTAL DATA MANAGEMENT, INC.
14100 Walsingham Road, Suite 31
Largo, Florida 33774

Tuesday, October 18, 2005

EDM

Environmental Data Management, Inc.
14100 Walsingham Road, Suite 31
Largo, Florida 33774
Tel. (727) 595-8600 Fax (727) 595-8606
http://www.edm-net.com

Tuesday, October 18, 2005

Client Project #: 05JX-7195

JC Waldron
Ellis & Associates, Inc.
7064 Davis Creek Road
Jacksonville, FL 32256

Subject: **Standard ASTM Research+ -- EDM Project #: 17314**

Dear Mr. Waldron:

Thank you for using Environmental Data Management, Inc. The following report provides the results of our environmental data research that you requested for the following location:

Approximate 9000 Acre Property
Duval & Baker Counties, Florida

The following is a summary of the components contained within this report:

- **Executive Summary** - a listing of the databases searched, search distance criteria and the number of sites identified for each database.
- **Map(s) of Study Area** - show the location of sites identified relative to the subject property. These sites are labeled with Map ID Numbers, used to correlate the map symbols with data detail within the report. *A non-mapped option is available.*
- **Summary Table** - summary information concerning the records identified within your study area. The table provides corresponding Map ID numbers, the site's Permit or Facility I.D. Number, the site's name and address and the government database(s) on which the site was listed.
- **Site Detail Reports** – data detail for each record identified. Grouped by database listing or by Map ID.
- **Proximal Records Table** – summary information listing potentially relevant sites identified just beyond the search criteria. These records may account for instances where a regulated site's boundary extends into the study area but its address is outside of the search radius or where the site is mis-mapped slightly.
- **Non-Mapped Records Table** - lists those government records that do not contain sufficient address information to plot within our GIS system, but may still exist within your study area.
- **Ancillary Information** – may include Title Search Report, City Directory Records or other additional research records.

At EDM we take great pride in our work, and continually strive to provide you with the most thorough and comprehensive service available. We accomplish this by manually screening your report against both computerized and hard copy maps, as well as additional address sources. This manual effort may add more time and effort to your report preparation, but we think a more thorough and accurate result is worth it. After all, what's the value of inaccurate information?

Thank you again for selecting EDM as your data research provider. Should you have any questions regarding this report or our service, please feel free to contact us. We appreciate the opportunity to be of service to you and look forward to working with **Ellis & Associates, Inc.** in the future.

ENVIRONMENTAL DATA MANAGEMENT, INC.

Agency List Descriptions

US Environmental Protection Agency (USEPA)

Comprehensive Env Response, Compensation & Liability Information SystemList(CERCLIS)

The US EPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) is the Superfund database used to track facilities and/or locations that the USEPA is investigating to determine if an existing or threatened release of hazardous substances is present.

Agency File Date: 7/5/2005 **Received by EDM:** 7/21/2005 **EDM Database Updated:** 7/23/2005

RCRIS Handlers with Corrective Action(CORRACTS)

The US EPA Corrective Action Sites (CORRACTS) database is a listing of hazardous waste handlers that have undergone RCRA corrective action activity. This information is compiled by the EPA Regional and State RCRA program personnel, as well as the RCRA facilities themselves.

Agency File Date: 9/22/2005 **Received by EDM:** 9/25/2005 **EDM Database Updated:** 9/26/2005

Emergency Response Notification System List(ERNS)

The Emergency Response Notification System (ERNS) is a database used to store information on the notification of oil discharges and hazardous substance releases. The ERNS program is a cooperative data sharing effort among the EPA, DOT and the National Response Center (NRC).

Agency File Date: 1/26/2005 **Received by EDM:** 9/21/2005 **EDM Database Updated:** 9/22/2005

Archived Cerclis Sites(NFRAP)

The US EPA NFRAP list contains archived data on CERCLIS sites where the EPA has completed assessment activities and determined no further steps to list the site on the NPL will be taken. These NFRAP sites may be reviewed by the states in which they are located to determine if they should be returned to CERCLIS because of newly identified contamination problems at the site.

Agency File Date: 7/5/2005 **Received by EDM:** 7/21/2005 **EDM Database Updated:** 7/23/2005

RCRA-LQG,SQG,CESQG and Transporters(NONTSD)

The EDM NONTSD list is a subset of the US EPA RCRIS list and identifies facilities that generate and transport hazardous wastes. These facilities may be Large Quantity Generators (LQG), Small Quantity Generators (SQG), Conditionally Exempt SQG's (CESQG) as well as" Non-Notifiers" and "Non-Handlers".

Agency File Date: 8/11/2005 **Received by EDM:** 9/15/2005 **EDM Database Updated:** 9/17/2005

National Priorities List(NPL)

The US EPA National Priorities List (NPL) contains facilities and/or locations where environmental contamination has been confirmed and prioritized for cleanup activities. The NPL was devised as a method for the EPA to prioritize these sites for the purpose of taking remedial action as funded by the Hazardous Waste Substance Superfund program.

Agency File Date: 10/10/2005 **Received by EDM:** 10/10/2005 **EDM Database Updated:** 10/11/2005

RCRA-Treatment, Storage and/or Disposal Sites(TSD)

The EDM TSD list is a subset of the US EPA RCRIS list and identifies facilities that Treat, Store and/or Dispose of hazardous waste.

Agency File Date: 8/11/2005 **Received by EDM:** 9/15/2005 **EDM Database Updated:** 9/17/2005

Florida Department of Environmental Protection (FDEP)

Leaking Underground Storage Tanks List(LUST)

The FDEP LUST list identifies facilities and/or locations that have notified the FDEP of a possible release of contaminants from petroleum storage systems. This Report is generated from the FDEP Storage Tank and Contamination Monitoring Database (STCM).

Agency File Date: 9/7/2005 **Received by EDM:** 9/27/2005 **EDM Database Updated:** 9/28/2005

Solid Waste Facilities List(SLDWST)

The FDEP SLDWST identifies locations that have been permitted to conduct solid waste handling activities including Landfills, Transfer Stations and sites handling Bio-Hazardous wastes. Sites listed with "##" after the GMS ID Number are historical locations, obtained from documents on record at local agencies.

Agency File Date: 10/5/2005 **Received by EDM:** 10/5/2005 **EDM Database Updated:** 10/6/2005

State Sites List(STCERC)

The STCERC is a historical listing of sites that the Florida Department of Environmental Regulation (FDER) compiled to track suspect contamination sites. This list was known as the Florida SITES list and was last updated by the FDER in 1989.

Agency File Date: 12/1/1989 **Received by EDM:** 4/1/1995 **EDM Database Updated:** 4/25/1995

State Funded Action Sites(STNPL)

TheFDEP SFAS list contains facilities and/or locations that have been identified by the FDEP as having known environmental contamination and are currently being addressed through State funded cleanup action.

Agency File Date: 8/12/2005 **Received by EDM:** 10/4/2005 **EDM Database Updated:** 9/7/2005

Underground/Aboveground Storage Tanks(TANKS)

The FDEP Storage Tank and Contamination Monitoring (STCM) database contains sites with registered aboveground and/or underground storage tanks containg regulated petroleum products. Please refer to the "Explanation of Florida Tank Codes" insert to interpret tank construction, monitoring and piping codes.

Agency File Date: 8/14/2005 **Received by EDM:** 8/29/2005 **EDM Database Updated:** 9/1/2005

Supplemental Databases

Florida Dry Cleaners(DRY)

The Florida Dry Cleaners List is comprised of data from the FDEP Storage Tank and Contamination Monitoring (STCM) database and the Drycleaning Solvent Cleanup Program- Priority Ranking List. It contains a listing of those Dry Cleaner sites (and suspected historical Dry Cleaning sites) who have registered with the FDEP for the Dry Cleaning Solvent Cleanup Program.

Agency File Date: 9/7/2005 **Received by EDM:** 10/7/2005 **EDM Database Updated:** 10/11/2005

EXPLANATION OF FLORIDA TANK CODES

CONSTRUCTION TYPE CODES

A = BALL CHECK VALVE
B = INTERNAL LINING
C = STEEL
D = UNKNOWN
E = FIBERGLASS
F = FIBERGLASS-CLAD STEEL
G = CATHODIC PROTECTION-SACRIFICIAL ANODE
H = CATHODIC PROTECTION -IMPRESSED CURRENT
I = DBL WALL/SINGLE MATERIAL
J = SYNTHETIC LINER IN TANK EXCAVATION
K = AST CONTAINMENT: CONCRETE /SYNTHETIC MATERIAL AREA
L = COMPARTMENTED
M = SPILL CONTAINMENT BUCKET
N = FLOW SHUT OFF
O = TIGHT FILL
P = LEVEL GAUGES, HI LEVEL ALARMS
Q = OTHER DER APPROVED PROTECTION METHOD
R = DBL WALL/DUAL MATERIAL/ (TANK "JACKET")
S = OTHER DEP APPROVED SECONDARY CONTAINTMENT SYSTEM
T = SMALL USE TANK
U = FIELD ERECTED TANK
V = PIPELESS UST W/SECONDARY CONTAINMENT
W = BUILT ON SUPPORTS
X = CONCRETE
Y = POLYETHYLENE
Z = OTHER DEP APPROVED TANK MATERIAL

PIPING TYPE CODES

A = ABOVE GROUND-NO CONTACT W/SOIL
B = STEEL OR GALVANIZED METAL
C = FIBERGLASS
D = EXTERNAL PROTECTIVE COATING
E = CATHODIC PROTECTION (SACRIFICIAL ANODE/IMPRESSED CURRENT)
F = DBLWALL/SINGLE MATERIAL
G = SYNTHETIC OR BOX/TRENCH LINER
H = AIRPORT/SEAPORT HYDRANT SYSTEM
I = SUCTION PIPING SYSTEM
J = PRESSURIZED PIPING SYSTEM
K = DISPENSER LINERS
L = BULK PRODUCT SYSTEM
M = DOUBLE WALL / DUAL MATERIAL (PIPE "JACKET")
N = APPROVED SYNTHETIC MATERIAL
O = SEVERE VIOLATION
P = INTERNAL PIPING WITHIN INTERNAL SUMP RISER
V = VIOLATION
X = NO PIPING ASOCIATED WITH TANK
Y = UNKNOWN
Z = OTHER DEP APPROVED PIPING MATERIAL

LEAK MONITORING CODES

1 = CONTINUOUS ELECTRONIC SENSING EQUIPMENT
2 = VISUAL INSPECTIONS OF PIPING SUMPS
3 = ELECTRONIC MONITORING OF PIPING SUMPS
4 = VISUAL INSPECTIONS OF DISPENSING LINERS
5 = ELECTRONIC MONITORING OF DISPENSER LINERS
6 = EXTERNAL PIPING MONITORING
7 = AUTOMATICALLY SAMPLED WELLS
8 = MANUALLY SAMPLED WELLS
A = SITE SUITABILITY PLAN
B = SITE SUITABILITY PLAN EXEMPTION
C = GROUNDWATER MONITOR PLAN
D = SPCC PLAN
E = INTERSTITIAL MONITORING UST LINERS
F = INTERSTITIAL SPACE-DOUBLE WALL TANK
G = ELECTRONIC LINE LEAK DETECTOR W/FLOW SHUTOFF
H = MECHANICAL LINE LEAK DETECTOR
I = NOT REQUIRED-SEE RULE FOR EXEMPTIONS
J = INTERSTITIAL MONITORING-PIPING LINER
K = INTERSTITIAL MONITORING- DOUBLE WALL PIPING
L = AUTOMATIC TANK GAUGING SYSTEM (USTS)
M = MANUAL TANK GAUGING SYSTEM (USTS)
N = GROUNDWATER MONITORING SYSTEM
O = VAPOR MONITORING SYSTEM
P = VAPOR MONITORING W/DILUTION PROCEDURES
Q = VISUAL INSPECTION OF AST SYSTEMS
R = INTERSTITIAL MONITORING OF TANK BOTTOM
S = STATISTICAL INVENTORY RECONCILIATION (SIR/USTS)
T = ANNUAL TIGHTNESS TEST WITH INVENTORY (UST)
U = BULK PIPING PRESSURE TEST
V = SUCTION PUMP CHECK VALVE
W = FIBER-OPTIC TECHNOLOGIES
X = NONE
Y = UNKNOWN
Z = OTHER DEP APPROVED MONITORING METHOD

Executive Summary

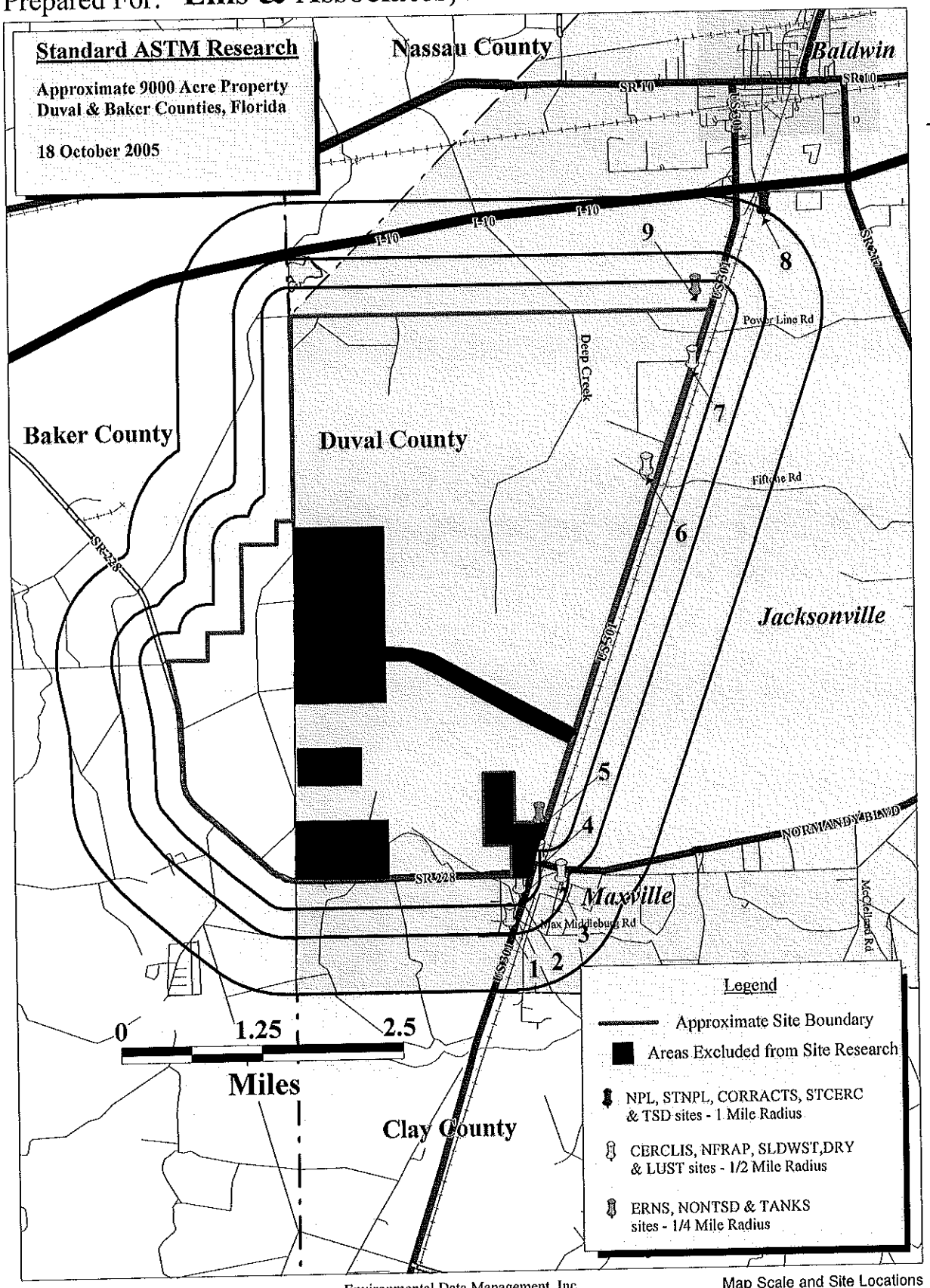
Client Information	Project Information
JC Waldron Ellis & Associates, Inc. 904-880-0960 Client Job No# 05JX-7195 Client P.O. No	Standard ASTM Research+ Approximate 9000 Acre Property Duval & Baker Countie Florida EDM Job No# 17314

The following table displays the databases that were included in the research provided, the respective search distance for each database, and the number of records identified for each database.

	Search Radius (Miles)	From 0 - .13 mi	From .13 - .25 mi	From .26 - .5 mi	From .51 - 1.0 mi	Greater than 1 Mile	Totals
EPA DATABASES							
National Priorities List(NPL)	1.00	0	0	0	0	N/A	0
Comprehensive Env Response, Compensation & Liability Information SystemList(CERCLIS)	0.50	0	0	0	N/A	N/A	0
Archived Cerclis Sites(NFRAP)	0.50	0	0	0	N/A	N/A	0
Emergency Response Notification System List(ERNS)	0.25	2	0	N/A	N/A	N/A	2
RCRIS Handlers with Corrective Action(CORRACTS)	1.00	0	0	0	0	N/A	0
RCRA-Treatment, Storage and/or Disposal Sites(TSD)	1.00	0	0	0	0	N/A	0
RCRA-LQG,SQG,CESQG and Transporters(NONTSD)	0.25	1	0	N/A	N/A	N/A	1
FDEP DATABASES							
State Funded Action Sites(STNPL)	1.00	0	0	0	0	N/A	0
State Sites List(STCERC)	1.00	0	0	0	1	N/A	1
Solid Waste Facilities List(SLDWST)	0.50	3	0	0	N/A	N/A	3
Leaking Underground Storage Tanks List(LUST)	0.50	0	2	3	N/A	N/A	5
Underground/Aboveground Storage Tanks(TANKS)	0.25	2	2	N/A	N/A	N/A	4
SUPPLEMENTAL DATABASES							
Florida Dry Cleaners(DRY)	0.50	0	0	0	N/A	N/A	0

EDM Job No: 17314
Client Job No: 05JX-7195

Prepared For: **Ellis & Associates, Inc.**



EDM

Environmental Data Management, Inc.
14100 Walsingham Road, Suite 31
Largo, Florida 33774
Tel (727) 595-8600 Fax (727) 595-8606

Map Scale and Site Locations are Approximate

** ENVIRONMENTAL DATA MANAGEMENT **

Standard ASTM Research+

Oct 18, 2005 — SUMMARY TABLE —

MAPID#	FACILITY ID NUMBER, NAME AND LOCATION		REGULATORY LISTS												
			NPL	CERCLIS	NFRAP	ERNS	CORRACTS	TSD	NONTSD	STNPL	STCERC	SLDWST	LUST	TANKS	DRY
1)	8521378 MAXVILLE FOOD MART 8788 US HWY 301 S JACKSONVILLE, FL. 322342600												X		
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.47													
	DIRECTION FROM SUBJECT PROPERTY	SE													
1)	8521378. DAULTS GROCERY 8790 US HWY 301 S JACKSONVILLE, FL. 32234												X		
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.47													
	DIRECTION FROM SUBJECT PROPERTY	SE													
2)	8507025 HATCHERS AUTO PARTS 8570 US HWY 301 S JACKSONVILLE, FL. 322342204												X	X	
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.19													
	DIRECTION FROM SUBJECT PROPERTY	SE													
3)	8734291 BELLSOUTH TEL INC #31381 MXVLFLMA 8455 MAXVILLE BLVD JACKSONVILLE, FL. 32265												X		
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.47													
	DIRECTION FROM SUBJECT PROPERTY	SE													
4)	8732479 ISLAND FOOD STORE #336 8391 US HWY 301 S MAXVILLE, FL. 322342208												X	X	
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.24													
	DIRECTION FROM SUBJECT PROPERTY	SE													
5)	575081 INSCONSIN EXPRESS LINE 7888 US HIGHWAY 301 JACKSONVILLE, FL.					X									
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.04													
	DIRECTION FROM SUBJECT PROPERTY	SE													
6)	00033628 TRAIL RIDGE LANDFILL LF1 US 301 1.5 MILES NW OF MAXVILLE JACKSONVILLE, FL. 32234											X			
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.01													
	DIRECTION FROM SUBJECT PROPERTY	NE													

MAPID#	FACILITY ID NUMBER, NAME AND LOCATION		REGULATORY LISTS												
			NPL	CERCLIS	NFRAP	ERNS	CORRACTS	TSD	NONTSD	STNPL	STCERC	SLDWST	LUST	TANKS	DRY
6)	00034387 TRAIL RIDGE LANDFILL (CLASSIII) US 301, 1-5 MI NW OF MAXVILLE MAXVILLE, FL.											X			
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.01													
	DIRECTION FROM SUBJECT PROPERTY	NE													
6)	412183 ALL JAX WASTE SVC US 301/TRAIL RIDGE LANDFILL BALDWIN, FL. 32257					X									
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.01													
	DIRECTION FROM SUBJECT PROPERTY	NE													
6)	9300953 JACKSONVILLE CITY-TRAIL RIDGE LANDFIL 5110 US HWY 301 S BALDWIN, FL. 32234													X	
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.01													
	DIRECTION FROM SUBJECT PROPERTY	NE													
6)	9807234 FLEET MANAGEMENT TRAILRIDGE #25 5110 US HWY 301 MAXVILLE, FL. 32234													X	
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.01													
	DIRECTION FROM SUBJECT PROPERTY	NE													
7)	00033447 PINECREST L/F 1.5 MILES S I10 ON US 301 BALDWIN, FL.											X			
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.01													
	DIRECTION FROM SUBJECT PROPERTY	NE													
8)	FLD083812537 FLORIDA STEEL CORP. YELLOW WATER RD HWY 217 BALDWIN, FL.										X				
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.96													
	DIRECTION FROM SUBJECT PROPERTY	NE													
9)	FLR000082685 BALDWIN SUBSTATION US 301 3 MI S OF I-10 BALDWIN, FL. 32234								X						
	DISTANCE FROM SUBJECT PROPERTY(mi)	0.1													
	DIRECTION FROM SUBJECT PROPERTY	NE													

APPENDIX C

1952 Aerial Photograph Dipping Vat Road and Turpentine Camp Vicinity

Ellis & Associates Inc.
Environmental ■ Geotechnical ■ Materials Testing
Integrated Engineering Services EB: 958
7084 Davis Creek Road Jacksonville, FL 32256
p: 904-880-0990 f: 904-880-0970 email: ellis@ellisassoc.com
Serving the Southeast since 1970.
Offices: Jacksonville, FL Titusville, FL Daytona, FL Brunswick, GA

1952 Aerial Photograph - Dipping Vat Road/Turpentine Camp Vicinity

U.S. Highway 301 Site

Baldwin, Florida

Source: Duval County Property Appraisers Office

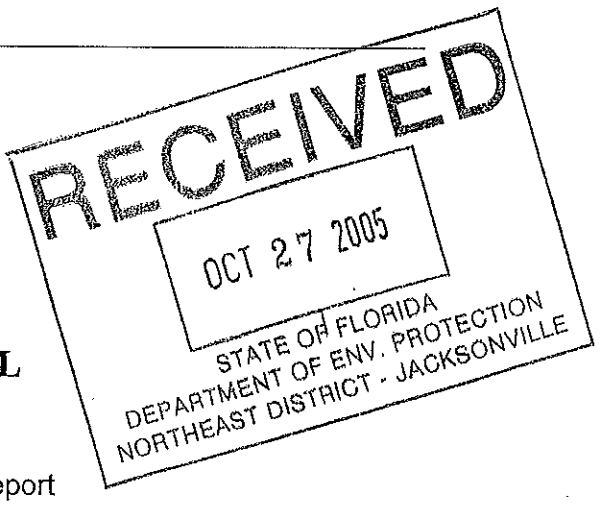
Scale 1" = ±400', Site Boundaries Depicted are Approximate

Date: 12/02/05	Project No.: 05JX-7195

APPENDIX D

File Excerpts for Trail Ridge Landfill

13493



TRAIL RIDGE LANDFILL

Semi-Annual Water Quality Data Report

Prepared for:
Trail Ridge Landfill
5110 U.S. Highway 301, South
Jacksonville, Florida 32234

FDEP Permit Number	0013493-010-SC
WACS ID Number	NED/16/00033628

Prepared by:
HDR Engineering, Inc.
200 West Forsyth Street
Suite 800
Jacksonville, Florida 32202
(904) 598-8900
(904) 598-8988 fax

October 2005

EXECUTIVE SUMMARY

Semi-Annual Water Quality Data Report for Trail Ridge Landfill

This semi-annual monitoring report was completed on behalf of Trail Ridge Landfill located in Jacksonville, Duval County, Florida. The data reviewed in this water quality assessment was obtained during the second routine semi-annual detection monitoring event conducted in 2005. The ground water at Trail Ridge is monitored by thirty-seven wells including five background wells. Two surface water sample points and a leachate point are also monitored in accordance with Permit Number 0013493-010-SC. The ground water wells are monitored semi-annually for the detection monitoring parameters listed under Attachment III and Specific Condition 48 of the Permit. The surface water is monitored semi-annually for the detection monitoring parameters listed under Attachment IV and Specific Condition 49 of the above Permit. Leachate is monitored annually and reported during the 1st semiannual sampling event for the parameters listed in Specific Condition 39 of the Permit.

A detailed review of the monitoring data indicates that iron exceeded the FSDWS at monitoring well MWB-2(I), MWB-2(S), MWB-3(I), MWB-7(I), MWB-11(S), MWB-11(IR), MWB-12(D), MWB-13(I), MWB-17(S), MWB-17(I), MWB-17(D), MWB-19(S), MWB-19(I), MWB-19(D), MWB-27(I), MWB-27(D), MWB-29(S), MWB-29(I), MWB-29(D), MWB-31(D), MWB-32(S), MWB-32(I), MWB-32(D), MWB-33(S), MWB-34(S), MWB-34(I), and MWB-34(D). The levels of iron seen in the ground water at Trail Ridge Landfill result from the interaction of the ground water with the soil mineralogy and are characteristic of the ground water in Duval County. Several VOCs were detected during the original sampling event, however subsequent resampling confirmed no VOCs to be present above laboratory reporting limits. At MWB-34S TDS and Ammonia exceeded the SDWS and GCTL respectively. Surface water sample SW-1, the regulatory standards for dissolved oxygen, pH, and iron were exceeded, and in SW-2 the regulatory standard for pH and iron was exceeded. These constituents have all historically been detected in both up and downgradient surface water samples and are not considered a result of site activities. The remainder of the data meets the water quality standards as dictated by the FDEP. The data reported appears to be consistent with the overall ground water quality and historical data.

Based on recent monitoring well inspections, all of the wells are maintained in good condition. Surface seals, protective casings, well caps, and well locks are in-place and in proper condition at each well to ensure that samples collected from the wells are representative of the aquifer conditions. Trail Ridge Landfill will continue to closely monitor the facility and evaluate the water data obtained during detection monitoring to ensure that there are no water quality exceedances.

TABLE OF CONTENTS

Figures

Appendices

1.0 INTRODUCTION

This semi-annual ground water monitoring report is submitted on behalf of Trail Ridge Landfill located in Jacksonville, Florida. Trail Ridge Landfill is located on US Highway 301, in the western portion of Duval County, Florida. It is located at 5110 U.S. Highway 301 in Baldwin, Florida. The landfill is about 4 1/2 miles south of the intersection of US 301 and I-10. Trail Ridge is an active municipal solid waste landfill owned by the City of Jacksonville and operated by Waste Management. Operation of the Landfill is in accordance with the Permit Number 0013493-010-SC, issued December 19, 2003 and the applicable provisions of previous permits.

The data submitted in this ground water quality assessment was obtained during the routine semi-annual detection-monitoring event conducted on July 5-8, 2005. During this monitoring period, thirty seven ground water wells were monitored for the parameters listed in Attachment III of the current permit. In conjunction with the ground water monitoring, two surface water samples were collected and analyzed for the parameters listed in Attachment IV of the permit.

The ground water and surface water monitoring program at the Trail Ridge Landfill incorporates monitoring elements to provide environmental protection post closure. All field work, sampling methodologies, data evaluation, data QA/QC, and laboratory analyses were conducted in accordance with the site permit, and the sample team and National Environmental Laboratory Accreditation Conference (NELAC) standards.

1.1 Background

As identified in the following tables, thirty-seven wells comprise the facilities routine monitoring system with an additional nine wells that are maintained but only sampled if required for assessment monitoring. Seven of the thirty-seven wells are designated background wells, seven wells are designated detection wells and twenty-three are designated as compliance wells. An additional nine compliance wells are part of the permitted groundwater monitoring system but in accordance with Specific Condition 48 of the permit not utilized unless required for assessment monitoring. Monitoring well designations are shown in the following tables.

Location	Well ID
Background	MWB-2(S), MWB-2(I) MWB-3(S), MWB-3(I) MWB-31(D)
Phase I Compliance	MWB-7(S), MWB-7(I), MWB-7(D) MWB-I1(S), MWB-11(I)R MWB-12(S), MWB-12(I), MWB-12(D) MWB-19(S), MWB-19(I), MWB-19(D) MWB-20(S) MWB-21(S) MWB-22(S)
Phase II Compliance	MWB-17(S), MWB-17(I), MWB-17(D)
Phase III & Phase IV Compliance	MWB-13(S), MWB-13(I)
Phase III Detection	MWB-33(S) MWB-34(S)d MWB-34(I), MWB-34(D)
Phase V Compliance	MWB-27(S), MWB-27(I), MWB-27(D) MWB-29(S), MWB-29(I), MWB-29(D)
Phase V Detection	MWB-32(S), MWB-32(I), MWB-32(D)

Specific Condition 48: These wells shall be maintained but will not be utilized unless required for assessment monitoring.

Location	Well ID
Phase I Compliance	MWB-14(S), MWB-14(I), MWB-14(D)
Phase III & Phase IV Compliance	MWB-23(S)
Phase IV Compliance	MWB-24(S), MWB-25(S), MWB-25(I), MWB-25(D), MWB-26(S)

The monitoring wells are installed around the perimeter of the landfill and are screened in three zones within the Surficial Aquifer (Shallow, Intermediate, and Deep zones). The monitoring wells are sampled and analyzed semi-annually for the parameters listed in Attachment III of the permit. Sampling is required by permit to be conducted prior to March 30 and September 30 of each year, with reports submitted to the FDEP for each sampling period no later than April 15 and October 15 each year. A 2-week extension was requested and approved by the FDEP to allow resample results to be incorporated into this report.

Surface water flow at the site mimics topography, with runoff in a predominantly eastward direction and drainage features trending west-east. There are two surface water monitoring sites (designated SW-1 and SW-2). Monitoring location SW-1 is located in a wetland, approximately 200 feet east of the landfill's

stormwater retention pond. Monitoring location SW-2 is located in a west-east trending drainage feature, approximately 500 feet north of the landfill. SW-2 is considered a background sampling location, since it does not receive run-off directly from the landfill area. In accordance with Chapter 62-701, FAC, surface water monitoring is performed on a semi-annual basis in conjunction with the groundwater monitoring schedule.

In accordance with Specific Condition 39 of the operating permit, leachate is sampled annually prior to September 30 and analyzed. Two samples are collected a composite sample (from tanks 1-5 designated LCS) and a sample of secondary leachate collection system (tank 6 designated LDSS). These samples are analyzed for the parameters listed in Specific Condition 39.

Leachate collection pipes that lie on top of the primary liner terminate at the leachate collection sumps. These sumps also collect any leachate flowing along the secondary leak detection system. The sump is designed so that the leachate from the primary and secondary systems is separated. Therefore, it is necessary to have two pumps in each sump, one for the primary leachate collection system and one for the secondary leachate collection system.

The leachate is pumped from the sumps through primary and secondary force mains to six 20,000-gallon storage tanks. Tanks 1 through 5 (interconnected) receive the leachate collected from all of the primary leachate collection sumps via one force main. Tank 6 receives leachate that is pumped through a separate force main from the secondary leachate collection sumps. Previous sampling procedures required sampling of all six tanks. However, since tanks 1 through 5 contain the same leachate, sampling procedures were reduced during the 1997 permit renewal for the site to the collection of two (2) samples (one for the secondary leachate collection tank and one composite sample of the five primary leachate collection tanks).

In accordance with Specific Condition 14, gas condensate from the pump station is sampled semiannually for Toxicity Characteristic Leaching Procedure (TCLP) parameters with the results submitted to the FDEP no later than June 30 and December 31 of each year.

In a letter dated June 15, 2004, FDEP concurred with the site Contamination Evaluation Plan and follow-up letter requesting that the site return to Detection Monitoring and to terminate sampling of the compliance wells. However, because of the timing of this letter and the sample event, compliance wells MWB14S and MWB23S were sampled by the site (e.g. the laboratory sent sample kits). The results show that VOCs were not detected in these samples, further confirming the findings of the evaluation plan. As approved and unless otherwise required by FDEP, these compliance wells will not be sampled during future events and the site has returned to detection monitoring.

Biennial Water Quality Reports are submitted to the FDEP every two years. The last Biennial report was submitted to the Department on September 30, 2005. The facility's permit expires on November 25, 2007 and consistent with Specific Condition 48(m), groundwater samples collected during this event are to be analyzed for the expanded parameter list on Attachment 2 of the permit.

2.0 GROUND WATER MONITORING DATA

The following section contains an evaluation of the ground water monitoring data. The ground water data from each of the compliance wells is compared to the background ground water quality and the applicable water quality standards.

Professional Technical Support Services, Inc. (Pro-Tech) conducted the field activities at the Trail Ridge Landfill, in which ground water elevation data, field measurements, and samples for laboratory analyses were collected. STL-Tampa conducted the laboratory analyses. The FDEP Semi-Annual Ground Water Parameter Monitoring Report forms have been completed and are included in Appendix A. The laboratory reports for the ground water samples are included in Appendix B.

2.1 Field Data

On July 5-8, 2005, Pro-Tech completed the field activities at Trail Ridge Landfill. The field measurements, sample collection, and sample preservation were conducted in accordance with Rule 62-160, F.A.C. and the FDEP Standard Operating Procedures. Prior to purging, depth to water and water level elevations were recorded to the nearest hundredth of a foot from a surveyed reference datum. The water level measurements were utilized for determining water volumes in the well casing and for preparation of ground water contour maps (Figures 1-3) used to determine ground water flow direction and gradient at the site.

The average horizontal gradient across the site indicates that groundwater flow directions and gradients in the three zones are very similar, with the deep zone, on average, having a slightly flatter gradient than the intermediate and shallow zones. It is noted that this observation may at least partially be a result of having fewer data points for the deep zone, resulting in larger interpolations between data points than in the shallow zone. There were no obvious seasonal trends in gradient fluctuations. As noted in previous reports, groundwater flow direction in all three zones is predominantly eastward. Current data reflects little change or variation in flow direction in any of the three zones.

Bladder pumps were used to evacuate a minimum of three well volumes of fluid from within each monitoring well, with exception of monitoring well MWB-13S, which was pumped dry after 1.3 well volumes (2.5 gallons). Following completion of purging activities, samples were collected from the wells using the bladder pumps. During sampling, field parameters including dissolved oxygen, pH, temperature, turbidity, specific conductance, and physical characteristics of the water samples, as well as the meteorological conditions at the time of sampling were noted on the field forms with the field data (Appendix C). Following collection of samples into laboratory provided containers and ice chests; the samples were forwarded to the contract laboratory under signed chain of custody documentation. Trip blanks were submitted for laboratory analyses with the samples.

A review of the field data shows that turbidity measurement reported in monitoring wells MWB-2S (191.8 NTU), MWB-11IR (200.1 NTU), MWB-13S (60.7 NTU), MWB-19S (42.2 NTU), MWB-32S (29.0 NTU), MWB-32I (117.1 NTU), and MWB-33S (49.8 NTU). The ground water turbidity levels in all other wells

that were sampled were below 20 NTU at each of the ground water wells sampled during this monitoring period. These turbidity levels are consistent with historic sampling events.

The pH levels reported for the groundwater samples collected at MWB-2(S), MWB-2(I), MWB-3(S), MWB-3(I), MWB-7(S), MWB-7(I), MWB-11(S), MWB-11(IR), MWB-12(S), MWB-12(I), MWB-13(S), MWB-13(I), MWB-17(S), MWB-17(I), MWB-17(D), MWB-19(S), MWB-19(I), MWB-20(S), MWB-21(S), MWB-22(S), MWB-27(S), MWB-27(I), MWB-27(D), MWB-29(S), MWB-29(I), MWB-29(D), MWB-32(S), MWB-32(I), MWB-32(D), MWB-33(S), and MWB-34(I) were below the FDWS specified range of 6.5–8.5 SU. Based on historical data, such pH levels are characteristic of the site.

2.2 Laboratory Parameters

The ground water samples collected from the site were transferred to Severn Trent Laboratories, Inc. (STL-Tampa) for analyses. The laboratory analyses including the quality control procedures have been conducted in accordance with Rule 62-160, F.A.C. Samples submitted were analyzed within the required holding times, unless otherwise noted in the laboratory reports. Quality control exceedances are discussed in the narrative portion of the laboratory reports for each lot of samples obtained. The monitoring parameters were compared to the ground water quality standards as designated in 62-550.310 and 62-550.320, F.A.C.

A review of the ground water data notes that:

- Total iron exceeded the FDEP secondary ground water quality standard of 300 µg/L at monitoring wells MWB-2(I), MWB-2(S), MWB-3(I), MWB-7(I), MWB-11(S), MWB-11(IR), MWB-12(D), MWB-13(I), MWB-17(S), MWB-17(I), MWB-17(D), MWB-19(S), MWB-19(I), MWB-19(D), MWB-27(I), MWB-27(D), MWB-29(S), MWB-29(I), MWB-29(D), MWB-31(D), MWB-32(S), MWB-32(I), MWB-32(D), MWB-33(S), MWB-34(S), MWB-34(I), and MWB-34(D). Iron concentrations have historically been reported above the FSDWS at this site and are considered to be reflective of natural groundwater conditions in the area. As previously discussed turbidity levels of many of these samples were elevated.

- Vinyl chloride was not detected in MW-34(S). This combined with the last four events makes five events where the vinyl chloride concentration was below the FPDWS. The site appears to have addressed and mitigated the vinyl chloride detections.

- During the original sampling event, several volatile organic compounds (VOCs) were detected at low levels all below primary drinking water standards. Resampling was conducted for the VOCs detected (see Appendix H & I) confirming these compounds were not present in concentrations above the laboratory reporting limit. Those VOCs detected during the original sampling event consisted of:

    - MWB-21S Acetone (17 ug/L) and Toluene (9.4 ug/L). Subsequent resampling confirmed these compounds were not present.
    - MWB-32S Acetone (57 ug/L) and Methyl Ethyl Ketone (MEK) (63 ug/L). Subsequent resampling confirmed these compounds were not present.

- MWB-34D Benzene (0.45 I ug/L -below laboratory reporting limits) and Toluene (1.7 ug/L). Subsequent resampling confirmed these compounds were not present.
- MW-34S Acetone (110 ug/L), MEK (150 ug/L), and Benzene (0.5 I ug/L - below reporting limit). Subsequent resampling confirmed all of these compounds not to be present with the exception of benzene which again was detected at trace levels (0.63 I ug/L) below the laboratory reporting limit.

- During the original sampling event at MWB-34(S) several compounds were detected at concentrations exceeding primary or secondary drinking water standards. This well was resampled for select parameters. These compounds detected include:

  - Sodium was detected during the original sampling event at 520 mg/L, above the PDWS of 160 mg/L. Subsequent resampling indicated sodium at a concentration of 110 mg/L, substantially below the PDWS.
  - Chloride was detected during the original sampling event at 540 mg/L, above the SDWS of 250 mg/L. Subsequent resampling indicated chloride at a concentration of 120 mg/L, below the PDWS.
  - TDS was detected during the original sampling event at 2000 mg/L, above the SDWS of 500 mg/L. Subsequent resampling indicated TDS at a concentration of 600 mg/L, substantially lower but still slightly above the SDWS.
  - Arsenic was detected during the original sampling event at 11 ug/L, slightly above the PDWS of 10 ug/L Subsequent resampling did not detect arsenic, confirming arsenic is not present.
  - Antimony was detected during the original sampling event at 7.8 ug/L, above the PDWS of 6 ug/L. Subsequent resampling did not detect antimony, confirming antimony is not present.
  - Sodium was detected during the original sampling event at 520 mg/L above the PDWS of 160 mg/L. Subsequent resampling indicated sodium at a concentration of 110 mg/L, substantially below the PDWS.
  - Ammonia was detected during the original sampling event at 190 mg/L, above the GCTL of 2.8 mg/L. Subsequent resampling indicated ammonia at a concentration of 27 mg/L, substantially lower but still above the GCTL.

- We note that repairs were made to the leachate piping system last summer immediately adjacent to MWB-34S. These low-level detections may be related to the repairs on the adjacent leachate line that were completed recently. Continued semiannual monitoring to confirm the downward trends and verify that the repairs were successful is warranted. The next scheduled sampling event is in January 2006.

- All other ground water data are below ground water quality standards and are consistent with the historical data obtained.

3.0 SURFACE WATER MONITORING DATA

The following section contains an evaluation of the surface water monitoring data. The surface water data is compared to the applicable water quality standards. The FDEP Semi-Annual Surface Water Parameter Monitoring Report forms have been completed and are included in Appendix D. The laboratory reports for the surface water samples are included in Appendix E.

A review of the surface water data notes that:

- Of the volatile organic compounds (VOCs) monitored for, none were detected above the laboratory reporting limits with the exception of toluene which was detected at SW-1 at 3.8 ug/L. Subsequent resampling confirmed toluene not to be present.

- Total iron exceeded the FDEP Class III surface water standard of 1000 µg/L at surface water sample point SW-1 (2,600 µg/L).

- pH exceeded the lower end of the FDEP Class III surface water standard of 6 SU at surface water sample points SW-1 (4.01 SU) and SW-2 (3.76 SU). These values are consistent with background water quality in this area;

- Dissolved oxygen measured in the field at SW-1 (2.6 mg/L.) exceeded the FDEP secondary water quality standard of 5.0 mg/L;

- Exceedances of regulatory standards (Chapter 62-302, FAC for Florida Class III Surface Waters) were noted in the surface water samples collected at the site. In SW-1, the regulatory standards for dissolved oxygen, pH, and iron were exceeded, and in SW-2 the regulatory standard for pH was exceeded. It is noted that most of these constituents have been detected before at the site and that they are not considered a result of site activities. As these constituents have all been historically detected in both sample locations (i.e., upgradient and downgradient) they are not considered a result of site activities and therefore, no additional action is recommended beyond the routine semiannual monitoring.

All other surface water data are below ground water quality standards and are consistent with the historical data obtained.

4.0 LEACHATE AND CONDENSATE MONITORING DATA

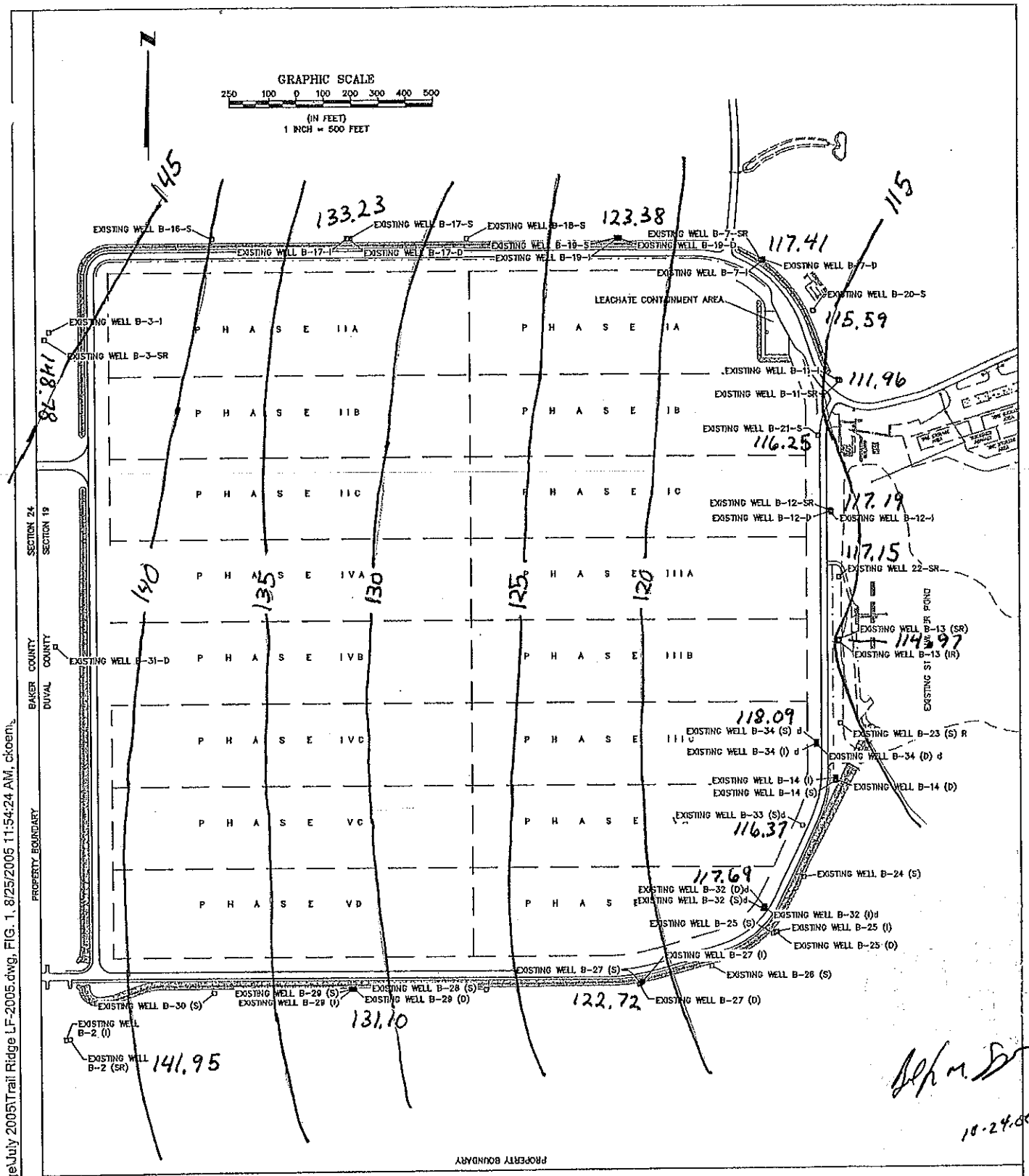
In accordance with Specific Condition 39 of the permit, leachate is sampled annually prior to September 30 and analyzed. Two samples are collected a composite sample (from tanks 1-5 designated LCS), and a sample of secondary leachate collection system (tank 6 designated LDSS) and analyzed for the parameters listed in Specific Condition 39. Leachate samples were collected. No exceedances of regulatory standards (40 CFR Part 261) were noted in the leachate samples collected for analysis.

In accordance with Specific Condition 14, gas condensate from the pump station was sampled for TCLP parameters with the results submitted to the Department no later than June 30 and December 31 of each

year. No exceedances of regulatory standards (40 CFR Part 261) were noted in the leachate samples collected for analysis.

5.0 SUMMARY

The data obtained during the second semi-annual monitoring event in 2005 at Trail Ridge Landfill are generally consistent with the historical data. The only constituents routinely exceeding a ground water quality standard are total iron and pH. These detections are consistent with background water quality. There were some VOC detections in wells MWB-21S, MWB-32S, and MWB-34D that were not verified by resampling. Well MWB-34S was also resampled and the resample showed that only TDS slightly exceeded the SDWS and Ammonia exceeded the GCTL. Continued semiannual monitoring is recommended to track and confirm the downward trends in TDS and ammonia in MW-34S. Total Iron, dissolved oxygen and pH were the only parameters exceeding FDEP surface water standards in the surface water samples. These constituents have all historically been detected in both up and downgradient surface water samples and are not considered a result of site activities. The remainder of the data is below ground water quality standards and is consistent with historical data. The monitoring well network continues to adequately monitor the landfill.



1"=500'

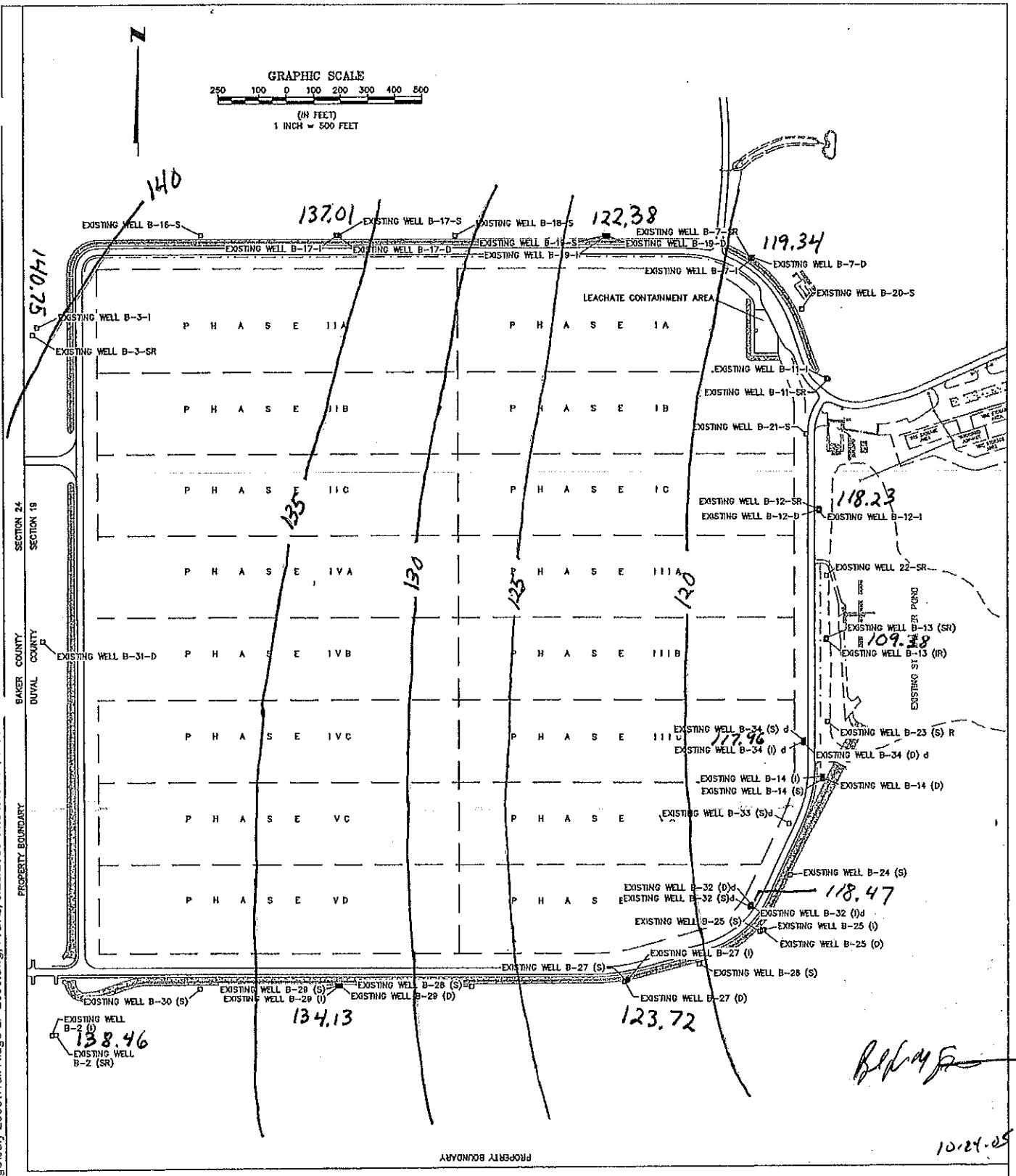
HDR Engineering, Inc.

GROUNDWATER CONTOUR MAP
SHALLOW WELLS
TRAIL RIDGE LANDFILL

Date: SEPT. 05

Figure: FIG. 1

Y:\Waste ...agement\Trail Ridge\July 2005\Trail Ridge LF-2005.dwg, FIG. 1, 8/25/2005 11:54:24 AM, ckoen



10-24-05

1"=500'

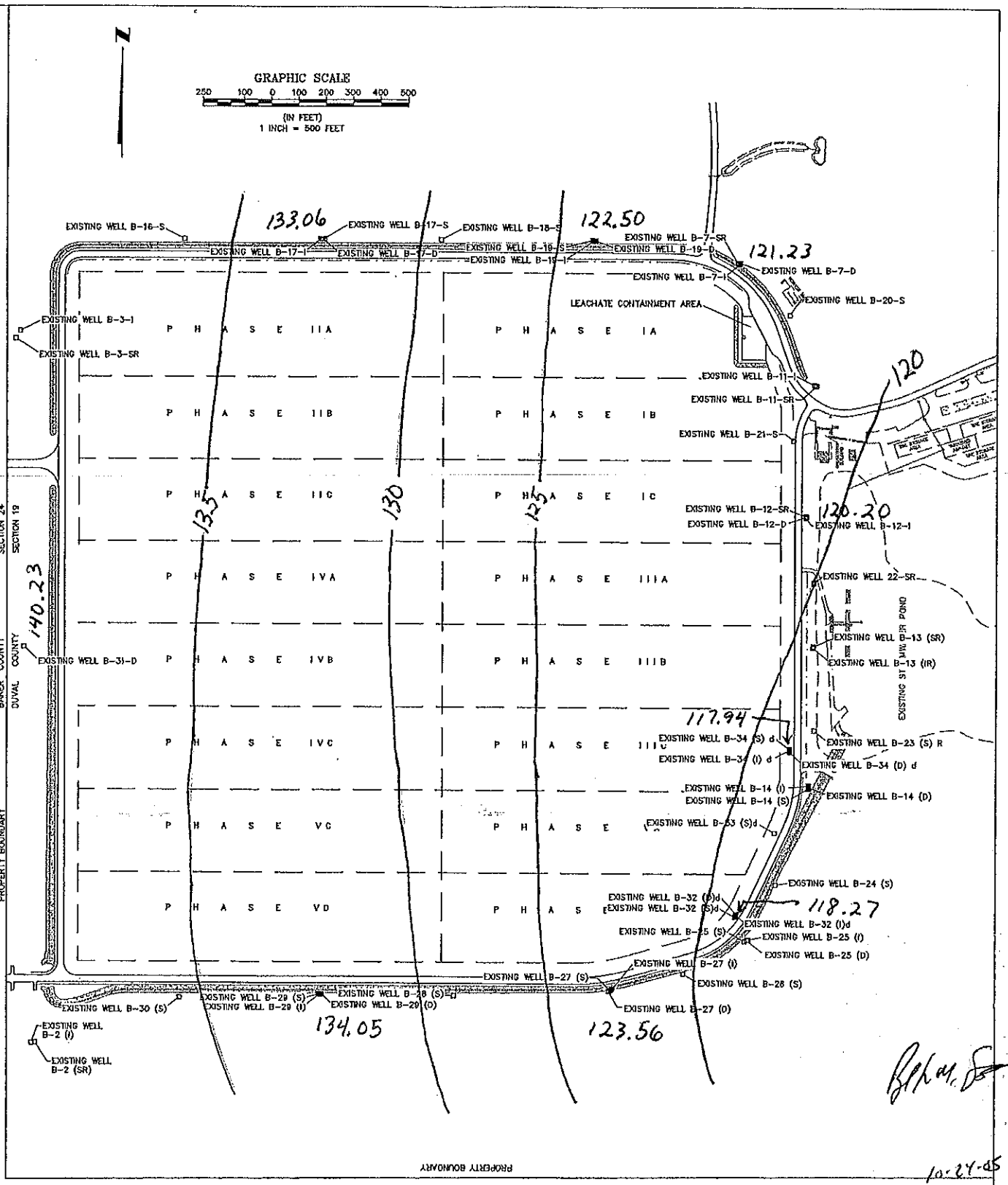
HDR Engineering, Inc.

GROUNDWATER CONTOUR MAP
INTERMEDIATE WELLS
TRAIL RIDGE LANDFILL

Date
SEPT. 05

Figure
FIG. 2

Y:\Wast...agement\Trail Ridge\July 2005\Trail Ridge LF-2005.dwg, FIG. 2, 8/25/2005 11:54:48 AM, ckoer.



10-24-05

1"=500'

HDR Engineering, Inc.

GROUNDWATER CONTOUR MAP
DEEP WELLS
TRAIL RIDGE LANDFILL

Date: SEPT. 05

Figure: FIG. 3

Y:\Wast agement\Trail Ridge\July 2005\Trail Ridge LF-2005.dwg, FIG. 3, 8/25/2005 11:55:31 AM, ckoen

~~FCRU 000536~~
5/29/2020 POD to JEA