

FINAL TIME CRITICAL REMOVAL ACTION WORK PLAN
Ecusta Paper Mill
Brevard, North Carolina

Shaw Project 131497
Revision 3
December 2008

Submitted to:

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Acronyms and Abbreviations

°F	degrees Fahrenheit
µg/L	micrograms per liter
µg/m ³	microgram per cubic meter
ACGIH	American Conference of Governmental Industrial Hygienists
ACM	asbestos-containing material
ARAR	Applicable or Relevant and Appropriate Requirement
ASB	aerated stabilization basin
AST	aboveground storage tanks
ATI	Altamont Environmental, Inc
BFPP	Bona-fide Prospective Purchaser
bgs	below ground surface
BMP	best management practices
C&D	construction and debris
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	chemicals of concern
CWA	Clean Water Act
DAF	dilution-attenuation factor
DPT	Direct-push technology
DRV	Shaw/Davidson River Village
EC	Electrochemical
EDDS	East Drainage Ditch System
EPA	United States Environmental Protection Agency
ERM	Environmental Resources Management
ESA	Environmental Site Assessment
FIRM	Flood Insurance Rate Maps
FSP	Field Sampling Plan
GPS	global positioning system
IHSP	Inactive Hazardous Sites Program
IRIS	Integrated Risk Information System
L/kg	Liters per kilogram
LF	linear feet
MCL	Maximum Contaminant Level
mg/kg	milligram per kilogram
mg/L	milligram per liter
ml/g	milliliters per gram
MW	monitoring wells
NCAC	North Carolina Administrative Code
NCDENR	North Carolina Department of Environment and Natural Resources
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetlands Inventory

Acronyms and Abbreviations (continued)

OSHA	Occupational Safety and Health Administration
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PEL	permissible exposure limit
pH	potential of Hydrogen
PPRTV	Provisional Peer Reviewed Toxicity Values
PQL	practical quantitation limits
PRG	preliminary remediation goal
RAM	real-time air monitor
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental concern
REL	Recommended Exposure Limit
RfD	reference dose
RG	remediation goal (site-specific)
SDDS	south drainage ditch system
SDWA	Safe Drinking Water Act
SL	EPA screening level
SRG	Soil Remediation Goal
su	standard unit
SVOC	semivolatile organic compound
TCE	trichloroethene
TCLP	toxicity characteristic leachate procedure
TCRA	time critical removal action
TLV	threshold limit value
TOC	total organic carbon
UCL	upper confidence limit
U/G	underground
VOC	volatile organic compound
WP	Work Plan
WWTP	waste water treatment plant
XRF	x-ray fluorescence

1.0 Introduction

1.1 Background

Shaw was retained by Davidson River Village, LLC (DRV) to prepare this Time Critical Removal Action (TCRA) Work Plan for the Ecusta Mill site located in Pisgah Forest, Transylvania County, North Carolina. This document presents the time critical removal actions necessary to mitigate the imminent release of contaminants from the site. These removal actions are intended to remove source material as required by the United States Environmental Protection Agency's (EPA) Bona-fide Prospective Purchaser (BFPP) Agreement and Order of Consent with DRV. The proposed actions will allow for the immediate response to, and removal of, contamination associated with the manufacturing operations at the facility during the redevelopment. Screening and investigation plans for sub-building slabs and soils will ensure that contamination which is discovered during the redevelopment activities will be investigated and mitigated.

The Ecusta Mill Site is considered by the EPA Region 4 and the North Carolina Department of Environment and Natural Resources (NCDENR) Superfund Section to consist of five areas of concern requiring TCRA. The areas are the Olin Disposal Area, the East and South Drainage Ditches, the soil underlying the building slabs, the Electrochemical Building demolition, and the Rifle Range (Figure 1-1). This document was prepared following EPA guidance on conducting time critical removal actions under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (August 1993). The following sections provide a description of the site, cleanup goals, a summary of previous assessments, and a description of planned assessments and removal actions.

1.2 TCRA Objectives

As specified in the BFPP, the objectives for this TCRA are to:

- Drainage Structure Removal, excavation and disposal of contaminated soils in the East and South Drainage ditches;
- Investigation and hot spot removal of the Olin Disposal Area;
- Slab removal for identified buildings, or slab break-up;
- Visual inspection and field screening of the slabs and the subsurface soils in the area where slabs are to be removed;
- Sub-building soil sampling on a grid at the machine shop and the printing building;

- Excavation and off-site disposal of soil in the Rifle Range area with contamination exceeding 400 milligrams per kilogram (mg/kg) of lead;
- Demolition of Building 58 and Building 56; and,
- Characterization of Building 58 and 56 structures and debris

This TCRA Work Plan and supporting documents have been prepared to describe and guide the activities undertaken to achieve these objectives.

1.3 Work Plan Organization

The introduction provided in this section is followed by a site background in (Section 2), the contaminants of concern and the cleanup goals (Section 3), the Olin Disposal Area Work Plan (Section 4), the Drainage Ditches Work Plan (Section 5), the Building Slabs Work Plan (Section 6), the Electrochemical Building Demolition Work Plan (Section 7), and the Rifle Range Work Plan (Section 8). Section 9 describes the project organization, while Section 10 provides the schedule for implementing the TCRA activities.

This Work Plan will be implemented in accordance with the Site Control Plan, Field Sampling Plan (FSP), Quality Assurance Project Plan, and the Health and Safety Plan. These documents will be used to guide the proposed field activities required to complete the Time Critical Removal Actions and assessments.

2.0 General Facility Description

2.1 Facility Location

The subject property referred to as the “Site” is located at 1 Ecusta Road in Pisgah Forest (Transylvania County), North Carolina. The main facility, which is located at 1 Ecusta Road, lies approximately 2.5 miles northeast of downtown Brevard. A topographic location map for the subject site is presented as Figure 2-1. A property map of the site is provided as Figure 2-2. Major features of the facility are shown in Figure 2-3 and facility buildings are shown in Figure 2-4.

2.2 Facility Description and Operational History

2.2.1 Facility Description

DVR LLC owns a number of properties associated with the operation of a specialty paper mill in Pisgah Forest, Transylvania County, North Carolina. These properties include:

1. An approximately 527-acre parcel, which includes:
 - A. An approximately 370,000 square foot of abandoned cellophane plant
 - B. An approximately 75-acre aerated stabilization basin (ASB), which serves as the final process stage of the wastewater treatment plant
 - C. A remote pumping station on the French Broad River
 - D. A rifle range adjacent to the French Broad River
2. One 13-acre property on Ecusta Road.
3. 22 single lot properties located around the periphery of the facility.

A property map and listing of all properties owned by DRV is provided in Figure 2-2.

The main facility property includes a large number of buildings associated with the manufacture and printing of specialty papers, as well as buildings associated with other process support operations. According to the previous published information, the facility has 1.7 million square feet under roof. The primary buildings include:

- A large, multi-story building complex, which houses all primary manufacturing operations (e.g., pulping, bleaching, papermaking, finishing, and converting). This complex includes approximately 1,200,000 square feet of operating space.
- An approximately 40,000 square foot building that houses the rotogravure printing operation (Bldg. No. 6).

- Three warehouses for fiber and finished product storage, comprising approximately 308,000 square feet (Bldg. No.'s 87, 88, and 89).
- An approximately 87,000 square foot water treatment plant (Bldg. No.'s 10, 15, 19, 38, 45, 47, and 54).
- An approximately 73,000 square foot boiler house (Bldg. No. 62).
- A turbine room, which houses four turbine generators (Bldg. No. 43).
- An approximately 12,000 square foot calcium carbonate plant (Bldg. No. 73).
- A wastewater treatment facility (Bldg. No.'s 103, 104, 107, and 108).
- Various shops dedicated to facility maintenance, vehicle maintenance, and painting.
- An approximately 7,500 square foot pilot plant (Bldg. No. 51).
- An abandoned cellophane and rayon film plant and associated buildings. Demolition of the film plant was in progress as of the writing of this report.

The main facility also includes administrative and research buildings (No.'s 2 and 52) and an on-site medical facility (No. 3). In general, these buildings are located on the western side of the main production complex (fronting on Ecusta Road), while other manufacturing support buildings are located on the eastern side of the complex (adjacent to the Davidson River). The majority of the main facility area is paved, with various storm water collection drains located throughout the main facility property.

The ASB consists of an approximately 75-acre basin, 14 feet deep, with a holding capacity of more than 200 million gallons of wastewater.

2.2.2 Operational History

The Property was first developed in 1938 as a paper manufacturing plant by Ecusta Paper Company. In 1949, Olin Industries acquired the facility. Cigarette papers were the only products manufactured at the facility until the mid-1950's when cellophane and rayon production was added with the construction of the film plant. In 1958, printing and lightweight paper production capabilities were added. A wastewater treatment plant was put into service in 1974, followed by the installation of the sludge landfill and the ASB in 1976. In 1985, in conjunction with the purchase of the Property by a corporation of former Olin employees, cellophane and rayon production was discontinued. In 1987, P.H. Glatfelter Company purchased the property which operated the business until 2001 when PURICO (IOM) Limited purchased the facility, forming RFS Ecusta. In 2002, RFS Ecusta declared bankruptcy and all production ceased. In late 2003, The Ecusta Business Development Corporation, LLC acquired the facility. Limited

production of flax pulp resumed on site while some of the buildings and warehouse facilities have been leased for use of local businesses. In 2007, DRV obtained the property.

Contamination related to former operations at the Site is known and suspected to exist in the soil and may be present in groundwater on the Property. DRV has agreed to certain cleanup requirements by EPA and NCDENR.

2.2.3 Boundary Descriptions

Access to the main process area is restricted by a chain-link fence and guarded gate at the plant entrance. The ASB area has a locked gate at the access point off of Everett Road but is not fenced.

2.2.4 Land cover, Topography, and Vegetation

Based on a review of the United States Geological Survey topographic map for the Pisgah Forest, North Carolina quadrangle, ground elevation at the site is approximately 2,120 feet above mean sea level. The surrounding topography is hilly, although site topography is generally flat.

The soils underlying the subject site are generally classified by the Transylvania County Natural Resources Conservation Services as the Rosman-Toxaway-Transylvania Association. These soils are well drained to very poorly drained, nearly level soils that are underlain by loam and fine sandy loam, or that have subsoil dominantly of silty clay loam. This soil association is found within floodplains.

2.2.5 Surface Water Bodies and Surface Drainage

Portions of the facility are located within the 100-year flood plain based on a review of the Flood Insurance Rate Maps (FIRM) for the area. The ASB and some of the off-site DRV-owned single lots are within the 100-year flood hazard area.

2.2.6 Historical/Archaeologically Significant Features

There are no historical or archaeologically significant features present on the DRV property.

2.3 Planned Development and Land Use

DRV plans to demolish the existing buildings and sell all or a portion of the site to retail and residential developers. Figure 2-5 shows a hypothetical development plan created for discussions with potential developers. Actual development plans will be determined by those developers.

2.4 Area Geology and Hydrogeology

2.4.1 Geology

The subject site is located in the Blue Ridge geologic province adjacent to the Brevard fault zone. The Brevard fault zone is a linear, southeast-dipping thrust fault that forms the boundary between the Inner Piedmont geologic belt to the southeast and the Blue Ridge geologic belt to the northwest. The geology in the vicinity of the site consists of moderate to high grade metamorphic rocks of middle to late Proterozoic age. The rock units include meta-sedimentary and meta-igneous rocks, including gneisses, amphibolites, metagabbros, and quartzite schist. According to the Geologic Map of North Carolina (NCGS, 1985), the site is located within the Brevard fault zone which is characterized by mylonitic and cataclastic rocks.

The general geologic stratigraphy, based on soil borings, geotechnical borings and monitor well borings that have been completed at the site, is summarized below. This stratigraphy provides a general representation of the subsurface conditions at the site. Conditions in localized areas of the site may vary.

Normal Depth (ft. BGL)	Geologic Unit	Remarks
0 - 2	Soil	
2 - 5	Silty organic peat	
5 - 12	Alluvial angular conglomerate	This highly permeable unit hosts a productive perched water zone that underlies the entire facility. The depth to the perched groundwater in this unit is generally less than 10 feet, but may be more than 100 feet in depth locally. Conceptually, this unit acts as an underdrain for the entire facility.
12 - 25	Saprolite	Hard schistose green saprolite. The water table occurs in the saprolite unit at a depth of approximately 10 to 20 feet.
From 20 to >100 feet	Bedrock	The depth to top of bedrock is highly variable and ranges from 20 feet to more than 100 feet. Bedrock is assumed to consist of mylonitic and clastic rocks of the Brevard fault zone.

Saprolite is chemically weathered bedrock that has the appearance of compact clayey to sandy soil, with original bedrock textures and features preserved.

2.4.2 Hydrogeology

The area hydrogeologic setting consists of a vadose or unsaturated zone within the alluvium above the groundwater table. The groundwater table lies within the alluvium and is recharged by infiltrating precipitation. The groundwater in the shallow water table aquifer moves horizontally until it discharges into surface waters. The surface of the water table is typically a subdued replica of the topographic surface and is generally near the ground surface in streams/valleys

(discharge areas) and is somewhat deeper beneath ridges and hills (recharge areas). Specifically, at the mill it is expected that shallow groundwater moves under relatively flat gradients with eventual discharge to the Davidson River.

The occurrence and movement of groundwater in the Inner Piedmont and Blue Ridge provinces is generally within two separate, but interconnected, water bearing zones. A shallow water-bearing zone occurs within the saprolite zone, and a deeper zone occurs within the underlying bedrock. Groundwater in the shallow saprolite zone occurs in the interstitial pore space of the saprolite. The depth to groundwater in the saprolitic zone can range from 20 to more than 50 feet along ridges and upland areas. In low lying stream valleys, the groundwater level will approach the local surface water elevations in stream channels. Groundwater flow in this zone is typically governed by water table conditions. This means that groundwater will flow under unconfined conditions and generally mimic topography. Therefore, groundwater movement will be from upland areas (recharge zones) to nearby surface streams (discharge zones).

The occurrence and movement of groundwater in the deeper water-bearing zone within crystalline bedrock is controlled by secondary joints, fractures, and faults within the bedrock. Groundwater within the bedrock zone may be under confined or unconfined conditions. The occurrence and movement of groundwater is difficult to predict on a small scale due to the erratic nature of the secondary openings that control groundwater flow in bedrock. Small surface water features generally do not provide an accurate indication of the direction of groundwater movement in bedrock. However, on a regional scale, the direction of groundwater movement will generally be from upland areas to major surface streams downgradient.

2.5 Surrounding Land Use and Populations

2.5.1 Surrounding Land Use

The main facility is located in a lightly developed area with mixed land uses. The main facility is bordered by Ecusta Road to the west and the Davidson River to the east. Highway 64 lies to the north of the main facility, beyond which lies limited commercial and residential development and the Pisgah National Forest. Although the main facility is located near the Pisgah National Forest, state regulators have not considered the DRV properties to be located within a wilderness area (i.e., Class I area). Land use to the west (across Ecusta Road) and south of the main facility is predominantly residential, although a cement manufacturing facility is also located in the vicinity. Residential properties and agricultural land lie to the east of the main facility, across the Davidson River.

One off-site adjacent property, Pisgah Shell Service, located at 1598 Asheville Highway, appears to represent a recognized environmental condition to the subject site. Facility personnel also report that two former service stations were located across from the main facility on the west side

of Ecusta Road. However, these former service stations could not be identified in the available historical aerial photographs of the facility.

2.5.2 Description of Drinking Water Sources and Potentially Impacted Populations

The Site is not served by city water. An on-site water treatment system was used to treat water from the Davidson River for drinking water purposes. Two on-site groundwater wells are located on-site but have not been used in several years. They are upgradient of any known contamination. These wells were tested in 2003 as part of the Phase II Environmental Site Assessment by Environmental Resources Management (ERM).

There are no residences using groundwater within ¼ mile of the Site. The closest residences are located about 500 feet south of the site and are connected to city water.

2.6 Sensitive Ecosystems

2.6.1 Wetlands

In the Phase I Environmental Site Assessment (ESA) conducted by ERM, they reviewed the National Wetlands Inventory (NWI) data (as presented in the EDR database report) published by the U.S. Department of the Interior, Fish and Wildlife Service for the subject site. The NWI indicated that the ASB was classified as a wetland. No other areas of the property have been classified as wetlands. The nearest off-site wetland location was along the banks of the French Broad River.

2.6.2 Endangered and Threatened Species

No Threatened or Endangered Species have been observed on the Site.

2.6.3 Connection to the Human food Chain

The Davidson River supports recreational fishing.

2.7 Meteorology

The climate of Transylvania County is mild and temperate. Average temperature is 38 degrees Fahrenheit (°F) in winter and 85 °F in summer (National Climatic Data Center). The normal annual total precipitation for Transylvania County is 65.8 inches.

3.0 Development of Removal Action Goals

A streamlined risk evaluation was performed in accordance with the guidelines provided in the Enforcement Action Memorandum (EPA, 2008a). Since the “overall plan for the Site calls for transition to the NCDENR Inactive Hazardous Sites Program (IHSP) after the time-critical and non-time critical Removal actions are completed, this removal action will utilize methodologies and Action Levels based on NCDENR IHSP regulations and guidance.” Furthermore, the State Applicable or Relevant and Appropriate Requirements (ARARs) were identified by NCDENR in a August 6, 2007 letter. Remedial action goals were developed for soil and groundwater by taking into consideration media of concern, NCDENR IHSP regulations and guidance, and state and federal ARARs.

3.1 Remedial Action Objectives

The following remedial action objectives were developed for the TCRA:

- Protect human health and the environment under current and potential future land use scenarios.
- Comply with ARARs identified for the selected removal action

3.2 Identification of Media of Concern

3.2.1 Human Health Risk-Based Media of Concern

Previous site investigations conducted at the Ecusta Mill site has shown concentrations of analytes in surface soil (0 to 12 inches) and subsurface soil (below 12 inches) at the site exceeded the EPA’s preliminary remediation goals (PRGs) (now referred to as the screening levels [SLs]) and/or NCDENR’s default soil remediation goals (SRGs) updated August 2007. Therefore, surface and subsurface soil were identified as media of concern. Groundwater was determined to be a medium of concern since groundwater concentrations exceeds EPA’s Maximum Contaminant Levels (MCLs) for Drinking Water and/or NCDENR’s North Carolina Administrative Code (NCAC) 15A.NCAC.2L Standards for groundwater (known as 2L Standard). Surface water or sediments are not media of concern at any of the sites considered as part of this TCRA Work Plan (WP).

3.2.2 Ecological Risk-Based Media of Concern

The Ecusta Plant site will be redeveloped for residential and commercial purpose that will provide little suitable ecological habitat. It is concluded that without a complete exposure pathway, there is not a potential for significant ecological impact; therefore, no ecological risk-based media of concern were identified.

3.3 Identification of Chemicals of Concern

In this section, the nature and extent of contamination at the Site was reviewed to identify the chemicals which may present a risk to human health. Chemicals of concern (COCs) were identified from the data using established criteria as outlined in RAGS Part D (EPA, 1998). The COCs are the chemicals at the site that are most likely to contribute significantly to cancer risks and non-cancer health effects thereby causing a public health concern.

3.3.1 Data Evaluation

Sections 4.0 to 8.0 of this report present the locations of soil and groundwater sampling points and analytical results for the Site. Analytical results were reviewed for appropriateness for use prior to selection of COCs.

Analyses from monitoring well (MW) MW-16S for sample collected on February 22, 2007 were excluded from consideration because turbidity in the sample could not be reduced below 472 nephelometric turbidity units. Similarly, metal analysis from groundwater samples collected from temporary wells were excluded as these results were questionable and could not be verified by sampling of permanent monitoring wells. However, metal results from temporary wells at the drainage ditches were retained for COC determination as permanent monitoring wells are not available next to the drainage ditches.

3.3.2 Screening for COCs

The screening procedure to determine COCs for human health was completed separately for soil and groundwater on Table 3-1 and Table 3-2, respectively. Risk-based screening for soils was completed by screening the maximum detected concentration of each chemical against the appropriate soil EPA SL (EPA, 2008c) based on residential land use and NCDENR IHSP default SRG for residential land use. The MCLs and NCDENR 2L standards were identified as ARARs for groundwater at the site. The screening for groundwater was completed by screening the maximum detected concentration of each chemical against the appropriate EPA's MCL and NCDENR's 2L Standard. Screening for groundwater COC's at the Building Slabs and ElectroChem Building Demolition was deferred to the non-time critical removal actions where site-wide groundwater issues will be addressed.

Chemicals were not eliminated as COCs during the screening stage based on a comparison with background data (except arsenic) or essential nutrients. Arsenic concentrations in background soils in Western North Carolina are high (19.5 mg/kg as per Harry Zinn of NCDENR [August 19, 2008]) compared to EPA SL or NCDENR default SRG. Therefore, arsenic concentration below 19.5 mg/kg was considered naturally occurring and was used to eliminate unnecessary COC.

3.3.3 *Summary of COCs*

The COCs selected for soil and groundwater at the Site are summarized in Table 3-3 by the area of concern. Arsenic, mercury, and four polynuclear aromatic hydrocarbons (PAHs) were identified as soil COCs for the Olin Disposal Area. Iron, lead, and manganese were identified as COCs for groundwater at the Olin Disposal Area.

Mercury was identified as soil COCs for the drainage ditches. Lead and mercury were identified as COCs for groundwater at the drainage ditches primarily due to detection in the groundwater sample collected from temporary wells with questionable turbidity.

Chromium and trichloroethene (TCE) were identified as preliminary soil COCs for the building slabs. Chromium is a soil COCs only if it exists as hexavalent chromium. However, analysis was performed for total chromium. Therefore, chromium was retained as a soil COC. Since soil samples were not analyzed for polychlorinated biphenyls (PCBs), pesticides, herbicides, and dioxin during previous investigations, these will be retained as potential COCs. Soil samples sent to the lab will be analyzed for these as well as two COCs identified based on the results of the previous investigations. Other analytes identified during the investigation will be screened according to the procedures described in Section 3 to determine if they are classified as COCs. COCs for groundwater at the building slabs will be determined later during the non-time critical removal actions.

COCs for the Electrochem building will be determined later during the non-time critical removal action. Lead was the only soil COC at the Rifle Range. No groundwater COCs were identified at the Rifle Range.

3.4 *Remedial Goals for Groundwater*

Since the overall plan for the Site calls for transition to the NCDENR IHSP after the time-critical and non-time critical removal actions are completed, this removal action will utilize methodologies and remediation goals based on NCDENR IHSP regulations and guidance. According to the Guidance for Assessment and Cleanup for ISHP (August 2007), the remediation goals for groundwater are equal to the lower of the following:

1. groundwater standards established under 15A.NCAC.2L
2. Federal MCLs, and
3. the non-zero MCL Goals

When none of these exists, the most current SLs for tap water established by EPA (EPA, 2008c) will be used. Remediation below the practical quantitation limits (PQL) (for analytical methods listed in Section A.7.1.2 of the Guidance for Assessment and Cleanup) or site-specific natural background level for metals is not required. Approved analytical methods are SW-846 methods

for mercury, EPA 8270 for semi-volatile organic compounds (SVOCs), and EPA 8260 for volatile organic compounds (VOCs).

Site-specific natural background levels for metals have not been developed at this point, so they will not be used. If site-specific background levels are developed in the future, remediation goals for groundwater will be adjusted accordingly.

Table 3-4 provides groundwater remediation goals and basis for them. Groundwater remediation goals for additional soil COCs (4 PAHs and TCE) were also developed as they would be required while developing soil remediation goals protective of groundwater. Groundwater remediation goals for PAHs were limited by the PQL.

3.5 Remedial Goals for Soils

Site-specific remediation goals (RGs) should meet criteria for health-based goals and protection of groundwater.

3.5.1 Human Health-Based Site Specific RGs

Health-based RGs for the IHSP are based on current EPA risk assessment guidance.

3.5.1.1 Exposure Pathway Analysis

An exposure pathway is composed of a contaminant source; a mechanism by which the chemical is released to the environment; a medium by which the chemical is transported to the location of exposure; an exposure point where the chemical is presented to a potential receptor; and an exposure route by which the chemical enters the receptor's body. A complete exposure pathway includes all of these components. A complete pathway simply indicates that the potential for presentation of a chemical to a receptor is possible; the reality of a toxicological response is a function of both dose and exposure. Figure 3-1 is the conceptual exposure model for soils at the Site.

Resident, construction worker, or trespassers could be exposed to chemicals contained in surface soil through ingestion, dermal absorption or inhalation of fugitive dust. It is estimated that the resident is the most impacted receptor to surface soils due to long term exposure.

Residents can be exposed to volatile chemicals contained in subsurface soils through inhalation of indoor air. Construction worker can be exposed to chemicals contained in subsurface soils through ingestion, dermal absorption or inhalation of fugitive dust and vapor in soil excavations. It is estimated that the construction worker is most impacted to subsurface soils due to multiple routes of exposure routes that includes potential direct contact. Since soil could be displaced by future construction activity, exposure to soils down to a depth of 8 feet was considered feasible.

Residents and the construction worker could also potentially be exposed to soils leaching to groundwater through ingestion, dermal absorption, or inhalation of volatiles.

3.5.1.2 Exposure Factors

The exposure scenarios presented in this risk assessment are consistent with the Reasonable Maximum Exposure concept presented in the EPA guidance documents (EPA, 1989). That is, the length of time and the amount of exposure to the chemicals was the maximum that would be reasonably expected given the assumptions of exposure. Exposure factors were developed for each exposure pathway to form the exposure scenarios for the most impacted receptor for each source. The factors used for the exposure scenarios were consistent with the exposure factors presented on the North Carolina IHSP website which were developed based on information in the following EPA documents:

- Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, Part A (1989), Part E (2004), Supplemental Guidance (1991), and
- Update to Exposure Factors Handbook (1997).

The exposure factors are summarized on Tables 3-5 and 3-6.

Exposure to Surface Soil

Residents may be exposed to contaminants in the surface soil (defined as 0 to 12 inches below ground surface) through direct contact with soil, inhalation of fugitive dust and inadvertent ingestion of soil. Exposure duration for lifetime residents is assumed to be 30 years total (EPA, 2008c). For carcinogens, exposures are combined for children (6 years) and adults (24 years). Exposure factors for resident's exposure to surface soil are summarized in Table 3-5.

Exposure to Subsurface Soil

Exposure scenario for subsurface soils (at depths greater than 12 inches below the ground surface) included a construction worker exposed to soils. Exposure factors for these scenarios are summarized in Table 3-6. It is assumed that construction worker will be exposed to subsurface soils 20-week (100-day) construction cycle.

3.5.1.3 Toxicity Assessment

Human health risk assessments are performed to quantify the potential health risks which may exist in areas where chemicals are not properly contained and where human exposure is possible. Estimates of current and potential future exposures are coupled with knowledge of the health effects of the chemicals involved to yield numerical estimates of the potential health effects which may result from these exposures.

The toxicity factors for the COCs, including oral and inhalation reference doses (RfD) and oral and inhalation potency factors, were summarized on Tables 3-7. Cancer slope factors are summarized in Table 3-8. Toxicity factors sources used for human health risk assessments are prioritized into three Tiers as specified by the EPA (EPA, 2003). The three tiers are as follows:

- **Tier 1 – Integrated Risk Information System (IRIS)** (EPA, 2008b).
- **Tier 2 – EPA Provisional Peer Reviewed Toxicity Values (PPRTVs).** The Office of Research and Development/National Center for Environmental Assessment/Superfund Health Risk Technical Support Center develops PPRTVs on a chemical specific basis when requested by EPA's Superfund program.
- **Tier 3 – Other Toxicity Values.** Tier 3 includes additional EPA and non-EPA sources of toxicity information. Priority should be given to those sources of information that are the most current, the basis for which is transparent and publicly available, and which have been peer reviewed.

The toxicity factors used in this risk assessment were obtained from EPA web-site (EPA, 2008c) and individually verified using IRIS to ensure the factors were current.

For dermal contact, exposure was quantified as a dermally absorbed dose. Since toxicity factors are based on an administered dose, the factors were adjusted to an absorbed dose in order to calculate the hazard index and cancer risk for the dermal pathway. The oral RfD was adjusted by multiplying by the absorption factor for the particular chemical to derive the dermal RfD. The oral slope factor was adjusted by dividing by the absorption factor to derive the dermal slope factor. Chemical specific absorption factors were obtained from the EPA website (EPA, 2008c).

3.5.1.4 Human Risk Characterization

In keeping with EPA guidance, reasonable maximum estimates of exposure to chemicals were developed for each pathway. These estimates were likely to approximate those which could be experienced by the most heavily exposed individuals at the site and were likely to exceed the average exposure levels by a substantial margin.

Carcinogenic Risks

The incremental cancer risk due to exposure to a chemical is calculated from the EPA's risk assessment guidance procedure (EPA, 2008c). NCDENR's IHSP allows the maximum cumulative excess cancer risk in the range of 1×10^{-6} to 1×10^{-4} . A target excess cancer risk of 1×10^{-5} was used for each COC because the maximum number of carcinogens present at any site is five. This will ensure that the cumulative excess risk does not exceed 1×10^{-4} .

Non-Carcinogenic Risks

The potential for adverse effects associated with chronic exposures to non-carcinogens were characterized using the ratio of the intake to the RfD for that chemical. Since different chemicals target different organs and organ systems, hazard quotients were summarized across pathways grouped based on the target organs. The sum of the hazard quotients is called the Hazard Index. Arsenic, chromium, mercury, and trichloroethene are the soil COCs with non-carcinogen effects at the former Ecusta Paper Mill site. These COCs target different organs and organ systems except for mercury and trichloroethene both targeting central nervous system but they are not present at the same site. According to NCDENR IHSP, hazard quotients for non-carcinogens in the same critical group should be added to obtain hazard index and hazard index should not exceed 1.0 (NCDENR, 2007). Therefore, hazard quotient of 1.0 was used for all non-carcinogens.

3.5.1.5 Direct Contact RGs

Calculations for direct contact RGs is presented in Appendix A and results are summarized in Table 3-9. Direct contact RGs are listed by areas as different COCs are present in each area. Note that the direct contact RG for arsenic is less than the background concentration for arsenic in Western North Carolina (19.5 mg/kg) (NCDENR, August 2008). EPA (EPA, 2008c) and NCDENR IHSP (NCDENR, 2007) does not require cleanup below the natural background. Therefore, arsenic RG was adjusted to the background soil value of 19.5 mg/kg for surface soils.

3.5.2 RG Based on Groundwater Protection

This section presents development of soil RGs based on groundwater protection for the drainage ditches, Olin Disposal Area, and rifle ranges sites. Sufficient site-specific data are present to develop RGs protective of groundwater for these three sites. For the remaining sites, additional data will be collected during the implementation of this TCRA WP that will be used to develop the site-specific RGs protective of groundwater quality. Section 3.5.2.4 presents proposed procedure for development of RGs for the remaining sites.

3.5.2.1 Drainage Ditches

Some of contaminated soils at the drainage ditches are in contact with groundwater while others are within one foot of the groundwater table. Mercury was not detected in any of eight monitoring wells located along the drainage ditches suggesting that mercury level in drainage ditch soils are protective of groundwater quality (see Section 5.6.3 for further detail.) Therefore, RGs protective of groundwater quality for drainage ditch were not developed.

3.5.2.2 Olin Disposal Area

The lower limit on the RGs protective of groundwater quality at the Olin Disposal Area were developed using standardized equations presented in EPA's *Soil Screening Guidance Document: User's Guide, Second Edition* (1996b):

$$C_s = C_w \left(\frac{K_d + \theta_w + \theta_a K_H}{\rho_b} \right) (DAF)$$

Where

C_s	= concentration in soil or the soil screening level (dry weight basis)
C_w	= groundwater remediation goal
DAF	= dilution-attenuation factor
K_d	= distribution coefficient or adsorption coefficient
K_H	= dimensionless Henry's Law constant
ρ_b	= bulk density
θ_a	= air filled porosity
θ_w	= water filled porosity

A default dilution-attenuation factor (DAF) of 20 was used to account for natural processes (adsorption, degradation, mixing with groundwater) that reduce contaminant concentrations in the subsurface. EPA recommends default DAF for source size less than 0.5 acres and suggests that a DAF of 20 may be applicable for larger sources as well. Contamination at the Olin Disposal Area appears in small hot spots. Therefore, DAF factor of 20 is appropriate for the Olin Disposal Areas.

Adsorption coefficients for organic COCs was calculated from the following relationship:

$$K_d = f_{oc} K_{oc}$$

Where f_{oc} is the naturally occurring carbon content of soil and K_{oc} is the organic carbon-water partition coefficient. A default value of f_{oc} of 0.6% (EPA, 2004) was used in initial calculations. The K_{oc} is a property of organic COC and will be obtained from Montgomery (1996).

RGs Protective of Groundwater

Table 3-10 shows development of RGs protective of groundwater including input parameters and calculations for the known organic COCs at the Olin Disposal Areas

3.5.2.3 Rifle Range

Lead at the Rifle Range is expected to occur in top one-foot of soils. Impact to subsurface soil is expected to be limited. Therefore, EPA's VLEACH Model was selected to model soil to groundwater impacts at the Rifle Range. VLEACH was initially developed for the USEPA in

1990. It has been updated since then, and the current version is V2.2. The vertical soil column in VLEACH can be represented by multiple zones, each with its own initial soil concentration. In each time step, total mass is calculated in the top zone including infiltrating water (at zero concentration). Once total mass is calculated, the equilibrium equation is used to distribute total mass into three phases (adsorbed to solids, liquid, and gas). The amount of infiltration received in one zone is discharged to the next zone with a concentration equal to the equilibrium liquid phase concentration. These calculations are repeated for each zone moving from top to bottom of the soil column. Leachate discharged from the bottom zone is mixed with groundwater. In addition to using equilibrium equations, the VLEACH model limits liquid phase concentration (C_w) to the saturation limit for the contaminant. VLEACH model ignores biodegradation and dispersion. Therefore, VLEACH overestimates impact to groundwater. VLEACH does not account for dilution of leachate as it mixes with groundwater. However, this can be added externally by using dilution factor calculations shown above.

Input parameters for VLEACH include infiltration rate, dry bulk density, water filled porosity, adsorption parameters, zone (cell) thickness, time step, and initial soil concentrations. It was estimated that the infiltration rate in conditions similar to the Rifle Range site would range from 10 to 15 inches per year. Higher infiltration rate would result in earlier impact to groundwater. Therefore, the infiltration rate was conservatively assumed to be 15 inches per year or 1.25 feet per year for VLEACH calculations.

Dry bulk density was assumed to be 100 pounds per cubic feet which equates to 1.6 grams per cubic centimeter. This is a typical value for silty clayey sands and also a default value as per EPA (1996b). Water filled porosity is less than the total porosity in unsaturated soils above the water table. Water filled porosity was assumed to be 30 percent (EPA, 1996b).

Smallest zone (cell) thickness that can be used within the model limitations should be used. Zone thickness of 0.1 feet was used. Time step for calculations should be small enough so that vertical migration of infiltration is less than the thickness of the zone (cell). For recharge rate of 15 inches per year and zone (cell) thickness of 0.1 feet, time step should be less than 0.08 years. A time step of 0.05 years was used in the calculations. VLEACH calculations were performed for 1,000 years for vertical migration. Calculations were performed at each time step and predicted leachate concentrations were printed out at 50 year time increments due to slow migration of lead.

The adsorption coefficient (K_d) for lead is pH dependent. The adsorption coefficient was calculated from site pH values and the equation presented in *Understanding Variation in Partition Coefficient, K_d , Values* (EPA, 1999). The equation is as follows:

$$K_d \text{ (ml/g)} = 1639 - 902.4(\text{pH}) + 150.4(\text{pH})^2$$

The K_d values for lead for an average pH of 6.33 was calculated to be 1,953 ml/g (1,953 L/kg).

Lead contamination at the Rifle Range is expected to be limited to the top one foot. However, to estimate worst-case groundwater impact, it was assumed that the maximum observed lead concentration of 1,900 mg/kg is applicable to the top 4 feet of soil column and it applies to the complete areal extent of the Rifle Range site. Soil column from 4 feet to 10 feet was considered clean soil. Background soil lead concentrations are not available for the site. Therefore, lead concentration for clean soil was assigned to be zero. In this approach, VLEACH will predict additional impact to groundwater from leaching of contaminated soils. Concentration of recharge water was set to zero to simulate rainfall containing no lead.

Appendix A presents VLEACH predictions of leachate concentrations as a function of time and depth. These calculations show that lead migrates very slowly and would have impacted leachate concentrations (less than 1 micrograms per liter [$\mu\text{g/L}$]) to a depth of 6 feet in 1,000 years which is 2 feet below the assumed worst-case initial soil contamination. This demonstrates that lead contamination present at the Rifle Range is not expected to impact groundwater quality above the groundwater remediation goal of 15 $\mu\text{g/L}$.

3.5.2.4 Proposed Procedure for Developing RGs Protective of Groundwater at the Remaining Sites

VLEACH model will be used to calculate RGs protective of groundwater at the Olin Disposal Area and Building Slabs. The worst case soil impacts for each COCs will be used as input to the VLEACH to determine if it is protective of groundwater remediation goals. If not, VLEACH calculations would be performed to determine the maximum soil concentration that would be protective of groundwater remediation goals presented in Table 3-4. For these calculations, contaminated zone would be assigned a constant concentration.

Adsorption coefficients for organic COCs will be calculated from the following relationship:

$$K_d = f_{oc} K_{oc}$$

Where f_{oc} is the naturally occurring carbon content of soil and K_{oc} is the organic carbon-water partition coefficient. The f_{oc} is site specific and will be obtained from site data. The K_{oc} is a property of organic COC and will be obtained from Montgomery (1996).

Adsorption coefficient for metals is pH dependent. The adsorption coefficient (K_d) for arsenic and chromium will be obtained for the site pH value using the relationships (charts) presented in EPA (1996a). The adsorption coefficient for lead will be calculated using the following equation presented in *Understanding Variation in Partition Coefficient, K_d , Values* (EPA, 1999):

$$K_d \text{ (ml/g)} = 1639 - 902.4(\text{pH}) + 150.4(\text{pH})^2$$

The measured values of K_d for mercury range from 322 to 5,280 l/kg (Battelle, 1989). The lowest reported value of K_d in literature - 322 ml/g (Battelle, 1989) will be used for developing mercury RGs protective of groundwater.

Other input parameters to be used are as follows:

Infiltration rate	15 inches per year
Soil bulk density	100 lbs per cubic feet
Water filled porosity	30 percent
Zone (cell) thickness	0.1 feet
Time step	0.05 years
Maximum time of simulation	1,000 years
Henry's Law Constant	From Montgomery (1996) or EPA (1996a)

3.5.3 Site-Specific Remediation Goals for Soil

Site-specific RGs for soil were calculated to be the minimum of RGs developed for direct contact (Table 3-9) and RGs protective of groundwater (Table 3-10). Table 3-11 summarizes the final site-specific RGs that are protective of direct contact and groundwater use.

The confirmatory sample results will be utilized in determining the residual risk to human receptors by developing a 95 percent upper confidence limit (95% UCL) for each medium using EPA's ProUCL software. Outliers will not be included the 95% UCL calculations and outliers will be treated as hot-spots. The 95% UCL value will be compared to the final site-specific RGs presented in Table 3-11 to determine if removal action is complete or not. The following data sets will be used for calculations of 95% UCL.

- Rifle Range site – Each 50 ft x 100 ft grid leading to the berm and one set for the berm.
- Drainage Ditches – The removal action in the field will be determined based on pre-remediation assessment. The 95% UCLs will be calculated on every 200 feet length of the drainage ditch to include a minimum of two transects.
- Olin Disposal Area – One data set for the North Olin Disposal Area and one data set for the South Olin Disposal Area
- Building Slabs – One set for each contiguous area or different process area as per the direction of the EPA field representative.

3.6 *Applicable or Relevant and Appropriate Requirements*

ARARs are designated by the EPA to be those federal or state laws or regulations that are protective of human health and the environment. Time-critical removal actions are expected to meet ARARs to the maximum extent practical. Although removal actions are not required to fully attain ARARs, the evaluation of removal technologies should consider their ability to achieve compliance with the identified cleanup standards and other requirements. Therefore, an evaluation of ARARs was developed for the removal actions being considered.

A requirement (regulation) under environmental laws such as the Resource Conservation and Recovery Act (RCRA), the Safe Drinking Water Act (SDWA), and the Clean Water Act (CWA), may be either i) applicable, or ii) relevant and appropriate, but not both. Identification of ARARs can only be made on a site-specific basis dependent on specific constituents at the site, the particular actions being evaluated, and the individual site characteristics. Therefore, there are three types of ARARs: 1) chemical-specific; 2) action-specific; and 3) location-specific.

The chemical-specific ARAR analysis is summarized in Table 3-12. Chemical-specific ARARs are health- or risk-based numerical values establishing acceptable amounts or concentrations of a chemical that may remain in, or be released to, the environment. If more than one requirement exists for a chemical, then the more stringent requirements should be used. The Inactive Hazardous Sites Response Act of 1987 was identified as a chemical-specific ARAR for the site. Soil remediation and confirmation sampling and analysis must comply with requirements outlined in the *Guidelines for Assessment and Cleanup*.

The action-specific ARAR analysis is summarized in Table 3-13. Action-specific ARARs are generally technology or activity based requirements or limitations. The following action-specific ARARs were identified for the removal action:

- **RCRA/ North Carolina Hazardous Waste Management Regulations.** Establishes standards which govern the storage, treatment and disposal of excavated soil. Defines chemical concentrations or required treatment levels for land disposal of excavated soil identified as a hazardous waste.
- **Occupational Safety and Health Administration (OSHA).** Establishes levels of chemicals and dust (particulates) above which workers may not be exposed. OSHA standards are applicable to all work at the site.
- **Clean Air Act and North Carolina Pollution Control Requirements.** Establish guidelines for minimizing the generation of particulate emissions (dust).
- **Hazardous Materials Transport Act.** Establishes requirements for off-site transport of a hazardous waste.

- **Solid Waste Disposal Act.** Establishes requirements for off-site disposal of soils not meeting the definition of a hazardous waste.
- **North Carolina Sedimentation Pollution Control Act of 1973.** Provides guidelines for sedimentation controls for land disturbing activities.

The location-specific ARAR analysis is summarized in Table 3-14. Location-specific ARARs set restrictions on the concentration of hazardous substances, actions, or activities solely because of the location of the site (e.g., flood-plains, wetlands, coastal areas, historic places, or sensitive ecosystems). Executive Order on Floodplains was identified as an ARAR for the Rifle Range since it is located within the 100 year flood plain. Therefore, land disturbing activities at the Rifle Range must comply with the substantive requirements and minimize excavation and restore the site to the original grade.

4.0 Olin Disposal Area Work Plan

4.1 Background

This section, which comprises the Olin Disposal WP, describes the assessment and remediation services that will be performed at the Olin Disposal Area, which are associated with the planned redevelopment of the former Ecusta Paper Mill site in Brevard, Transylvania County, North Carolina. This work will be performed in accordance with the Final Draft Removal Action Scope of Work described in the BFPP between EPA and DRV, dated January 7, 2007.

A history of the Olin Disposal Area, the current redevelopment plans, and the environmental land use restrictions are discussed in Section 4.3, “Summary of Previous Investigations and Remediations,” of this WP.

This WP provides a summary of previous environmental investigations conducted at the Olin Disposal Area site and outlines the proposed efforts to identify, characterize, evaluate, and mitigate potential risks to human health and the environment. Proposed activities outlined in the WP are considered part of the TCRA.

4.2 Site Description

This section describes the Olin Disposal Area site and its present and past operations, including waste disposal practices and potential contaminant sources located in the area.

4.2.1 Area Description

Figure 4-1, shows the Olin Disposal Area location on an overall site map. The Olin Disposal Area is an approximately 0.6-acre tract of the site located adjacent to the Davidson River. The area stretches north from the two large waste water treatment plant (WWTP) clarifiers located at Building 108, below Building 102, and terminates east of Building 90 and the adjacent three large diesel fuel storage tanks (see Figure 4-2). The portion of this tract on the north side of the old road is referred to as the “North Olin Disposal Area” and was used pre-1956 for burial of demolition debris, including concrete, brick, and rubble, and for disposal of Sorensen Cell components. The area south of the old road is designated the “Southern Olin Disposal Area” and was used to bury film waste.

4.2.2 History

As shown in Figure 4.2, a dike was built along the Davidson River in the early 1940s to protect the area from flooding. A drainage ditch was located on the western side of the dike (current location of the east ditch), which flowed south, and then discharged into the Davidson River. There was a level area between the dike and the river that could be accessed by a dirt road

constructed over the dike. Material was allegedly deposited between the dike and the river from the late 1940s until 1956. In the North Olin Disposal Area (see Figure 4-2), cracked concrete debris from the Sorensen Cells was buried along with other demolition debris. The Sorensen Cells used mercury to produce caustic and chlorine for the production of paper. This disposal area was described as being located north of an old road leading to the river. The area is divided into two sites with Site 1 being located between the dike and the river and Site 2 being located just west of the dike.

The South Olin Disposal Area was south of the old road and was reportedly used to bury film material along with ash and clinkers from the boiler house. The film material consisted of waste from the manufacture of cellulose film which occurred in an area located in the southwestern corner of the site at another part of the Ecusta plant. The area of film deposits was located south of the old dirt road and adjacent to the current WWTP Clarifier No. 1. After 1956, because there was no more room to bury waste in this location, a new landfill, named the Island Landfill, was created across the Davidson River.

The WWTP clarifiers were constructed around 1974. Prior to the WWTP construction, the Olin Disposal Area was covered over and filled.

4.2.3 Land Cover, Topography, and Vegetation

The site topography at the Olin Disposal Area is generally level between the clarifiers to the south and the three fuel oil storage tanks to the north. The land surface is mostly gravel with weeds and brush growing through the gravel. As the result of recent trench excavation during the due diligence investigations, the ground surface has become uneven, and concrete debris is visible (refer to the photos included in Appendix B).

4.2.4 Surface Water Bodies and Surface Drainage

The Davidson River flows southward, adjacent to the Olin Disposal Area on the east side, just beyond the property's chain-link fence. Beyond the fence line, the ground level drops sharply down approximately 14 feet to the river bed. The west side of the Olin Area is bordered by a gravel roadway, and adjacent to the roadway on the west side is a drainage trench known as the "east drainage ditch." This drainage trench collects storm water that flows southward and then discharges to the Davidson River through a 48-inch pipe at the permitted Outfall No. 2.

4.2.5 Utilities

Several underground (U/G) utilities are located in and around the Olin Disposal Area (see Figure 4-2). Care must be taken to locate and avoid these U/G utilities during excavation and remediation activities, particularly a 12 inch raw water U/G pipe that traverses the middle of the site from north to south. Another major buried pipe is a 48 inch storm drain line that runs

eastward to the Davidson River. Furthermore, numerous other buried pipelines are located in the vicinity of the WWTP.

4.3 Summary of Previous Investigations and Remediations

The following four reports were available and reviewed for information relative to previous investigations at the Olin Disposal Area:

- Phase I Environmental Site Assessment, RFS Ecusta Pulp and Paper Mill, prepared by Environmental Resources Management, June 2003
- Phase II Environmental Site Assessment, RFS Ecusta, Inc., prepared by Altamont Environmental, Inc. (ATI), July 2003
- Phase II Environmental Site Assessment, Ecusta Paper Mill, prepared by Shaw Environmental, Inc., June 2007
- Olin Disposal Area Investigation Report and Addendum, prepared by Shaw Environmental, Inc., January 2008

The following subsections briefly describe these site investigations, sampling activities, and any remediation that occurred at the site where samples were collected and analyzed. A summary of analytical results related to the Olin Disposal Area are presented in Tables 4-1A through 4-1E, Table 4-2, and Tables 4-3A through 4-3D. Relevant figures and diagrams from these previous investigations are also provided as Figure 4-4, “Previous Investigations Data Summary, North Olin Disposal Area,” Figure 4-5, “Investigation Trenches, Cross-Sections, North Olin Disposal Area,” Figure 4-6, “Previous Investigations Date Summary, South Olin Disposal Area,” and Figure 4-7, “Investigation Trenches, Cross-Sections, South Olin Disposal Area.”

4.3.1 Phase I Environmental Site Assessment, June 2003

The Phase I ESA prepared by Environmental Resources Management in June 2003 identified recognized environmental concerns (RECs) as the “old cellophane landfill under WWTP clarifiers,” which corresponds to the southern part of the Olin Disposal Area. The Phase I finding indicated there was a potential for soil and/or groundwater contamination.

4.3.2 Phase II Environmental Site Assessment, July 2003

The Phase II ESA prepared by ATI in July 2003 further investigated the “old cellophane landfill near the WWTP clarifiers.” A temporary well, TW-24-K9-A, was installed and groundwater was sampled. No VOCs were detected, but six metals, including arsenic and mercury, were above North Carolina 2L Standards. The report recommended the installation a permanent monitoring well to continue monitoring the groundwater to determine whether contaminants are leaching from this disposal area, and to further evaluate the area to determine whether the metals were of regulatory concern.

A temporary well, TW-09-K9-A, was installed near the three fuel aboveground storage tanks (ASTs) and sampled. The groundwater sample showed four metals, including mercury, were above North Carolina 2L Standards. A soil sample was also collected, SOIL-09-K9-2.0. No metals in the soil were above the North Carolina Inactive Hazardous Sites Branch threshold criteria for remedial action. However, the Toxicity Characteristic Leaching Procedure (TCLP) analysis on a soil sample contained lead at a concentration above North Carolina 2L Standards, but below the 5 milligrams per liter (mg/L) criteria for characteristically hazardous waste.

The Phase II effort also involved installing a deep permanent well, MW-03-K9, into the saprolite soil layer down to 103 feet below ground near the diesel ASTs. Well installation details are included in Appendix C, "Soil Boring Logs and Well Completion Data, MW-03 and MW-13." Lead was the only metal present in the groundwater sample above the North Carolina 2L Standards (refer to Tables 4-1A through 4-1E for the analytical summary results of this investigation). Figure 4-3, "Olin Disposal Area, Potentiometric Surface Map," depicts a groundwater potentiometric map of the Olin Disposal Area created for the 2003 Phase II ESA. It illustrates that groundwater is flowing southeast towards the Davidson River.

4.3.3 Phase II Environmental Site Assessment, June 2007

The Phase II ESA prepared by Shaw Environmental, Inc. in June 2007 provided a further assessment to better characterize the environmental conditions across the Ecusta property. Permanent well, MW-13, was installed to 13 feet below ground surface (bgs) just west (across the gravel road) of the southern portion of the Olin Disposal Area. Well installation details are included in Appendix C. The groundwater was sampled for VOCs and metals. Table 4-2, "Detected Constituents in Groundwater, Phase 2 Environmental Site Assessment (Shaw, June 2007)," presents the analytical results from this sampling event. The only constituents above North Carolina 2L Standards were iron and manganese, but the elevated iron and manganese levels were explained as naturally occurring.

4.3.4 Olin Disposal Area Investigation Report, January 2008

The Olin Disposal Area Investigation Report and Addendum was prepared by Shaw in January 2008. The purpose of the investigation was to ascertain landfill boundaries by exploratory trenching and to determine contaminants of concern by collecting soil samples from the trenches. This investigation was conducted as part of the pre-purchase due diligence completed by DRV. The report is included in Appendix D, "Olin Disposal Area Investigation Report and Addendum."

4.3.4.1 North Olin Disposal Area

Site 1 of the North Olin Disposal Area (associated with Sorensen Cell debris) was delineated by excavating 11 trenches/pits and collecting 13 soil samples for metals analysis. Table 4-3A, "Detected Analytes for Soil Samples from the North Olin Disposal Area, Olin Area Investigation

Report (Shaw, 2008),” provides a summary of detected analytes from the North Olin Disposal Area. Concrete debris similar to that described as being from the old Sorensen Cells was uncovered in Trench 3. Analyte concentrations were compared with the North Carolina Default SRGs developed under the IHSR Act of 1987. Three soil samples had mercury levels above the default SRG and two locations exceeded the default SRG for arsenic. However, the Default SRGs are based on unrestricted site use and assumes 5 non-carcinogens are present. North Carolina guidelines allow for adjusting SRGs if less than 5 non-carcinogens are present at the site. Since only two non-carcinogens (mercury and arsenic) are present above the screening levels, Default SRGs were adjusted as per the guidelines. The adjusted site-specific RG for arsenic is 19.5 mg/kg (background value) and for mercury is 23.5 mg/kg as shown in Table 4-4. None of the analytes in soil samples collected from the Northern Olin Area exceeded these site-specific RGs. Additionally, analyte concentrations were compared with the EPA Residential SLs, which are based on one non-carcinogen being present. None of the soil samples collected in this part of the Olin Area exceeded the EPA SLs.

Trenches 1, 2, and 3 were dug 10 feet deep. The bottom of the buried material was reached in Trench 3 only, where hard-pan, compacted soil was encountered. It was unclear how deep the buried debris was at Trenches 1 and 2.

Site 2 of the North Olin Disposal Area was not assessed during this investigation.

4.3.4.2 South Olin Disposal Area

The South Olin Disposal Area (associated with film waste) was delineated by excavating 7 trenches/pits and collecting 14 soil samples for metals analysis, plus 10 soil samples for SVOC/PAH analysis. Tables 4-3B through 4-3D provide a summary of detected analytes from the South Olin Disposal Area. Un-degraded cellophane film clusters were unearthed in Trenches 11 and 11A. Analyte concentrations were compared with the North Carolina Default SRGs developed under the IHSR Act of 1987. One metal, arsenic, exceeded the North Carolina Default SRGs and EPA SL from a soil sample collected from Trench 11A. The level (159 mg/kg) was also above the site-specific RG for arsenic of 19.5 mg/kg (background value). Three other soil samples collected from Trench 11 had SRG exceedances and SL exceedances for four PAH compounds: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and benzo(k)fluoranthene. A potential source of these contaminants is thought to be the buried boiler house ash and “clinkers” created from the incomplete combustion of coal.

Trench 11 was excavated to 12 feet deep and Trench 11A down to 6 feet deep. The bottom of buried debris was not found during trenching. The other trenches uncovered what was deemed to be clean native soil at depths ranging from 0 to 6 feet bgs.

4.4 Olin Disposal Area Work Plan Goals

The following goals are proposed for TCRA activities at the Olin Disposal Area as related to this WP:

- Verify local groundwater contours and groundwater flow direction relative to the Olin Disposal Area
- Determine the impact of the disposal material on groundwater, if any
- Confirm the characterization of disposal materials based on soil borings
- Remove contaminated soil “hot spots” where identified
- Determine the vertical extent (depth) of the waste in the South Olin Disposal Area
- Delineate the southern and eastern horizontal extents of the waste in the South Olin Disposal Area
- Determine surficial soil contamination, if any

4.5 Site-Specific Remediation Goals

Site-specific remediation goals for the Olin Disposal Area were developed in Section 3.0 and are summarized in Table 4-4 for soils and Table 4-5 for groundwater. Final soil-to-groundwater RGs cannot be calculated at this time because the contamination distance to groundwater and the soil total organic carbon (TOC) is not known. These values will be calculated after the TCRA investigation is complete. However, calculations presented in Table 3-10 and preliminary runs of VLEACH model indicates that site specific RGs would not be limited by the soil-to-groundwater migration pathway.

4.6 Proposed Field Activities

In order to accomplish the TCRA goals for the Olin Disposal Area, field activities will be conducted as discussed below.

The Olin Disposal Area site is divided into two areas based on historical uses: the Northern Area associated with Sorensen Cell concrete disposal and the Southern Area associated with film waste disposal. The field activities will be discussed in terms of the two areas, where applicable. Work items described below are illustrated on Figure 4-8, “Proposed Sampling Locations, North Olin Disposal Area,” and Figure 4-9, “Proposed Sampling Locations, South Olin Disposal Area.”

4.6.1 Delineation of the Extent of Disposal Area

Samples will be collected using the procedures specified in the Field Sampling Plan. Soil samples will be analyzed for analytes as described in Table 4-6, “Field Sampling Schedule, Olin Disposal Area.”

4.6.1.1 Northern Olin Disposal Area - Site 1

The extent of the North Olin Disposal Area Site 1 has been delineated and representative soil samples have been collected during the Shaw/DRV due diligence investigations. Mercury and arsenic were detected in the soil; however, levels do not exceed the site-specific RGs.

Direct-push technology (DPT) will be used to confirm the analysis for COCs in the North Olin Disposal Area. Four soil borings will be advanced using DPT at the locations shown on Figure 4-8. Samples will be taken at the surface (0 to 12 inches), 6 feet bgs, and at the bottom of the waste which is expected to be 10 to 14 feet bgs at the location that had the highest COCs during the December 2007 trenching investigation. No additional surface soil samples will be collected.

4.6.1.2 Northern Olin Disposal Area – Site 2

Site 2 of the North Olin Disposal Area is shown on Figure 4-8. The area was bounded on the south by the access road across the dike, on the east by the earthen dike, on the west by railroad tracks and on the north by the coal yard. A 50 foot grid will be setup over the area and each grid will be sampled using a DPT rig. The boring will be advanced until clean soil is encountered. The borings will be field-screened for metals in 2-foot intervals using X-Ray Fluorescence (XRF). A soil sample with the highest XRF field screen value at each soil boring location will be sent to the laboratory for metals and PAH analysis. Additional soil samples may be sent to the laboratory based on visual observation of soil samples. Figure 4-8 shows the grid layout and the approximate location of the proposed borings.

4.6.1.3 Southern Olin Disposal Area

The South Olin Disposal Area has been partially delineated and soil samples were taken and analyzed during the Shaw/DRV due diligence investigations. The north and west boundaries of the disposal area have been determined. Five soil borings will be advanced to verify site characterization and to delineate the remaining unknown extent of the disposal areas near the south and east boundaries (see Figure 4-9). The borings will be field-screened for metals in 2-foot intervals using XRF. A soil sample with the highest XRF field screen value at each soil boring location will be sent to the laboratory for metals and PAH analysis. Additional soil samples may be sent to the laboratory based on visual observation of soil samples. Two of the soil samples will be analyzed for TOC content. TOC values will be used to determine fate and transport of PAHs in soil.

Three additional surface soil samples (0 to 12 inches) will be taken from the disturbed areas to use in subsequent residential risk assessments.

4.6.2 Hot Spot Removals

4.6.2.1 North Olin Disposal Area

No “hot spot” removals are anticipated in Site 1 of the North Olin Disposal Area as soil levels are below the site-specific RGs. Any Site 2 removals will be determined following the investigation activities.

4.6.2.2 South Olin Disposal Area

A TCRA will be conducted in this area to remove impacted soil contaminated with high levels of arsenic located near the middle of the test Trench 11A. This trench is shown in the Olin Areas Investigation Report by Shaw dated January 2008. Arsenic contamination was encountered at a 3-foot depth at 159 mg/kg, which is above the site-specific RG of 19.5 mg/kg. Soil will be excavated vertically and laterally until field screening indicates arsenic is no longer present at levels higher than the site-specific RG or the instrument detection levels. The detection level for field screening arsenic using XRF Spectrometry is about 25 mg/kg. Confirmatory soil samples will be collected from the bottom and sidewalls of the excavation for analysis by a certified laboratory. The excavated soil/debris will be placed inside Warehouse 89 to create a stockpile of excavated material that will not be exposed to the elements. This stockpile will remain inside the warehouse until disposal of this material. The excavation will be backfilled with clean borrow soil.

“Cellophane” film waste was also uncovered while trenching in the South Olin Disposal Area. It was buried only 2.5 feet deep in portions of Trenches 11 and 11A. Although the film waste did not appear to be degrading, most cellophane is made from biodegradable cellulose fibers that are not associated with environmental contamination. Therefore, this material will be left in place.

4.6.3 Groundwater Assessment

A temporary groundwater monitoring well (TW-24-K9-A) was installed and sampled down gradient of the disposal area. Samples were analyzed for VOC, SVOC, and metals. This well was below cleanup levels for all COCs. An existing monitoring well, MW-03-K9, is located north of the disposal area which is most likely upgradient; however, it is 103 feet deep.

4.6.3.1 Groundwater Monitoring Well Installation

Two groundwater monitoring wells will be installed at the locations shown on Figures 4-8 and 4-9 to facilitate the collection of groundwater samples and the measurement of groundwater elevations. One new groundwater monitoring well will be installed down gradient and southeast of Trench 2. The second monitoring well will be installed down gradient of Trench 11A. The wells will be installed with screens intercepting the water table, which is expected to be less than

25 feet bgs. All newly installed monitoring wells will have 10-foot screens. Details of the monitoring well construction are shown on Figure 4-10, "Monitoring Well Details." During drilling of the wells, two soil samples will be taken from below the water table and analyzed for TOC.

4.6.3.2 Groundwater Sample Collection and Analysis

One round of groundwater samples will be collected from the new monitoring wells for laboratory analysis for Semi-volatile organic compounds SVOCs by EPA Test Method 8270 and RCRA metals (see Table 4-6). Samples will be collected in accordance with the procedures specified in the FSP. Temperature, pH, conductivity, redox potential, and turbidity will be measured in the field. Groundwater samples will be collected after the field parameters stabilize.

4.6.3.3 Groundwater Elevation Measurement and Survey Data

Groundwater elevations will be measured at the newly installed and existing monitoring wells and piezometers to provide data for the production of a potentiometric surface map for the site. Top-of-casing elevations will be surveyed by a North Carolina licensed surveyor. State plane coordinates will be determined for the new monitoring wells using a global positioning system (GPS). Known existing wells in the Olin Disposal Area to be measured for groundwater levels include: PZ-07, MW-03-K9, and MW-13.

4.7 Fate and Transport Mechanisms and Evaluation

The primary site-related constituents of concern are heavy metals and PAHs. Soil and groundwater with low and high pH contribute to the mobility of the heavy metals; therefore, areas of extreme pH at the site are also of concern. Investigations to date do not indicate there are pH extremes in the area. As rainfall infiltrates through soil containing waste material, the pH may be reduced or increased. When low or high pH water comes in contact with the source contaminant material, heavy metals may be mobilized and transported to groundwater. Therefore, an evaluation will be conducted of the feasibility and need to raise or lower the pH levels of the Olin Disposal Area to reduce this leaching effect of heavy metals into the groundwater.

The likely source of PAHs in soil and groundwater is the buried clinker material (residue from burning coal in the boilers) found in Trench 11. PAHs are not readily soluble in water; therefore, a limited potential exists for groundwater transport of PAHs. PAHs will naturally biodegrade over time and their concentrations will decrease. Additionally, these contaminants were located 6 feet below and 12 feet below ground level where residential exposure is not expected. The only complete exposure pathways are for construction worker and soil-to-groundwater migration. Detected PAH concentrations are below the remediation goals presented in Section 3

for the construction worker exposure. Soil-to-groundwater migration pathway will be evaluated in the TCRA report.

4.8 Olin Area TCRA Report

A TCRA report will be produced following completion of the work described in this WP. Based on the completed investigative and remedial work, the TCRA report will summarize and discuss the following:

- Soil sample analytical results and remedial excavations
- Groundwater flow direction and groundwater sample analytical results
- Human health risks based on future site use
- Soil-to-groundwater migration potential
- Conclusions from the investigative and remedial work completed
- Recommendations for future investigative and/or remedial work, if any.

5.0 Drainage Ditches Work Plan

5.1 Background

This section, which comprises the Drainage Ditches WP, describes the assessment and remediation activities that will be performed for the Drainage Ditches, which are associated with the planned redevelopment of the former Ecusta Paper Mill site in Brevard, Transylvania County, North Carolina. This work will be performed in accordance with the Removal Action Scope of Work described in the BFPP between EPA and DRV, dated January 7, 2007.

This Work Plan is for the stormwater drainage ditches, storm sewer pipeline, and process sewer pipeline. Investigation and remediation of concrete U-trenches will be addressed in the non-time critical removal action for the Electrochemical Building. This Drainage Ditches WP provides a summary of previous environmental investigations conducted at the Site and outlines efforts to be taken to remove, verify, and mitigate potential risks to human health and the environment.

5.2 Drainage Ditches Description

This section describes the drainage ditches, storm sewer pipeline, and process sewer pipeline areas, their present and past operations including waste disposal practices, and the potential contaminant sources affecting the area.

5.2.1 Drainage Ditch Systems Locations

The site is located at 1 Ecusta Road, Brevard, Transylvania County, North Carolina. Figure 5-1, “Site Location Map, Drainage Ditches” shows the East side and South side drainage ditches, concrete U-trench, stormwater lines, and process pipeline locations on an overall facility map. Detailed plans for the Drainage Ditch Systems are shown on Figure 5-2 to 5-11.

5.2.2 Drainage Ditch Systems Description

The drainage ditches and associated conveyance utilities are described as two separate entities: an East Drainage Ditch System (EDDS) and a South Drainage Ditch System (SDDS). The drainage systems referenced in this Work Plan were the wastewater conveyance systems for the Electrochemical Building during the use of the Sorensen Cells which contained mercury.

5.2.2.1 Concrete U-Trench

The concrete U-trench is connected to the EDDS and consists of approximately 380 linear feet (LF) of U-shaped concrete trench beginning near the southeast corner of the Electrochemical Building No. 58 and extending northward outside the east wall to Building 46. The U-Trench is located beneath a concrete platform and the top of the trench is open. Some manholes are located in the platform to provide access to the U-trench. At Building 46 the U-trench is routed

east and connects with a process sewer pipeline. Prior to the 1970's, the U-trench flowed by gravity through a storm sewer for approximately 150 LF to the headwall structure in the East drainage ditch. In the mid-1970's, after the Sorensen Cells were removed, the U-trench was connected to a separate process sewer line which conveyed the liquid to the wastewater treatment system.

5.2.2.2 East Drainage Ditch

The East drainage ditch is an open ditch partially lined with riprap. Water flows in the ditch southward beside an asphalt road for approximately 850 feet then through a 66 inch diameter culvert beneath the road and railroad track for approximately 110 feet, and then enters another open ditch which is approximately 300 feet long. Water in the drainage ditch is discharged to the Davidson River, under National Pollutant Discharge Elimination System (NPDES) Permit #NC0000078, Outfall 002, through a 48 inch diameter pipe. Total length is approximately 1,790 feet.

The ditch contains numerous utility line crossings, walkway platforms, and stormwater discharge pipes. There are three road crossings which have concrete headwalls and culvert pipes including the one described above.

5.2.2.3 South Process Sewer

Prior to the 1970's one pipe was used to carry process water and stormwater to the south drainage ditch. In the mid-1970's, after the Sorensen Cells were removed, a new stormwater system was installed and the combined process water/stormwater sewer was converted to the process sewer. Discharges from the process sewer to the south ditch were plugged and the process sewer was routed to the wastewater treatment system.

The south process sewer begins as a 48 inch diameter underground pipe at the southwest corner of the Electrochemical Building (No. 58) at the discharge of a trench drain. This 48" inch pipe extends westward approximately 380 feet to a manhole beside the Pulp Storage Building (No. 57), then runs southwest for approximately 180 feet. The process sewer line increases to a 54 inch diameter pipe and runs south for approximately 800 feet beside the Warehouse Building (No. 89) to a manhole, as shown on Figures 5-6 to 5-8. South of the manhole the process sewer pipe had continued approximately 85 feet toward the open drainage ditch and headwall; however, it was plugged and abandoned. The total length is approximately 1,445 feet.

5.2.2.4 South Drainage Ditch

Prior to the 1970's, process water discharged to the south drainage ditch. When the separate stormwater system was installed the process water was rerouted to the wastewater treatment system. Under the current configuration, only stormwater discharges directly to the South Drainage Ditch under NPDES Permit #NC0000078, Outfall 003. Water in the open ditch flows

eastward for approximately 800 feet until it is adjacent to the WWTP clarifiers where it turns southward for approximately 600 feet and then turns east toward the Davidson River for about 50 feet to the fence line and a Parshall flume. Total length of the south drainage ditch is approximately 1,450 feet.

5.2.3 Drainage Ditch Systems History

The Electrochemical Building housed Sorensen Cells which utilized mercury to produce chlorine for the bleaching process of paper production prior to 1973. The Sorensen Cells were installed in the late 1940s and were removed from use by 1973. Mercury contamination on the plant site has been linked to the operation of these cells.

Drainage from the Electrochemical Building was collected by floor drains/floor trenches and routed from the building via two drain trenches. One drain trench exits the building at the southeast corner and discharges into a concrete U-trench beneath a platform on the east side of the structure. Flow was then routed to the east side drainage ditch as described in Section 5.2.2.2. The other drain trench exits the southwest corner of the building and discharges into a 48 inch diameter process sewer. From there, flow was routed to the south drainage ditch as described in **Section 5.2.2.4**.

In the mid-1970's, wastewater flows were segregated between storm sewer flows and process sewer flows and the process water was routed to the WWTP clarifiers, while storm water was directed into the drainage ditches.

During at least four different investigations between 2003 and 2007, soils from these ditches have been sampled and analyzed for contamination. Various levels of mercury contamination have been confirmed in shallow soils and warning signs were consequently posted along the ditch banks alerting people of potential mercury contamination. These previous investigations are described in Section 5.3 below. To our knowledge, no investigations have been conducted on the U-trench or the south process sewer.

5.2.4 Land Cover, Topography, and Vegetation

The east drainage ditch is a partially riprap-lined, open ditch which flows southward beside an asphalt road. This ditch is predominantly grass-lined near the WWTP clarifiers where it previously discharged to the Davidson River through a 48 inch reinforced concrete pipe. In June 2008 a temporary 6-foot diameter riser was installed on the inlet to the 48 inch pipe to divert stormwater to the junction manhole of the process sewer system. The purpose of the temporary diversion was to route stormwater to the ASB during the demolition phase of the redevelopment project. This diversion has resulted in standing water at the lower section of the east ditch, prior to its discharge to the clarifier.

The south drainage ditch is grass lined and has small amounts of riprap near a culvert where the ditch passes under a railroad spur. It contains some standing water and flows eastward then southward discharging into the Davidson River through a Parshall flume. In June 2008, the main stormwater line flowing south to the drainage ditch was diverted into the process sewer. In addition, a dam was installed in the ditch just upstream of the railroad crossing near the clarifiers and a connection between the south ditch and the process sewer was installed. The purpose of both of these actions was to divert stormwater to the ASB during the demolition phase of the redevelopment project. The diversion at the south ditch has resulted in standing water in this section of the south ditch. These features can be seen in the photos included in Appendix E.

5.2.5 Surface Water Bodies and Surface Drainage

The Davidson River flows southward adjacent to the site along the east side just beyond the property's chain link fence. Beyond the fence line, the ground level drops sharply down several feet to the river bed. The east and south drainage ditches both discharge to the Davidson River through separate outfalls. Both are regulated under a NPDES permit and are designated as Outfalls 001 and 002.

5.2.6 Utilities

U/G utilities are located in and across the drainage ditches. U/G utilities will be located prior to excavation, backfilling, and remediation activities to ensure there are no liquids spilled into the drainage ditch. U/G utilities are identified on Figures 5-2 to 5-11 of this Work Plan. Several pipe lines are visible crossing the two ditches and can be seen on the photos in Appendix E.

5.2.7 Historical/Archaeologically Significant Features

No historically or archeologically significant features were identified at the Site during the Phase 1 ESA in 2003.

5.2.8 Wetlands

The Phase 1 ESA reviewed in 2003, the National Wetlands Inventory data published by the U.S. Department of the Interior, Fish and Wildlife Service for the overall Ecusta site. No wetlands were identified in the drainage ditch areas. An updated wetlands survey was conducted by William G Lapsley & Associates on April 16, 2008. No wetlands were identified in the drainage ditch area during this survey.

5.3 Summary of Previous Investigations and Remediations

The following five reports were available and reviewed for previous investigations information relative to the drainage ditches, concrete u-trench, and process pipeline:

- Phase I Environmental Site Assessment, RFS Ecusta Pulp and Paper Mill, prepared by ERM, June 2003.

- Phase II Environmental Site Assessment, RFS Ecusta, Inc., prepared by ATI, July 2003.
- Ditch Sediment Sampling Results, Ecusta Business Development Corporation, LLC Facility, prepared by ERM, March 2004.
- Expanded Site Inspection, Ecusta Mill, prepared by NCDENR, May 2005.
- Phase II Environmental Site Assessment, Ecusta Paper Mill, prepared by Shaw, June 2007.

The following subsections briefly describe these site investigations, sampling activities, and any remediation that occurred at the site where samples were collected and analyzed. A summary of analytical results related to the Drainage Ditches are presented in Tables 5-1 through 5-5. Sample locations for the previous investigations are provided in Figures 5-12 and 5-13.

5.3.1 Phase I Environmental Site Assessment, June 2003

The Phase 1 ESA dated June 2003 identified the drainage ditches as a potential for soil and/or groundwater contamination based on the operation of the Sorensen Cells in the Electrochemical Building. See Table 5-1 for a summary of the Phase 1 findings relative to the drainage ditches.

5.3.2 Phase II Environmental Site Assessment, July 2003

The Phase II ESA by ATI dated July 2003 further investigated the drainage ditches. See Tables 5-2A through 5-2C for the analytical results summary of this investigation.

ATI reviewed soil sampling results from EPA sampling conducted in May 2003 from beneath the Sorensen Cell Room slabs and sediment from the east drainage ditch and sediment just outside and south of the Electrochemical Building. The EPA soil samples from the east ditch (samples CB-1 & CB-2) confirmed mercury at levels higher than the NCDENR default SRG Standards (4.6 mg/kg). The soil samples outside and south of the Electrochemical Building (samples MCB1-7 & MCB2-7) also contained mercury but were below default SRG Standards. The Phase II ESA report concluded there was mercury contamination in the east ditch.

In the Phase II ESA by ATI three sediment samples were collected from the east and south ditches. Sediment sample SED-02-K12 located near the abandoned Parshall flume was only analyzed for VOCs to try to relate it to contaminants from the Acid Neutralization Pit and all VOC results were below NCDENR SRG Standards. Sediment sample SED-03-K10 was from the east ditch near the “Olin Disposal Area” and was analyzed for metals, VOC, PCBs, and dioxins. Results showed only mercury was above the default SRG Standards. Sediment sample SED-04-J11 was from the south ditch and showed mercury was present but below the default SRG Standards. All other analytes were below the default SRG Standards. There were no specific recommendations proposed for the drainage ditches.

5.3.3 Ditch Sediment Sampling Results, March 2004

The objective of the March 2004 sediment sampling event by ERM was to confirm previous sediment sampling results and evaluate the onsite extent of sediments containing elevated concentrations of mercury. Nine sediment samples were collected from the east and south ditches from shallow depths of between 3 and 6 inches. Seven out of the nine sample locations contained mercury levels above the default SRG Standards and confirmed the results of earlier sampling events by ATI and EPA performed in 2003. Table 5-3 summarizes the analytical results from this effort.

5.3.4 Expanded Site Inspection, May 2005

The NCDENR Superfund Section, in cooperation with EPA, conducted the expanded site inspection in March 2004 (report is dated May 2005). The purpose was to obtain the data necessary to assess the threat posed by the site to human health and the environment, and to complete a Hazard Ranking System score for the site to determine the need for further action under CERCLA/SARA or other authority. The inspection focused on two areas of concern, one of which related to the drainage ditches and the soils outside the Electrochemical Building and the other was the ASB.

Four surface soil samples and four soil boring samples were collected from locations east of the Electrochemical Building beside the loading dock. Samples were analyzed for mercury. Three of the four surface samples contained mercury above the default SRG Standards and all soil boring samples (from 4 to 7 feet bgs) were below these standards.

In addition to the soil samples located near the Electrochemical Building, sediment samples were also sampled. Three sediment sample locations (EM005SD, EM008SD, and EM010SD) were related to the drainage ditches. Samples EM008SD and EM010SD were located in the east ditch and exceeded the default SRG Standard. EM005SD was collected near the Parshall Flume where the south ditch discharges to the Davidson River and had a low mercury concentration of 1.4 mg/kg which is below the default SRG.

Several MWs were also sampled during this inspection. Four of these were reviewed for relevance to the drainage ditches and had been sampled for mercury. Only temporary well EM003MW, located near the east loading dock of the Electrochemical Building, contained mercury (9 µg/L) above the North Carolina 2L Standard (1.05 µg/L).

Tables 5-4A and 5-4B summarize the analytical results from this investigation. Figures 5-12 and 5-13 show the sample locations and results on the facility map.

5.3.5 Phase II Environmental Site Assessment, June 2007

The Phase II ESA by Shaw dated June 2007 provided a further assessment to better characterize the environmental conditions across the Ecusta property. In an effort to assess the mercury levels in soils adjacent to the east and south drainage ditches, 11 soil borings were located every 300 feet on alternating sides along the lengths of the east and south drainage ditches. One soil sample was collected from each boring at an equivalent depth of approximately 1-2 feet below the bottom of the drainage ditch. Based on the soil samples collected, mercury was detected in only 2 out of the 11 sample locations. Mercury was detected in soil boring SB04 at 0.033 mg/kg and in SB05 at 0.025 mg/kg, which were located on the east and west sides, respectively, of the East drainage ditch. The default SRG for mercury is 4.6 mg/kg and the EPA SL for residential exposure for mercury is 23 mg/kg. The mercury action level for both SRG and SL are significantly higher than that found at sample locations SB04 and SB05. An additional soil sample, MW16S, was collected from the soil boring advanced to install MW16S to evaluate the horizontal extent of mercury contamination from the east drainage structure. The result was 0.058 mg/kg. Another sample was also collected from the geotechnical boring (B104) located south of the No. 9 Paper Machine (Building No. 59) where 0.41 mg/kg of mercury was detected. All of these results are below the default SRG. Data for mercury in soils adjacent to the drainage ditches and the borings are presented in Table 5-5. Figures 5-12 and 5-13 show the sample locations and results on the facility map. These results indicate the mercury contaminants previously found in the shallow sediments in the ditches have not migrated to greater depths or traveled laterally at significant concentrations.

5.4 Drainage Ditches Work Plan Goals

The following goals are proposed for TCRA activities occurring in the east and South Drainage Ditch systems as related to this Work Plan:

- Remove potential mercury contaminated concrete sewer pipe associated with the East drainage system,
- Assess mercury contamination in and around the process sewer pipe draining to the South Drainage Ditch.
- Remove the underground process sewer pipe and surrounding soil from beneath and beside the process sewer pipe draining to the South Drainage Ditch where the contamination exceeds the site specific RG,
- Remove potential mercury contaminated soil from the bottom and sides of the East & South Drainage Ditches, reusing existing riprap,
- Store the potentially contaminated soils, concrete u-trenches, and piping in Warehouse Building No. 89 for future assessment and disposal,
- Backfill the excavations using clean soils,

- Demonstrate by sampling and analysis that the soils remaining within the drainage systems after the excavation have a mercury concentration level below the site-specific RGs.

5.5 Site-Specific Remediation Goals

The remedial action goals for the Drainage Ditches were developed in Section 3 and are summarized in Tables 5-6 and 5-7.

5.6 Proposed Field Activities

In order to accomplish the TCRA goals for the Drainage Ditch systems, field activities will be conducted as discussed below.

5.6.1 East 48-inch Sewer Pipe Removal

The east 48-inch sewer pipe (between the U-Trench and east drainage ditch) removal will take place prior to or concurrently with the demolition of the surrounding buildings. Removal actions on the east drainage ditch will begin at the junction manhole where U-Trench used to combine with stormwater. The pipe will be removed from the junction manhole to the headwall where stormwater discharges into the East Drainage Ditch (Refer to Figure 5-2). The potentially contaminated concrete pipe will be removed along with approximately one foot of soil from beneath and beside the pipe.

Soil samples will be collected on approximately 25 foot spacing and screened using XRF. Additional soil samples may be collected based on visual observations. At each location, soil samples will be collected on 6-inch to 1-foot depth interval until mercury concentrations are below the site-specific RG.

Figure 5-14 shows the old location of U-trench in the area where the east 48-inch sewer pipe is located. It appears that the east 48-inch sewer pipe is located in the same area where U-trench used to be. The only exception is in the immediate area of current transition from U-Trench to 48-inch pipe. In this area old U-trench configuration had 90-degree turn while the 48-inch sewer pipe is aligned diagonal. In this area additional soil samples will be collected and screened using XRF during sewer pipe excavation.

Approximately 10 percent of soil samples will be sent to a fixed laboratory for confirmation of XRF analysis. Soil sampling screening results will be used to determine the extent of soil excavation. Should the fixed laboratory analytical data result in 95% UCL value to exceed the site-specific RG, additional excavation would be performed.

Clean soil will be used to backfill the excavation where necessary to achieve the desired grade elevations.

5.6.2 South Process Sewer Pipe Assessment and Removal

No previous investigations have been performed on the South Process Sewer so the presence of soil or sediment contamination is unknown. While attempting to dispose chemicals to ASB via process sewer in June 2008, a cross-connection between process sewer and storm sewer was discovered. A video survey and flow tests with clean water were performed to identify leaks in the process sewer line. Even though the leakage point in the south process sewer was not exactly determined, a video inspection of portions of the pipe conducted in June 2008 revealed several suspected leak points at poor joints. As a result a combination of removal and assessment are proposed.

The entire length of the South Process Sewer pipe will be video inspected and recorded. The locations of sediment buildup and poor pipe/joint conditions will be noted in consultation with the EPA/NCDENR site-representative.

Pipe removal will start at the pipe joint that was corroded in the vicinity of the suspected cross-connection and continue upstream and downstream until the soil under the pipe is below the site-specific RG. The pipe removal will restart at other locations where poor pipe/joint conditions are noted in video observations. Soil samples will be collected below the pipe on 6-inch to 1-foot depth interval until mercury concentrations are below the site-specific RG. Approximately 10 percent of soil samples will be sent to a fixed laboratory for confirmation of XRF analysis. Soil sampling screening results will be used to determine the extent of soil excavation. Should the fixed laboratory analytical data result in 95% UCL value to exceed the site-specific RG, additional excavation would be performed.

Very little sediments were observed in the pipe during the June 2008 video inspection. Where sediments are observed in the video survey, they will be sampled for mercury. If the sample results are above the site-specific RG then that section of pipe will be removed and the soil under the pipe will be tested. Pipe removal will continue upstream and downstream until the soil under the pipe is below the site-specific RG. If the assessment reveals significant contaminated soil/sediment and may poor pie/joint conditions the entire pipe may be removed.

The soils above the buried sewer lines are considered un-contaminated, but will be field screened for mercury contamination using XRF on-site. If XRF readings show mercury below the site-specific RGs for this upper soil, then the soil will be set aside near the excavation and be re-used as backfill material. Any soil above the site-specific RGs from the screening will be transported to the warehouse for storage. Clean soil will be used to backfill the excavation to the desired grades.

5.6.3 Groundwater Quality Assessment

Five new MWs will be installed along the ditch to assess groundwater contamination prior to the removal action in the ditches (Figure 5-16). The five new MWs will be used in conjunction with the 6 existing MWs (MW-1, MW-5, MW-10, MW-13, MW-14, and MW-15) to monitor mercury levels in groundwater related to the ditches. New MWs will all be located in the presumed down gradient side of the drainage ditches to provide data on potential mercury migration in the groundwater. MWs will have 1.5-inch ID, 10-foot PVC screen across the water table. Top of casing elevations and state plane coordinates will be surveyed by a North Carolina licensed surveyor.

One round of unfiltered groundwater samples will be collected from the 6 existing and 5 new monitoring wells for laboratory analysis of mercury. Samples will be collected using low-flow technique in accordance with the procedures specified in the FSP and for the analytes listed on Table 5-8. Temperature, pH, conductivity, redox potential, and turbidity will be measured in the field. Groundwater samples will be collected after the field parameters stabilize.

Note: The groundwater quality assessment described in this section was approved by EPA and NCDENR in the Draft mode to get a better handle on the drainage ditch assessment and removal plan described in Sections 5.6.4 and 5.6.5. A brief summary of results of the groundwater quality assessment work performed are described in the remainder of this Section. Complete data package will be included in the TCRA Report.

Monitoring wells MW-21 to MW-25 were installed and developed in November 2008. Subsequently newly installed monitoring wells and five existing MWs (MW-1, MW-10, MW-13, MW-14, and MW-15) were sampled and analyzed for mercury. Monitoring well MW-5 could not be sampled as it full of sediments. Mercury was detected only in MW-10 (0.22 µg/L) and MW-14 (0.40 µg/L), located along the South Process Sewer Pipe. Detected values are less than the groundwater clean-up goal of 1.05 µg/L. Mercury was not detected in any of the wells located along the drainage ditches suggesting that mercury level in drainage ditch soils are protective of groundwater quality.

Depths to groundwater in newly installed wells were compared to the drainage ditch bottom to determine the relationship of drainage ditch and water table. Table 5-10 provides a comparison of groundwater levels and drainage ditch bottoms. Drainage ditch bottoms near MW-22, MW-23, and MW-24 are lower than the water table, i.e., the drainage ditch bottom is in contact with groundwater. Drainage ditch bottoms near MW-21 and MW-25 are approximately one foot above the water table.

5.6.4 East Drainage Ditch Assessment and Removal

The ditch excavation activity will begin after the overall site building demolition phase is near completion. Delaying the ditch removal action until after demolition is complete will help avoid possible recontamination of the ditches should contaminant releases or spills occur during the demolition work. In order to control stormwater discharges during site demolition activities an eight foot diameter riser has been installed on the 48-inch discharge pipe to the Davidson River (Figure 5-4). The weir gate to the grit chamber has been opened to convey stormwater in the East Ditch to the grit chamber where it is then pumped to the ASB. The lower portion of the East Drainage Ditch has water pooling 2' to 3' deep since the grit chamber weir gate is higher than the bottom of the east ditch. Post-demolition grade will result in surface drainage to the East Ditch and the abandonment of the storm sewer system.

5.6.4.1 East Drainage Ditch Assessment

Prior to excavation an assessment will be conducted to determine the extent of contamination in the sediment and soil. This information will be used to determine the extent of soil removal action.

Based on previous sampling results mercury contamination is expected to be no deeper than one foot below the bottom of the ditch and sidewalls of the ditch. Therefore, at each cross-section soil samples will be collected at three locations – bottom of the ditch and approximately one-third of the way up on both side slopes. The assessment will start at the beginning of the East Ditch at the headwall. Sediment and soil screening will be conducted at the bottom of the trench and along the ditch banks as shown in Figure 5-15. This screening will be continued at 50 foot transects along the East Ditch to the Process Sewer Junction Manhole shown on Figures 5-2 to 5-4. A total of 26 transects are planned on the East Ditch.

Since drainage ditch bottom is in contact with groundwater or is within one foot of the groundwater, sediment and soil will be sampled at six inch intervals for the first two feet in the bottom of the ditch, with the exception at transects E1, E4, E12, and E19. Transect E1 is located at the start of the East Drainage Ditch while transects E4, E12, and E19 are located just before the culverts in the ditch. At these locations, additional soil samples will be collected by pushing a four to five feet long sampler. Soil samples below two feet will be analyzed on one foot interval. Soil samples at the bottom of the ditch will be obtained by manual push of a sampler, or hand auguring. If manual push is used, soil samples will be collected by advancing 2-inch rods with acetate liners. All the soil samples from the bottom of the ditch will be analyzed for mercury by an off-site laboratory. Some of the soil samples sent for laboratory analysis will be field screened using XRF to develop correlation and repeatability, and to establish protocols that can be relied upon to support decision making during soil excavation under varying moisture content conditions.

Soil samples from the side slopes will be collected using hand augers. Side slope soil borings will be advanced to a depth of two feet and soil samples will be collected on 6-inch interval. Analysis will start from the shallowest soil sample at each of these locations and continue to deeper soil samples until off-site laboratory results for mercury is below the site-specific RG.

5.6.4.2 East Drainage Ditch Excavation

The extent of ditch excavation will be determined based on the results of soil mercury analysis as outlined above. All soils above the 95% UCL values exceeding site-specific RG as well as any hot spots identified will excavated. The 95% UCL will be calculated for each subarea consisting of four transects.

The East drainage ditch passes through 3 culverts beneath access roads. One of the culverts is a single 66 inch diameter culvert pipe installed beneath a railroad line and roadway. The culverts are planned to remain in place and the interior will be screened to determine cleaning requirements.

The East Drainage Ditch is normally dry except for the lower end where ponding occurs to due to the higher elevation of the inlet to the grit chamber. The riser will still be in place on the 48 inch storm sewer pipe to the Davidson River so any stormwater entering the ditch will flow to the grit chamber and then get pumped to the ASB. Standing water in the drainage ditch will also be pumped to the grit chamber. Following completion of the East and South Ditch remediation the riser on the 48-inch pipe will be removed.

Ditch excavation will begin upstream at the headwall east of Building 46 and proceed sequentially downstream to ensure the upstream worked area does not become re-contaminated. Diversion berms will be used to keep stormwater from running into the ditch during remediation. As work progresses to the lower part of the East Ditch berms, temporary dams and pumps may be necessary to maintain a relatively dry work area. The riser will be removed and the weir gate will be closed following the completion of the East Ditch remediation.

Riprap will first be removed and cleaned to remove any soil. The ditch will be excavated in 50-foot to 100-foot increments based on the assessment results. Since detailed pre-excavation assessment will be completed, no further soil sampling will be completed after soil excavation. Immediately after the soil removal, the ditch will be backfilled and the cleaned riprap will be replaced along the ditch side slopes. Non-woven geotextile fabric will be placed under the riprap for erosion control.

5.6.5 South Drainage Ditch

Prior to the start of the overall site demolition activities a manhole was installed to connect the South Drainage Ditch to the process sewer and a temporary dam was installed just upstream of

the culverts near the clarifiers (Figures 5-9 and 5-10). This conveys stormwater from the upper part of the South Drainage Ditch to the grit chamber where it is then be pumped to the ASB. Another connection was made from the south ditch stormwater pipe to the process sewer upstream of the headwall at the south ditch (Figure 5-7). The ditch excavation will begin after the overall site building demolition phase is near completion. Post-demolition grade will result in surface drainage to the South Drainage Ditch and abandonment of the storm sewer piping system.

5.6.5.1 South Drainage Ditch Assessment

Prior to excavation an assessment will be conducted to determine the extent of contamination in the sediment and soil. This information will be used to determine the extent of soil removal action.

Based on previous sampling results mercury contamination is expected to be no deeper than one foot below the bottom of the ditch and sidewalls of the ditch. Therefore, at each cross-section soil samples will be collected at three locations – bottom of the ditch and approximately one-third of the way up on both side slopes. The assessment will start at the beginning of the South Ditch at the headwall. Sediment and soil screening will be conducted at the bottom of the trench and along the ditch banks as shown in Figure 5-15. This screening will be continued at 50-foot transects along the South Ditch to the temporary dam shown on Figure 5-10. The assessment downstream of the dam will be conducted at 100-foot intervals. Figures 5-8 to 5-11 show approximate locations of planned transects. A total of 21 transects are planned on the South Ditch.

Since drainage ditch bottom is in contact with groundwater or is within one foot of the groundwater, sediment and soil will be sampled at six inch intervals for the first two feet in the bottom of the ditch, with the exception at transects S1, S4 and S13. Transect S1 is located at the start of the South Drainage Ditch while transects S4 and S13 are located just before the culverts in the ditch. At these locations, additional soil samples will be collected by pushing a four to five feet long sampler. Soil samples below two feet will be analyzed on one foot interval. Soil samples at the bottom of the ditch will be obtained by manual push of a sampler, or hand auguring. If manual push is used, soil samples will be collected by advancing 2-inch rods with acetate liners. All the soil samples from the bottom of the ditch will be analyzed for mercury by an off-site laboratory. Some of the soil samples sent for laboratory analysis will be field screened using XRF to develop correlation and repeatability, and to establish protocols that can be relied upon to support decision making during soil excavation under varying moisture content conditions.

Soil samples from the side slopes will be collected using hand augers. Side slope soil borings will be advanced to a depth of two feet and soil samples will be collected on 6-inch interval.

Analysis will start from the shallowest soil sample at each of these locations and continue to deeper soil samples until off-site laboratory results for mercury is below the site-specific RG.

5.6.5.2 South Drainage Ditch Excavation

The extent of ditch excavation will be determined based on the results of soil mercury analysis as outlined above. All soils above the 95% UCL values exceeding site-specific RG as well as any hot spots identified will excavated. The 95% UCL will be calculated for each subarea consisting of four transects.

The South Drainage Ditch passes through two culverts installed beneath railroad track spurs. The culverts will be cleaned with subsequent screening. During remediation of the upper portion of the South Ditch any stormwater entering the south ditch will be diverted to the grit chamber at the clarifiers through a process sewer line and pumped to the ASB. The South Drainage Ditch retains some standing water after rainfall events. Standing water in the drainage ditch will be pumped to the WWTP clarifiers as necessary to dry out the ditch. Additionally, some storm drain lines which discharge into the South ditch will be demolished and cut off behind the ditch sidewalls. If wet soils from the ditch bottom are excavated, they will be mixed with dryer side slope soils to obtain a workable consistency.

Excavation in the South Ditch will begin at the upstream end at the headwall. Diversion berms will be used to keep stormwater from running into the ditch during remediation. As work progresses to the lower part of the South Ditch berms, temporary dams and pumps may be necessary to maintain a relatively dry work area. Excavation at the lower part of the South Ditch will begin at the plugged culverts pipes and continue downstream to the fence line Parshall flume. Figure 5-16 shows a typical excavation sequence.

Riprap will first be removed and cleaned to remove any soil. The ditch will be excavated in 50-foot to 100-foot increments based on the assessment results. Since detailed pre-excavation assessment will be completed, no further soil sampling will be completed after soil excavation. Immediately after the soil removal, the ditch will be backfilled and the cleaned riprap will be replaced along the ditch side slopes. Non-woven geotextile fabric will be placed under the riprap.

Provisions will be made to prevent runoff from entering the active segment. Check dams will be used at the downstream side of the active segment to prevent any sediment from flowing back into the cleaned sections during a storm event.

5.6.6 Excavated Material Stockpile

All potentially contaminated excavated/removed soils, concrete U-trenches, storm sewer piping, and process sewer piping will be transported and stored in Warehouse Building No. 89 for future

determination of disposal options. This large warehouse will not be demolished until a later time. The large size and the interior floor slab near ground elevation makes it easily accessible for dump trucks and other vehicles. Contaminated soil and material will be loaded directly into trucks for hauling to the warehouse thus avoiding the need to store and protect large quantities of contaminated material outside.

5.7 Drainage Ditches TCRA Report

A TCRA report will be produced following completion of the work described in this Work Plan. Sampling analytical results will be summarized and discussed, soil removal activity detailed, and recommendations for future site work will be included. A preferred soil disposal alternative will be identified based on the contaminated soil volume stockpiled in the warehouse.

6.0 Building Slabs Assessment Work Plan

This section describes the assessments that will be performed beneath the building slabs following the demolition of the building structures.

6.1 Background

This WP describes the assessment activities that will be performed beneath the building slabs which are associated with the planned Brownfield redevelopment of the former Ecusta Paper Mill site in Brevard, Transylvania County, North Carolina. This work will be performed in accordance with the Final Draft Removal Action Scope of Work described in the BFPP between EPA and the DRV, dated January 7, 2007.

6.2 Building Slabs Description

This section describes the buildings covered by the scope of the Building Slabs, present and past operations, and potential contaminant source areas located in the area.

6.2.1 Site Description

During demolition of the building slabs, the soil under the floor slabs will be assessed to determine whether contaminants have penetrated the slab and potentially contaminated the ground. Figure 6-1 shows the locations of the buildings and structures where the soil beneath the slabs will be assessed. Some building slabs will remain as part of the future development of the site and these are also shown on Figure 6-1. The soil beneath these slabs will be assessed without disturbing the slab.

Investigation of soils under the ElectroChem Building (Building 58) will be addressed separately in a non-time critical removal action work plan and will not be discussed in this work plan.

6.2.2 Basements and Sumps

Some buildings contain basements and sumps which are below the “at grade” slab elevation. The basements are shown on Figure 6-2. Basements are defined as areas where plant personnel and equipment were operating and sumps are strictly liquid collection points. The number of sumps are too numerous to show on a drawing. Sumps were typically built water-tight especially if they were below the groundwater level in order to keep the groundwater out. During demolition, basements and sumps are planned to be filled with inert (concrete/brick) demolition debris.

6.2.3 History

The Ecusta Mill was built starting in the late 1930s and the facility was expanded at various times until the mid 1990s. Primary production was pulp, paper, and cellulose at the Olin cellulose facility and these production areas made up the largest building areas. Support buildings were also constructed for maintenance, product storage, and utility systems. Numerous chemicals were handled over time as part of the production process which may have been spilled or leaked onto the floor. The soil beneath the building slabs is closely related to the activities which occurred inside the building over the lifetime of operations. Major operations included paper and cellophane manufacturing, warehousing, chemical storage, electrical power generation, and others. A detailed description of site history is provided in Section 2.0.

6.2.4 Building Slab Drainage

Most buildings had floor drains which would drain to sumps or drain to gravity sewer systems. The water in the sumps would be pumped to gravity sewers for discharge from the building. Prior to 1970, the facility had only one sewer system which conveyed process water and stormwater. In the mid-1970s the storm sewer was separated from the process sewer system. Most of this work was done outside of the building footprint.

6.2.5 Underground Utilities

Besides the U/G sewer systems, there are other U/G utilities including: electrical, potable water, process water, steam, and others. The U/G utilities would typically penetrate the floor slab at some point to service above grade equipment. The U/G utilities in the area of the demolished building slabs will be inactive and either abandoned or removed by the demolition contractor. The U/G utilities could be a potential pathway for soil contamination beneath the slabs. Visual inspections and field screening will be focused on these areas.

6.2.6 Low Risk Buildings

Buildings that did not use or store chemicals are considered low risk buildings. Contamination beneath these building slabs is unlikely. These buildings are identified on Figure 6-1.

6.3 Summary of Previous Investigations

The following reports were available and reviewed for previous investigations and provide information relative to the assessment under the building slabs:

- *Phase I Environmental Site Assessment, Ecusta Paper Mill*, by ERM, June 2003
- *Phase II Environmental Site Assessment, Ecusta Paper Mill*, by ATI, July 2003
- *Phase II Environmental Site Assessment, Ecusta Paper Mill*, by Shaw, June 2007

The subsections that follow briefly describe the items related to the assessment under the building slabs from these reports.

6.3.1 Phase I Environmental Site Assessment by ERM, June 2003

The 2003 Phase I ESA Report identified four RECs as related to assessing contamination under building slabs across the site. The first referenced the Print Shop (Building 6) and noted potential VOC contamination associated with ink mixing and solvent recovery. The second noted potential contamination in the Machine Shops (Buildings 27 and 31) from solvents and lubricating oils evidenced by stained floors. The third referenced the laboratories at the entire facility having potential contamination from chemical disposal practices. The fourth noted oils and chemicals on floors throughout the entire facility as being the potential sources of under slab contamination.

6.3.2 Phase II Environmental Site Assessment by ATI, July 2003

The 2003 Phase II ESA Report followed up on issues identified in the Phase I ESA Report. The four RECs that were related to under building slabs and/or activities inside the buildings with the potential for contaminating the environment were further investigated during this Phase II ESA. Figure 6-3 shows the sampling locations.

A temporary well, TW-15-I7-A, was installed in the mixing kitchen of the Print Shop (Building 6) and one soil sample was collected and analyzed for VOCs, SVOCs, and metals. Results for detected analytes are shown in Table 6-1. Five metals (arsenic, barium, chromium, lead, and mercury) and toluene were detected in the soil sample collected at 2 feet below grade during the installation of the well. Only chromium (60 mg/kg) was detected above the default SRG standard (44 mg/kg) but was below the EPA SL (210 mg/kg).

A temporary well, TW-20-J7-A, was installed at the Machine Shop (Building 31). One soil sample was collected during the installation of the well and analyzed for VOCs and SVOCs. Results for detected analytes are shown in Table 6-2. The soil sample contained no detectable concentrations of VOCs or SVOCs. The soil was not analyzed for metals.

The Phase I ESA described suspected oils and chemical spills on floors throughout the entire facility but particularly the old side and new side paper machines. Although a temporary well installation was attempted, it could not be completed and therefore no soil or groundwater samples were collected. No conclusions on contaminant levels were offered.

6.3.3 Phase II Environmental Site Assessment by Shaw, June 2007

Shaw's Phase II ESA investigations under the building slabs were conducted in May 2007. It included installation of six soil borings through the floor of the Machine Shop Building (Building 31) and five soil borings into soils through the floor of the Print Shop Building

(Building 6) to collect soil samples 1 to 2 feet below grade level (Figure 6-3). The samples were analyzed for VOCs. Tables 6-3 and 6-4 show that low levels of VOCs were detected in both buildings. Only TCE was detected above the default SRG or EPA SL values in the Machine Shop Building. TCE was detected at 0.087 mg/kg in a soil sample 1 to 2 feet below ground surface from location MSB05 which is above the SRG and EPA SL value of 0.053 mg/kg.

Water samples were collected from five in-ground sumps located inside Buildings 6, 48, 50, and 56. Figure 6-4 shows the sump sampling locations. The samples were analyzed for metals and VOCs. Table 6-5 shows that mercury and nine VOCs were detected. Mercury was detected above the 2L standard in two of the five locations with a maximum concentration of 65.4 µg/L. Both of these sumps are connected with subfloor drains in the ElectroChem Building. None of the VOC results exceeded the 2L standards.

6.4 Building Slabs Assessment Work Plan Goals

The following goals are proposed for the TCRA activities under building slabs as related to this WP:

- Visually inspect the areas under floor slabs to identify areas of potentially impacted soils and photo document observations;
- Field screen areas identified with potentially impacted soils;
- Collect soil samples to determine the horizontal and vertical extent of soil contamination where contamination has been identified, (i.e., Machine Shop [Building 31] and Printing Building [Building 6])

6.5 Site-Specific Remediation Goals

The site-specific RGs for the Building Slabs will be determined following the procedures described in Section 3 after the field activities described in Section 6.6 are completed.

6.6 Proposed Field Activities

In order to accomplish the TCRA goals for the Building Slabs, field activities will be conducted as discussed below.

6.6.1 Field Screening and Soil Sample Collection

Field screening using OVA, XRF, and Ohio Lumex technology will be conducted. Samples will be collected to determine the approximate horizontal and vertical extent of the impacted soil. Sample locations will be marked and recorded using GPS. Vertical profile samples will be collected using hand augers, if necessary. Drill rigs or other mechanical boring techniques are not anticipated to be required.

If field screening indicates the potential presence of contamination, soil samples will be collected for laboratory analysis to define extent of soil impacts. A minimum of 10 percent of the screening samples will be sent to the laboratory for analysis.

Samples will be collected using the procedures specified in the FSP. Soil samples will be analyzed for analytes as described in Table 6-6 in accordance with the Quality Assurance Project Plan.

6.6.2 Buildings with Slabs to Remain

Some building floor slabs will be reused for the future development of the site and these will not be removed or covered over. These slabs are shown on Figure 6-1. The Storage Shed Buildings (Building 109) are considered low risk buildings and no screening is planned for the soil beneath these slabs. For all other building slabs to remain, soil investigations are proposed on a 100-foot grid pattern by coring the concrete floor and using a hand auger for sampling. Soil samples will be field screened as specified in Section 6.5.1. A minimum of 10 percent of the screening samples will be sent to the laboratory for analysis. Specific analyses for each building are determined based on historical use of chemicals in the building and are shown in Table 6-6.

6.6.3 Buildings with Slabs to be Removed

Figure 6-1 shows which building slabs will be removed. The following subsections describe the activities for each type of slab.

6.6.3.1 Low Risk Building Slabs

Buildings that did not use or store chemicals are considered low risk buildings. Contamination beneath these building slabs is unlikely and no inspection will be performed.

6.6.3.2 Print Shop (Building 6) Slab

The Print Shop is approximately 180 feet by 220 feet with an area of 40,000 square feet. Metals have been detected in soils beneath the Print Shop during previous investigations. Soil borings taken during previous investigations indicated all VOCs were below SRGs and SLs. Only one soil sample exceeded SRG for chromium. Soil beneath the print shop will be screened on a 50-foot grid pattern using FID/PID and XRF as shown on Figure 6-5. Based on field screening, select samples will be sent for laboratory confirmation analysis of the screening levels. A minimum of 10 percent of the screening samples will be sent to the laboratory for analysis for chromium and PCBs.

6.6.3.3 Machine Shop (Building 31) Slab

The Machine Shop is approximately 90 feet by 250 feet with an area of 22,500 square feet. Soil borings taken during previous investigations indicated all VOCs were below SRGs and SLs except for MSB05 which had TCE of 0.087 mg/kg. The soil beneath the Machine Shop will be

screened on a 50-foot grid pattern using FID/PID and XRF as shown on Figure 6-5. Based on field screening, select samples will be sent for laboratory confirmation analysis of the screening levels. A minimum of 10 percent of the screening samples will be sent to the laboratory for analysis for chromium, VOCs, SVOCs, and PCBs.

6.6.3.4 Other Building Slabs

For the remaining buildings where the floor slabs are to be removed, the slab will be broken and lifted away from the area so a visual inspection can be conducted. Visually impacted areas will be field screened using a FID/PID meter and XRF. The location of any visually impacted soils will be recorded using a GPS. A minimum of 10 percent of the screening samples will be sent to the laboratory for analysis. Specific analyses for each building is determined based on historical use of chemicals in the building and are shown in Table 6-6. The concrete would be stockpiled and crushed for recycling and reuse or otherwise managed.

6.6.4 Basements

Basements are identified on Figure 6-2. Some buildings have basements which are not planned to be removed since they are well below the post-demolition site grade line. Dry basement slabs will be broken in place to permit drainage of infiltrating water and will not be removed. Visual inspection will be provided by lifting some portions of the slab. Screening will be conducted if the soils appear to be impacted. A minimum of 10 percent of the screening samples will be sent to the laboratory for analysis.

Some basements are flooded due to groundwater infiltration and/or stormwater from open roofs or roof drains. Since the basement sump pumps have not been operational the basements have flooded with up to 6 feet of water. The water in the basements will be pumped to the process sewer. The basement slabs will then be broken in place to permit drainage. Any infiltrating groundwater will continue to be pumped to the process sewer until visual inspection can be completed. Visual inspection will be provided by lifting some portions of the slab. Screening will be conducted if the soils appear to be impacted. A minimum of 10 percent of the screening samples will be sent to the laboratory for analysis. These basements will be filled in with clean demolition debris.

6.6.5 Sumps and Pits

There are numerous sumps and pits located throughout the facility which range in depth from 4 feet to 16 feet below the ground floor slab elevation. The sumps are typically less than 150 square feet and may contain a small pit with a sump pump. Any water in the sumps will be pumped to the process sewer. The bottom slabs will be broken up and soil will be collected in the bucket of the excavator for screening. A minimum of 10 percent of the screening samples will be sent to the laboratory for analysis.

6.7 Assessment Schedule

Building and slab demolition work will drive the progress of the assessment of soils underneath the slabs. The under slabs assessment will start approximately two months after demolition work of the plant begins. It is planned to be completed when the demolition is finished.

6.8 Fate and Transport Mechanisms

Due to the wide range of chemicals used at the facility, the primary constituents of concern could be VOCs or metals. Each building is evaluated based on its operational history. Rainfall infiltration was not a factor while the slab was in place; however, with the slab removed; rainfall will now infiltrate through the soil. The fate and transport potential of constituents of concern will be evaluated based on the results, the subgrade information from when the facility was built, and the future plans for the area.

6.9 Building Slabs Assessment TCRA Report

A TCRA report will be produced following completion of the work described in this WP. Based on the completed investigative and assessment work, the TCRA report will summarize and discuss the following:

- Soil sample analytical results and field assessments
- Human health risks based on future use of the site
- Conclusions from the investigative and remedial work completed
- Recommendations for future investigative and/or remedial work, if any

7.0 Electrochemical Building Demolition Work Plan

7.1 Background

This section, which comprises the Electrochemical Building Demolition WP, describes the assessment and remedial action activities that will be performed for the demolition of the Electrochemical (EC) Building, which is associated with the planned redevelopment of the former Ecusta Paper Mill site in Brevard, Transylvania County, North Carolina. This work will be performed in accordance with the Final Removal Action Scope of Work described in the BFPP between the EPA and DRV, dated April 9, 2008.

A history of the EC Building, the current redevelopment plans, and the environmental land use restrictions are discussed in Section 7.2, “Site Description.” Assessments previously performed in this building are discussed in Section 7.3, “Summary of Previous Investigations and Remediations.”

This EC Building WP provides a summary of previous environmental investigations conducted above the slab at the EC Building and outlines the proposed efforts to identify, characterize, evaluate, and mitigate potential risks to human health and the environment. Proposed activities outlined in the WP are considered part of the TCRA because of potential mercury contamination associated with the building materials.

7.2 Site Description

This section describes the EC Building and its present and past operations, including waste disposal practices and potential contaminant sources located in the area.

7.2.1 Building Description

Figure 7-1, “Site Location Map,” shows the location of the EC Building (Building 58) on an overall site map. The EC Building is a one story building that is approximately 165 feet by 112 feet and the height varies from 18 to 28 feet. Building 56 surrounds the EC Building on the north and west sides and exterior walkways flank the east and south sides (see Figure 7-2). The building walls are double brick construction supported between steel columns. Building 56 and the Electrochemical Building have common walls. The roof structure is 3 inch tongue and groove planks supported on steel trusses. The floor of the building is poured in place concrete. Numerous pipes (both insulated and uninsulated) run through the building along the north wall. The exterior platforms are cast in place concrete and sit above grade.

7.2.2 History

The EC Building was initially constructed in 1938 to house two pre-washers that were used for pulp production in conjunction with paper machines 1 and 2. In 1939, the building was expanded to its current size and eight more pre-washers were added. The pre-washer equipment had a separate foundation which was recessed below the floor. Trenches were also constructed in the floor to convey waste liquid from the pre-washers.

In the mid-1950's the pre-washers were removed, the recessed pre-washer foundations were filled with concrete, and the open trenches were covered with concrete tops in order to install the Sorensen Cells that were used for chlorine and caustic production operations. The Sorensen Cell operations used mercury as a catalyst and some mercury was lost during these operations. Mercury vapors may have been present during cell operation and may have entered porous building materials.

The Sorensen Cells were removed in 1973. After 1973, the area was primarily used to store material. Two bleach tanks were added on the east side of the building along with a containment curb.

7.2.3 Land Cover, Topography, and Vegetation

The area around the EC Building is fairly level. A raised concrete platform is located on the south and east side of the building and beyond this area is grass. The adjacent building is at the same elevation as the EC Building.

7.2.4 Surface Water Bodies and Surface Drainage

The East Drainage Ditch is located approximately 160 feet from the east face of the building. Process wastewater used to drain to this ditch until 1973. In 1974, after the Sorensen Cells were removed, a separate process sewer was constructed to convey the process wastewater to the treatment system. A trench along the west side of the building drained to the storm/process sewer which ran west and then south to the South Drainage Ditch. In 1974 a separate storm sewer was installed and the process sewer was rerouted to the new wastewater treatment system.

7.2.5 Utilities

Above ground pipelines are located inside and along the north side of the building. Some of these are insulated with aluminum jackets and may need to have the insulation removed prior to removing the pipe. A survey will be performed as part of a facility-wide effort by the demolition contractor to determine whether asbestos containing material is present. Electrical and other utilities will be inactive as the result of the demolition of the adjacent buildings.

7.3 Summary of Previous Investigations and Remediations

The following five reports were reviewed for information relative to previous investigations at the EC Building:

- Phase I Environmental Site Assessment, RFS Ecusta Pulp and Paper Mill, prepared by ERM, June 2003
- Phase II Environmental Site Assessment, RFS Ecusta, Inc., prepared by ATI, July 2003
- Mercury Vapor Sampling Report, Ecusta Paper Mill, prepared by Mountain Environmental Services, March 2004
- Mercury Vapor Sampling Report, Ecusta Paper Mill, prepared by Mountain Environmental Services, November 2004
- Phase II Environmental Site Assessment, Ecusta Paper Mill, prepared by Shaw, June 2007

The following subsections briefly describe these site investigations, sampling activities, and any remediation that occurred at the site where samples were collected and analyzed. A summary of analytical results related to the EC Building are presented in Tables 7-1 through 7-3. Sample locations for the previous investigations are provided in Figure 7-2.

7.3.1 Phase I Environmental Site Assessment, June 2003

The Phase I ESA was conducted in May 2003 by Environmental Resources Management and the final report was prepared in June 2003. The Phase I ESA identified the “Electrochemical Building” as an environmental concern. The Phase I ESA finding indicated there was mercury contamination in the soil associated with the Sorensen Cell operation.

7.3.2 Expanded Site Investigation Report, May 2005

This investigation sampled the soil below the slab and the sediment in the trenches of the EC Building in May 2003. The underslab trenches conveyed process wastewater. Analytical results for the soil ranged from 0.2 mg/kg to 580 mg/kg.

Based on further review some of the samples were taken from sediment inside the drainage trenches. Samples in the soil ranged from 0.2 mg/kg to 21 mg/kg mercury and sediment in the trenches ranged from 160 mg/kg to 580 mg/kg mercury. Table 7-3 presents the summarized analytical results.

7.3.3 Phase II Environmental Site Assessment, July 2003

No further investigation of the soils beneath the EC Building (REC 10) was provided in this assessment.

7.3.4 Mercury Vapor Sampling Report, March 2004

This investigation was conducted to determine if mercury vapors in this room presented an unacceptable inhalation hazard to future occupants. Five air samples were collected and analyzed for mercury. All sampling devices were placed at the floor level at the locations shown on Figure 7-2. PS-01 was placed within 4 inches of a previous borehole penetration at sample MCB05 and contained 580 mg/kg mercury. All doors were closed and the exhaust fans were turned off. All vapor samples were detected at levels below the applicable National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL), American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) and OSHA permissible exposure limit (PEL) worker exposure limits (Table 7-1). However, all samples exceeded 0.3 microgram per cubic meter ($\mu\text{g}/\text{m}^3$), the EPA's Generic Screening Levels for residential exposure.

7.3.5 Mercury Vapor Sampling Report, November 2004

This investigation was conducted to repeat the mercury vapors testing in the breathing zone of the EC Building. Four samples were collected at dispersed locations in the central area of the EC Building. Doors to the room were opened and overhead exhaust fans were running to provide good general ventilation. Mercury levels detected were lower than those detected during the previous vapor sampling event. All vapor sample results were below the applicable NIOSH REL, ACGIH TLV and OSHA PEL worker exposure limits (Table 7-2). However, all samples exceeded 0.3 $\mu\text{g}/\text{m}^3$, the EPA's Generic Screening Levels for residential exposure.

7.3.6 Phase II Environmental Site Assessment, June 2007

No further investigation of mercury in the soils beneath the EC Building, building material, or mercury vapor was conducted during this assessment.

7.4 Electrochemical Building Demolition Work Plan Goals

The following goals are proposed for TCRA activities at the EC Building as related to this demolition WP:

- Determine extent of mercury contamination in porous building materials within the EC Building.
- Identify specific health and safety procedures related to demolition of mercury contaminated building materials in the EC Building, if any.
- Building demolition.
- Identify demolition material segregation and disposal requirements.
- Determine schedule of activities for demolition.

7.5 Proposed Field Activities

In order to accomplish the TCRA goals for the EC Building demolition, field activities will be conducted as described below.

7.5.1 Delineation of the Extent of Contaminated Building Material

Mercury can deposit and infiltrate materials as a combination of mercury vapor, mercury compound particles, and mercury attached or sorbed onto other particles such as dust. The extent and concentration of mercury contamination can be extremely variable. Factors such as operation and maintenance procedures, ventilation, and cleaning can impact the level of residual contamination. Contamination will be highest where the mercury was used. Lower concentrations will be found further away from the source. Contamination will also vary vertically. Increased levels of contamination will be found close to the floor and will decrease closer to the ceiling unless a ventilation duct is located near the mercury source. Chip (or chisel) samples will reveal higher concentrations than wipe samples and will provide a more reliable indication of overall contamination. Chip (or chisel) samples will be taken to a depth of approximately ¼-inch. If free mercury is discovered in the building material, the locations will be noted in the TCRA Report and removal will take place prior to demolition activities. Samples will be collected using the procedures specified in the Field Sampling Plan and analysis will be as described in Table 7-4.

Building material samples will be collected for total and TCLP mercury analysis. TCLP mercury analysis will be placed on hold pending total mercury analysis. The maximum TCLP result can be no greater than one-twentieth of the total content in soil/building material because TCLP involves 20-to-1 volumetric extraction in acidic water. If total mercury analysis is less than 4.0 mg/kg then even if all mercury is extracted during the TCLP, the TCLP mercury result will be less than 0.2 mg/L and the building material will be considered non-hazardous. Therefore, TCLP analysis is not needed when the total mercury level is less than 4.0 mg/kg. If the total mercury concentration in a sample exceeds 4.0 mg/kg (20 times the TCLP criteria for hazardous waste [0.2 mg/L]), then the sample will be released for TCLP analysis to determine if it will fail the characteristic hazardous waste criteria of 0.2 mg/L for TCLP mercury.

7.5.1.1 Brick Walls

The brick exterior walls are double brick construction and extend to a height of 18 feet throughout the building with a total perimeter distance of 554 feet. There is approximately 10,000 square feet of interior brick wall in the EC Building. Full brick (50% of samples) or core samples (50% of samples) will be collected every 50 feet around the entire interior periphery at 1 foot above the floor, 5 feet above the floor, and 1 foot below the roof. Two samples will be collected on the Building 56 side of the west brick wall of the EC Building at 1 foot above the floor and 5 feet above the floor (total of 4 samples). Each sample will be analyzed for total

mercury. Samples for TCLP mercury analysis will also be obtained and held at the lab until the total mercury results are obtained and evaluated. TCLP analysis will be run if the total mercury level exceeds 4 mg/kg (20 times the TCLP limit of 0.2 mg/L).

7.5.1.2 Wood Ceiling

The building ceiling/roof is constructed from 3 inch tongue & groove wood planks and covers an area of approximately 18,500 square feet. Core samples will be collected on a 50-foot grid pattern from the inside surface. Samples from four nodes will be composited and sent to the laboratory for total and TCLP mercury analysis. TCLP analysis will be run if the total mercury level exceeds 4 mg/kg (20 times the TCLP limit of 0.2 mg/L).

7.5.1.3 Painted Steel

The building steel is painted and has mild corrosion. Scrape samples will be taken of the paint at each interior column and composited. Samples will be sent to the laboratory for total mercury analysis only.

7.5.1.4 Particulate and Dust

Dust will be collected with a wipe sample to determine the potential for mercury contamination. The building has been operated for over 30 years without the Sorensen cells. Dust and particulate build-up from 0 to 18 feet high and from 18 to 28 feet high will be sampled at six locations and composited based on the height range. The composited samples will be submitted to the laboratory for total mercury analysis. Two dust samples will be obtained in Building 56 near the west wall of the EC Building.

7.5.1.5 Pipe Insulation

Two samples of the pipe insulation will be obtained in the area of the Sorensen Cells and analyzed for mercury.

7.5.2 Site Specific Health and Safety Procedures

Once the assessment on mercury contamination of the building material is complete an addendum will be issued to the Site Health and Safety Plan, if necessary, prior to starting demolition. The addendum will address the types of materials to be demolished and levels of contamination present. Personal protective equipment and dust related controls will be identified in order to eliminate construction worker exposure.

7.5.3 Building Demolition

7.5.3.1 ACM Survey and Abatement

Asbestos survey and abatement activities will be performed in the EC Building. The asbestos-containing material (ACM) survey and all ACM abatement and demolition work will be performed in compliance with the North Carolina Asbestos Hazard Management Program,

established under N.C. General Statute §130A-444-452, which is administered by the North Carolina Division of Public Health, Health Hazards Control Unit. Rules adopted by the North Carolina Health Commission to implement the statutes may be found under 10A NCAC 41C.0600 - Asbestos Hazard Management Program.

7.5.3.2 Engineering Survey

Prior to the starting work, an engineering survey specific to the proposed demolition activities will be prepared in accordance with OSHA Regulation 29 CFR Part 1926 Subpart T. The survey will be used to evaluate the project and the demolition methodology and to assess the potential for an unplanned or sudden collapse of structural components during demolition operations.

7.5.3.3 Demolition

Demolition work shall include the removal of all structures, tanks, stacks, piping, catwalks, concrete unit masonry walls, brick, electrical conduit, lighting and ballasts, motor control centers, mechanical equipment, pumps, valves, and all appurtenances and materials above the floor slab. The work generally involves using 35 to 80 ton series excavators equipped with shears, grapples, buckets, and/or hydraulic hammers. The following paragraphs describe the methods and equipment that will be used to safely and successfully perform demolition.

The EC Building is a single-story building constructed of brick, steel, wood and concrete. Prior to performing any structural demolition all nonferrous recyclables, salvageable materials, and equipment will be removed. Structural demolition will be accomplished utilizing excavators fitted with grapples, processor's, and/or shear attachments. The excavators with attachments will be used to pull structural supports and walls, raze the structure in a controlled manner from top to bottom, bay by bay. After the building has been collapsed, the steel and recyclable clean fill materials will be extracted, sorted, prepared, and stockpiled for transport off site in a timely fashion.

The remaining non-hazardous construction and debris (C&D) materials will be stockpiled neatly and loaded into transport trucks for disposal at a landfill and the clean concrete and brick will be taken to an on-site crusher.

The steel will be cut to prepared sizes by an excavator with a shear before transport off site for recycling. A loading area will be designated for loading the processed steel into trucks or rail cars for off-site recycling.

Brick and concrete which can be used as fill will be crushed to **three-inch minus**.

7.5.3.4 Temporary Safety Fencing

Temporary safety fencing shall be provided to restrict access to the area and separate work area(s) from non-work area(s).

7.5.3.5 Care and Preservation of Site and Surroundings

Prior to starting work, best management practices (BMPs) will be installed to prevent soil, solids, and sediments from entering the Davidson River. BMPs will be installed on all site storm water drains and catch basins to control construction water and storm water that originates and migrates through the site.

Dust and debris suppression methods, including tarping, will be used as necessary to contain the materials during demolition, material storage, and transportation. All hazardous and non-hazardous waste materials generated during the project will be handled in accordance with the applicable off-site transportation and disposal regulations.

7.5.4 Demolition Debris Segregation and Disposal

Demolition debris will be separated into the following four categories:

- Hazardous Material for Off-Site Disposal
- Non-Hazardous Material for Off-Site Disposal
- Recycle Material
- On-Site Reuse

7.5.4.1 Hazardous Material for Off-Site Disposal

Building material which has TCLP mercury levels greater than 0.2 mg/L will be classified as hazardous. Material classified as hazardous will be segregated, covered and stored prior to disposal. Based on the type of classification of the material, it may be cleaned and resampled or disposed of in a hazardous waste landfill.

7.5.4.2 Non-Hazardous Material for Off-Site Disposal

Non-hazardous building material which is not suitable for on-site reuse, recycle or resale and which is below the limit for hazardous waste characterization (0.2 mg/L TCLP mercury) and above the North Carolina Default SRG for mercury (4.6 mg/kg) will be disposed offsite at a Subtitle D landfill. Non-hazardous building material with mercury concentrations less than the North Carolina Default SRG may be disposed at an offsite C&D landfill.

7.5.4.3 Recycle Material

Demolition material which has recycle value and is non-hazardous will be sent to a recycler.

7.5.4.4 On-Site Reuse

Non-hazardous crushed brick and concrete may be used onsite for beneficial reuse as fill material as long as it meets the required SRGs.

7.5.5 Demolition Schedule

Demolition of the EC Building will begin after the assessment and report for the underslab groundwater, soils, and trenches is completed under the non-time critical removal action to prevent rain water from entering the trenches.

7.6 Stockpile Confirmation Sampling

Prior to disposal the stockpiled material will be sampled and sent to the laboratory for total mercury analysis. One composite sample will be collected per 100 cubic yard of stockpiled demolition debris. Each sample will be composited from a minimum of six grab samples collected from different locations. Sampling will be as described in Section 7.5.1.

7.7 Electrochemical Building Demolition TCRA Report

A TCRA report will be produced following completion of the work described in this WP. Based on the completed investigative and remedial work, the TCRA report will summarize and discuss the following:

- Building material sample analytical results
- Quantities and method of final disposal of demolition debris

8.0 Rifle Range Remediation

8.1 Background

This Work Plan describes the assessment activities that will be performed at the Rifle Range Area associated with the planned redevelopment of the former Ecusta Paper Mill site in Brevard, Transylvania County, North Carolina. This work will be in accordance with the Final Draft Removal Action Scope of Work described in the BFPP between the EPA and DRV, dated January 7, 2007.

This Work Plan for the Rifle Range Area provides a scope of work to investigate and remediate any potential lead impacts to the environment from the operation of the range. Efforts will be taken to identify, characterize, evaluate, and mitigate potential risks to human health and the environment. The Rifle Range will be addressed as part of the TCRA.

8.2 Site Description

The Rifle Range is located south of the Aerated Stabilization Basin between the Davidson River and its confluence with French Broad River as shown on Figure 8-1, “Remediation Project Area for Rifle Range.” The site contains a backstop berm and a shooting station.

8.2.1 History

The Rifle Range was formally used by plant personnel and local authorities for target practice.

8.2.2 Land Cover, Topography, and Vegetation

The site topography is generally level with a small backstop berm. Grass covers the site which has been continuously maintained.

8.2.3 Surface Water Bodies and Surface Drainage

As Shown in Figure 8-1, the site is surrounded on three sides by the Davidson River and the French Broad River. Surface water runoff drains to one of the two rivers.

8.2.4 Wetlands

There are no wetlands associated with the Rifle Range. However, the site is located within the 100-year floodplain.

8.3 Summary of Previous Investigations

ATI conducted a Phase II ESA at the plant beginning on May 20, 2003. As part of the Phase II ESA work scope conducted by ATI, one soil sample, SS-03-M16-0.5, was collected from a depth of 0.5 feet in the vicinity of the Rifle Range berm as illustrated on Figure 8-2, “Previous and Proposed Site Investigations, Rifle Range Area”. The soil sample was analyzed for eight metals:

arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. The sample was analyzed for total and TCLP leachate concentrations. Table 8-1 is a summary of the analytical results. Of the eight metals analyzed, only lead exceeded the NCDENR SRGs. Total lead concentration was 1,900 mg/kg and the SRG for lead is 400 mg/kg. Arsenic (0.15 mg/L), barium (0.97 mg/L), lead (72 mg/L), and selenium (0.027 mg/L) were detected in TCLP analysis. Lead was present in the TCLP leachate at a concentration of 72 mg/L compared to 5 mg/L criteria for characteristically hazardous waste. Soils are classified as D008 (TCLP lead greater than 5.0 mg/L) waste and would require treatment before disposal. These data suggest that lead is the only contaminant of concern at the site which is typical for a small arms range site.

8.4 TCRA Objectives

The TCRA objective is to delineate, remove, and dispose of spent lead shot from the rifle range backstop berm, and dispose of soils in the rifle range field area exhibiting lead concentrations exceeding the remediation goal for lead (400 mg/kg), as developed in Section 3.

8.5 Site-Specific Remediation Goals

The remedial action goals for the Rifle Range were developed in Section 3 and are summarized in Table 8-2.

8.6 Proposed Field Activities

The field work at the Rifle Range will consist of delineating extent of lead contamination, excavating the backstop berm and the range field area, transportation and disposal of contaminated soils, and site restoration. In order to accomplish the TCRA goals, field activities will be conducted as discussed below.

8.6.1 Delineation of Lead Impacted Soils

The area between the impact berm and the presumed shooting positions at the shooting station (approximately 150 feet by 75 feet) will be assessed using a 25 feet by 25 feet grid pattern (Figure 8-2). The positions of the four corners of the area and grid locations will be established in the field using a portable global positioning system. Temporary stakes will be installed at the corners and at each grid point prior to sampling. Each grid location will be marked with a unique number to identify its position.

Soil samples will be collected from each grid location using a decontaminated stainless steel hand auger from 0- to 6-inch, 1-foot, and 2-foot depth intervals to define the horizontal and vertical extent of lead impacts. Soil samples will be visually screened for spent shot and an XRF screening instrument will be used to screen the soil samples following removal of any spent shot that may be identified in the sample, for lead content. XRF readings will be recorded for each grid point and a map produced establishing the limits of the area to be excavated at each of the

three depth intervals. Deeper soil samples will be collected if XRF readings indicate lead concentrations exceed established remediation goals.

Three soil samples will be submitted to an approved laboratory for total and TCLP lead analysis to determine handling procedure for excavated soils. The screening sample with the highest XRF reading for lead from the range field will be selected as one of the three soil samples. Table 8-3 provides a summary of samples to be taken at the Rifle Range.

Range field and berm excavation will proceed after the limits of the excavation area are confirmed by the results of these analytical samples. Limits of excavations will be determined using hot-spot removal as well as 95% UCL exceeding lead RG of 400 mg/kg. The 95% UCLs will be calculated using data sets from 75 ft x 75 feet in the Rifle Range Field and one set for the backdrop berm. No groundwater sampling will be conducted or is anticipated due to the limited area and shallow depth of the lead impact in the soil.

8.6.2 Rifle Range Field and Backstop Berm Excavation

Most of the spent lead shot that will be handled during this project will be generated from the soil comprising the first 2 feet of the impact face of the backstop berm. Also, the impact face of the berm is expected to fail TCLP criteria of 5 mg/L based on Phase II ESA sampling. The impact face of the berm will be removed to a depth of 2 feet and segregated for further processing. Applicable Site Preparation and Staging Best Management Practices for Soils Treatment Technologies, Suggested Operational Guidelines to Prevent Cross-Media Transfer of Contaminants During Cleanup Activities as outlined in EPA530-R-97-007 document published in May of 1997, will be utilized during the excavation phase of the Rifle Range cleanup.

Soil from deeper in the berm and the range field soils are expected to contain relatively little spent shot and are expected to pass TCLP lead criteria. Soils from these sources will be excavated and stockpiled separately. It is anticipated that there will be limited mature vegetation that will require removal before the soil excavation process starts. However, prior to the excavation, the area targeted for soil removal will be surveyed and if necessary a clearing and grubbing phase will be implemented.

Soils samples from the sidewalls of excavation will be collected every 50 linear feet and two samples will be collected from the base of the excavation. Soil samples will be field screened using XRF to ensure that soils exceeding established remediation goals have been excavated. Once excavation is complete one composite soil sample from each sidewall of excavation and two composite soil samples from the base of the excavation (total of 6 composite samples) will be sent to a fixed laboratory for confirmation that the soil removal action is complete. The composite will consist of four grab samples. The grab samples will be collected and thoroughly

homogenized using a decontaminated stainless steel bowl and trowel. These composite samples will be analyzed for lead by EPA Method 6010.

All stockpiled soils will be contained to keep erosion and dust generation to a minimum. The soil stockpile will be established over temporary visqueen sheeting, and covered with sheeting whenever excavation activities are not being conducted, at the end of each work day, or as weather requires. Temporary silt fencing will be installed around the stockpile to contain run-off resulting from rainfall.

Personal air monitoring will be performed for equipment operators during all excavation activities for total airborne particulates using a Personal Data Real-Time Air Monitor (RAM). Samples for lead particulates within the dust will be collected using collection filters attached to the RAM. The sampling filters will be delivered to an analytical laboratory for analysis of lead by EPA Method 6010.

8.6.3 Lead Shot/Bullet Debris Segregation

It is anticipated that approximately 400 cubic yards (an estimated 670 tons) of lead impacted soil will be excavated. Two handling and disposal methods may be used for this soil. The first method is for off-site disposal with stabilization depending on the specific landfill acceptance criteria. The second method is to screen out the lead shot using the following procedure. Lead shot will be segregated from soil using a double deck screen plant with a three-belt power screen. The soil from the backstop berm face will contain the most lead shot and will be processed first. Two-stage screens will be used to separate the excavated material from the rejected material. The first screen (0.5 inches) will separate large debris and vegetation. The second screen (4 millimeters) will separate lead bullets and shot from the soil. A belt below the second screen will eject the fine screened material. This material will then be moved to the staging area stockpile to await sampling, as described in Section 9.5.4.

Spent lead shot will be collected from the second screen and placed into sealed drums to await disposal to a recycling facility at the completion of the project.

Personal air monitoring will be performed for equipment operators during soil screening activities for total airborne particulates using a Personal Data RAM. Samples for lead particulates within the dust will be collected using collection filters attached to the RAM. The sampling filters will be delivered to an analytical laboratory for analysis of lead by EPA Method 6010.

8.6.4 On-Site Soil Stockpile Management, Treatment, and Sampling

Based on TCLP analysis for soil sample SS-03-M16-0.5, the soil from berm face is classified as D008 waste (TCLP lead greater than 5 mg/L) as per 40 CFR 261. Therefore,

stabilization/solidification of the berm face soil is required which will be performed in an enclosed area with a concrete floor, such as the warehouse building, or on visqueen at the Rifle Range. It is expected that the following reagent mix ratios of reagents may be sufficient for stabilizing/solidifying the soil and to meet typical landfill acceptance criteria of TCLP lead less than 5 mg/L and soil pH greater than 2.0 su and less than 12 su:

- 3 percent by weight of trisuperphosphate
- 20 percent by weight cement kiln dust
- 5 percent Portland cement

Reagent will be spread on the soil to be treated and mixed by moving soils by front-end dozer and/or excavator. Following mixing, the stabilized/solidified material may require time for curing depending on the reagent used.

The composite will consist of four grab samples from various locations in the stockpile. The grab samples will be collected and thoroughly homogenized using a decontaminated stainless steel bowl and trowel. The composite sample will be placed into a laboratory supplied sample jar, sealed, labeled, preserved on ice, and transported in accordance with chain of custody protocols to the analytical laboratory for lead analysis by EPA Method 6010 and TCLP Leachate process. If treated soils fail TCLP lead criteria, soils will be further treated using additional reagent and resampled.

Screened soils excavated from deeper in the backstop berm and from the Rifle Range Field area (stockpiled separately) is not expected to fail TCLP lead criteria. These stockpiles will be sampled and analyzed for TCLP lead using the same approach described above at a frequency of one composite sample per 100 cubic yards of material. If any of the stockpile fails TCLP lead criteria, it will be treated with stabilizing/solidifying reagent as described above.

8.6.5 Soil and Lead Disposal

It is estimated that approximately 400 cubic yards (estimated 670 tons) of soil (after treatment, if required) will be transported either to the Electro-Chem Building area for containment or transported off-site and disposed at a Subtitle D landfill as approved by EPA and the NCDENR. Screened stockpiled soil exhibiting concentrations below the established remedial criteria and found to be nonhazardous may be used to backfill the range field excavation. Recovered lead shot will be transported and disposed at a metal recycling facility. Waste manifests and/or landfill weight tickets will be collected documenting the tonnage and proper disposal of all material removed from the site.

8.6.6 Site Rehabilitation

The excavated areas of the range field and backstop berm will be backfilled to grade using approved material from the screened soil stockpile. Additional soil will, if needed, be excavated from barrow areas on-site to backfill to grade. All disturbed areas will be graded to match the surrounding topography.

Soil erosion control fencing will be placed immediately down-gradient of all backfilled areas and the soil will be compacted to provide stabilization. A HydroSeed application of suitable local plant species will be applied to permanently stabilize the soils in the excavated area. Follow-up monitoring will be conducted weekly for a 6-week period to inspect the area for erosion and monitor the progress of seed germination. Corrective actions including additional compaction, regrading, irrigation, or reseeding will be conducted as necessary during this period to assure adequate stabilization. Provided that the surface has adequately stabilized, the erosion control fencing will be removed 6 weeks after completion of the backfill.

8.7 TCRA Report

Following the execution of the above described work scope, a post remediation report will be developed detailing the work conducted and the results of the remedy.

9.0 Project Organization

9.1 Introduction

Several organizations will be directly involved in the performance and review of this project. These organizations have specific project functions and relate to each other in various ways according to their project responsibilities. The purpose of this section is to provide an understanding of the overall project organization and the function and responsibility of various groups to aid in the exchange of information and to provide efficient project implementation. The key organizations, personnel, and their responsibilities are described below and are shown graphically in Figure 9-1. Table 9-1 provides contact information for key individuals working on the project.

9.2 U.S. Environmental Protection Agency

The EPA Region 4 has entered into an Order of Consent with the DRV to perform a TCRA at the Site. The EPA must review and approve certain plans and reports submitted for the TCRA as specified in the Order of Consent. The EPA has designated Ms. Jennifer Wendell as its Remedial Project Manager.

9.3 North Carolina Department of Environment and Natural Resources

The NCDENR provides state oversight for the project. The NCDENR reviews plans and reports submitted for the TCRA and provides comments to the EPA. The NCDENR has designated Mr. Jim Bateson as its Project Manager.

9.4 Respondents

Davidson River Village LLC is the Respondent for the TCRA at the Site. EPA approved the appointment of Mr. Mike Singer, of Davidson River Village LLC as the Project Coordinator. Mr. Singer will be responsible for administration of all actions by Davidson River Village LLC.

9.5 TCRA Contractor

Shaw has been chosen by the Respondent as the TCRA contractor. All work will be performed under the supervision of the Shaw Project Manager, Mr. Ron Kenyon.

9.6 TCRA Support Contractors

Respondent will retain support contractors to perform demolition, surveying, monitoring well installation, sample analysis, and/or other qualified contractors, as necessary, to implement the tasks described in this Work Plan. Some of the contractors are identified in Figure 9-1. The

technical aspect of support contractors' work will be coordinated by Shaw and administrative aspects of support contractors' work will be coordinated by the project coordinator.

10.0 Project Schedule

Figure 10-1 presents a bar chart showing the planned schedule for the TCRA activities. The schedule includes both target dates and time periods for each deliverable and field data collection activity identified in this Work Plan, with assumptions regarding the timeframes for EPA review of deliverables. Initiation of field data collection activities will commence at the site after the EPA approves the TCRA Work Plan. The schedule will be updated and submitted to the EPA for approval, as necessary, to reflect actual durations and activity forecasts during the progress of the work.

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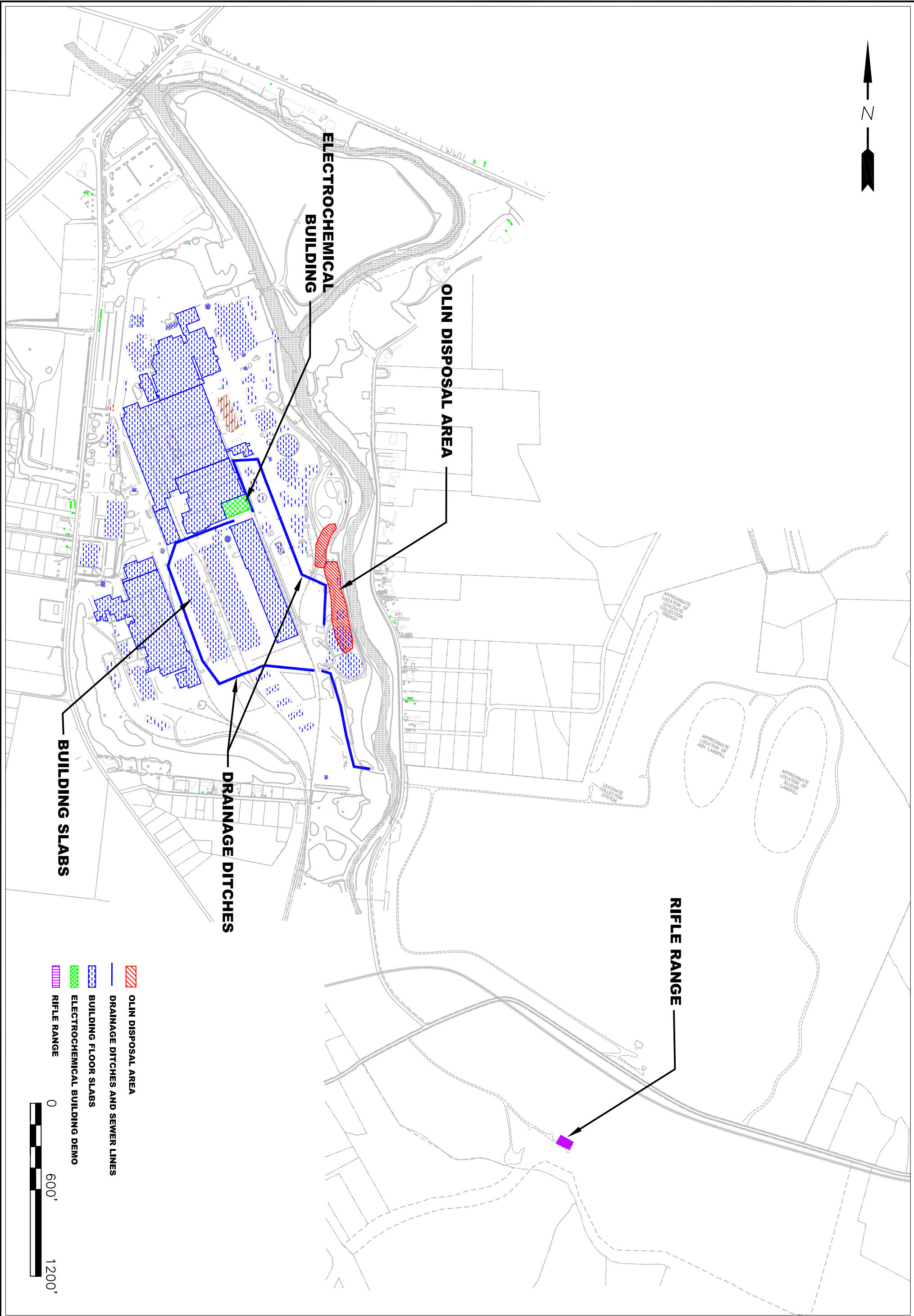
U.S. Environmental Protection Agency, 2004, Risk Assessment Guidance for Superfund: Volume I Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment). Final. EPA/540/R/99/005. Office of Emergency and Remedial Response. Washington, D.C, PB99-963312.

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Figures



TCRA AREAS

CLIENT: DAVIDSON RIVER VILLAGE LLC			PM: RK
LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA			CHECKED: RS
DESIGNED: AA	DETAILED: TFR	PROJECT NO.: 131497	FIGURE: 1-1



Image courtesy of the U.S. Geological Survey

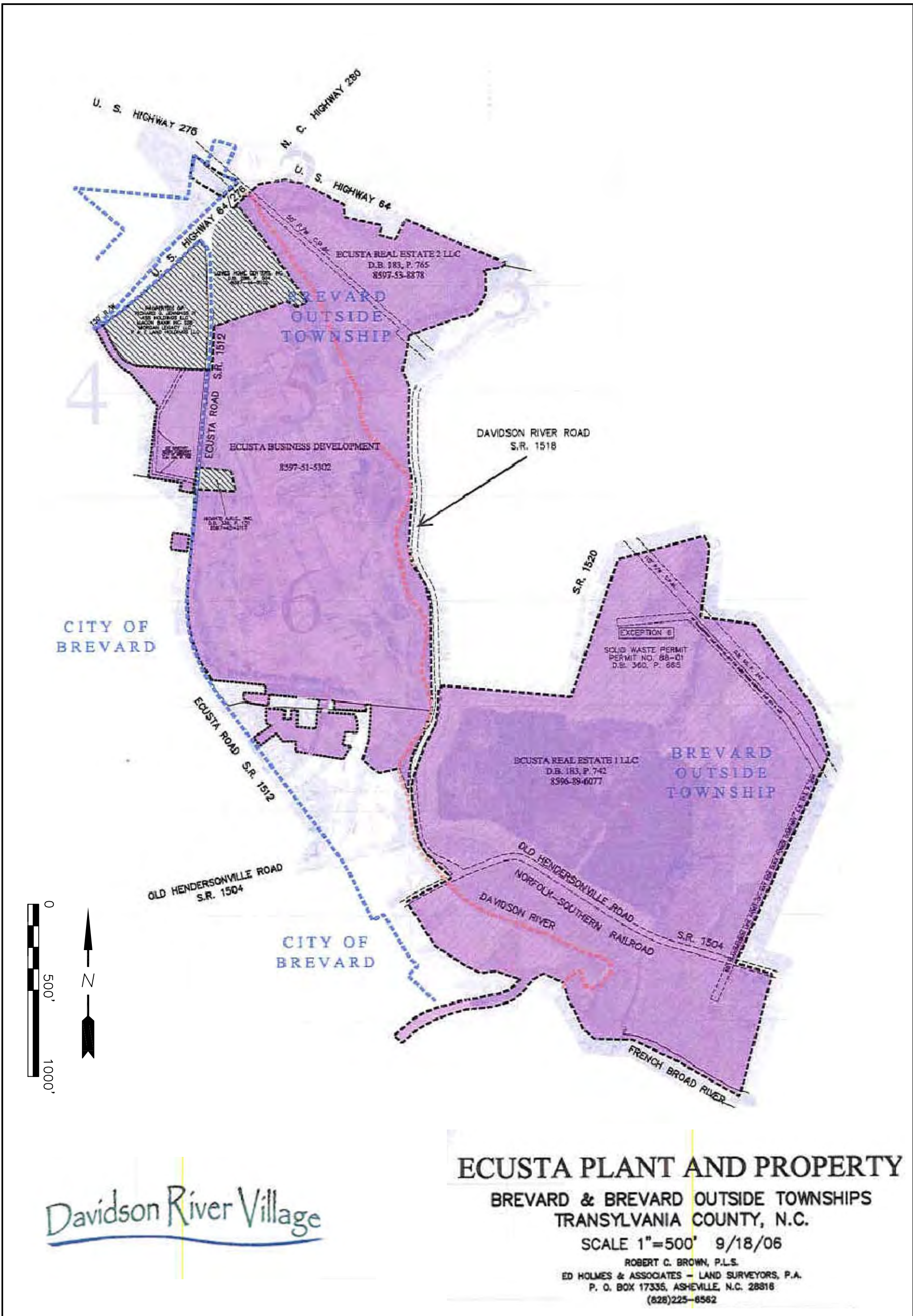


11560 GREAT OAKS WAY
SUITE 500
ALPHARETTA, GA 30022
(770) 475-8994 (TEL)
(770) 777-9545 (FAX)

LOCATION MAP

OFFICE: Alpharetta
DRAWING DATE: 03/14/2008
ACAD FILE: FIGURE2-1

CLIENT: ECUSTA PAPER MILL			PM: RK
LOCATION: PISGAH FOREST NORTH CAROLINA			CHECKED: RS
DESIGNED: AA	DETAILED: TFR	PROJECT NO.: 131497	FIGURE: 2-1



Davidson River Village

ECUSTA PLANT AND PROPERTY

BREVARD & BREVARD OUTSIDE TOWNSHIPS
TRANSYLVANIA COUNTY, N.C.

SCALE 1"=500' 9/18/06

ROBERT C. BROWN, P.L.S.
ED HOLMES & ASSOCIATES - LAND SURVEYORS, P.A.
P. O. BOX 17336, ASHEVILLE, N.C. 28816
(828) 225-6562

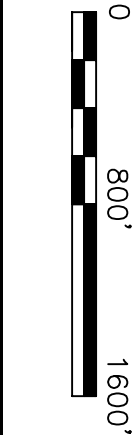



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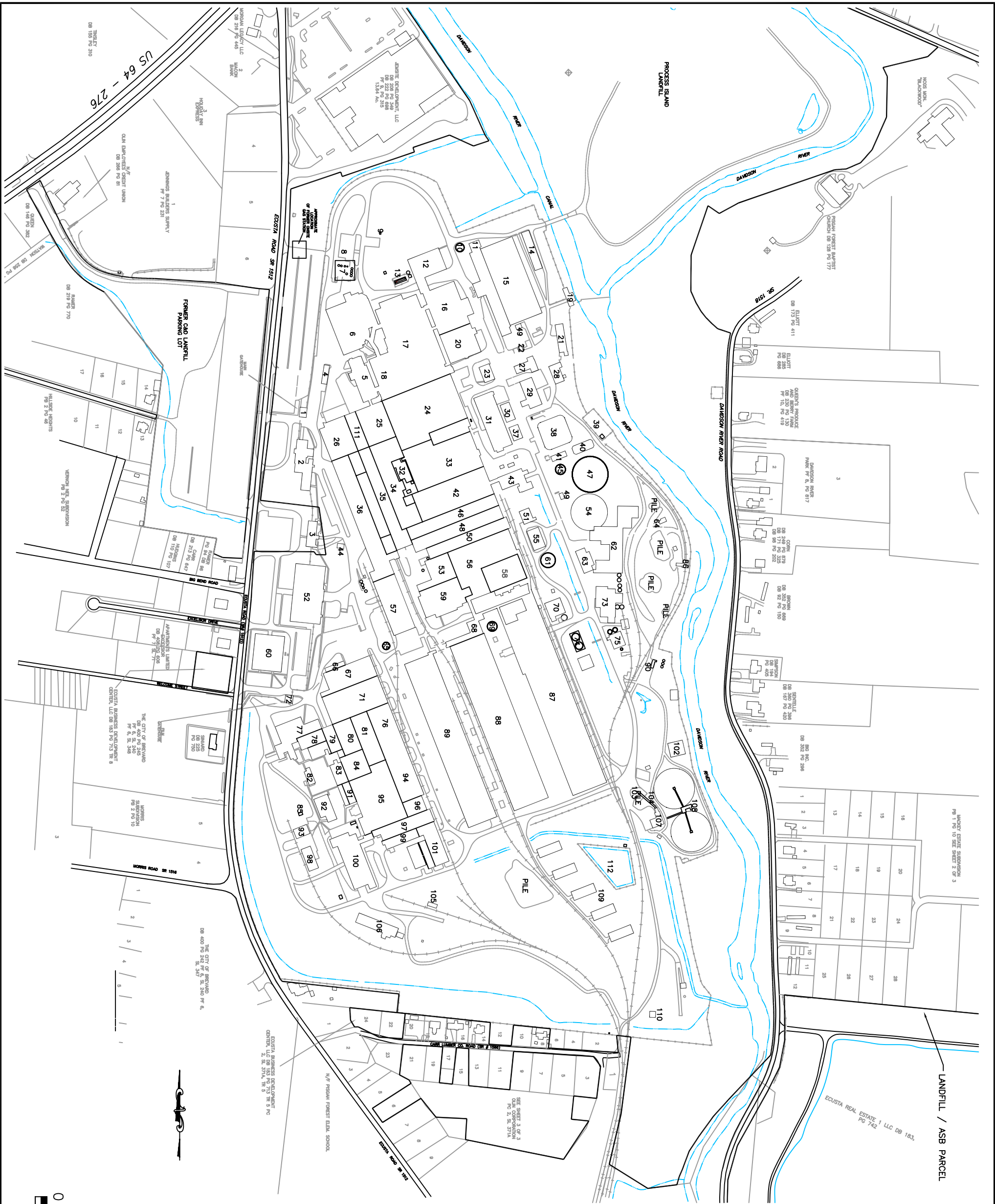
11560 GREAT OAKS WAY
SUITE 500
ALPHARETTA, GA 30022
(770) 475-8994 (TEL)
(770) 777-9545 (FAX)

PROPERTY MAP

CLIENT: DAVIDSON RIVER VILLAGE LLC			PM: RK
LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA			CHECKED: RS
DESIGNED: AA	DETAILED: TFR	PROJECT NO.: 131497	FIGURE: 2-2



<div><div>11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)</div></div>			<div>SITE LAYOUT MAJOR FEATURES</div>			CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK
LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA						CHECKED: RS		
OFFICE: Alpharetta	DRAWING DATE: 03/14/2008	ACAD FILE: FIGURE2-3.DWG				DESIGNED: AA	DETAILED: TFR	PROJECT NO.: 131497



- 1. MAIN ENTRANCE & GATE HOUSE
- 2. MAIN OFFICE BUILDING
- 3. LABORATORY
- 4. CAFETERIA CENTER
- 5. CAFETERIA
- 6. PRINTING
- 7. SOLVENT RECOVERY
- 8. INK DRUM STORAGE
- 9. 100' DIAMETER WELL
- 10. BACKWASH TANK
- 11. PORTABLE WATER FILTER PLANT
- 12. STORAGE BUILDING
- 13. SOLVENT STORAGE TANK
- 14. SALVAGE BUILDING
- 15. PAPER MILL
- 16. STORAGE BUILDING
- 17. CONVERTER BUILDING
- 18. DAVIDSON RIVER PUMP HOUSE
- 19. STORAGE BUILDING
- 20. STOREROOM
- 21. PROPANE STORAGE (2 PLC'S)
- 22. PROPANE STORAGE
- 23. PAINT & OIL STORAGE
- 24. FINISHING
- 25. WINDING & CALENDERING
- 26. STORAGE BUILDING GARAGE
- 27. TRANSPORTATION GARAGE
- 28. PAINT SHOP
- 29. SHEET METAL & PIPE SHOP
- 30. MAINTENANCE OFFICE BUILDING
- 31. MACHINE SHOP
- 32. LABORATORY
- 33. LABORATORY
- 34. No. 10 PAPER MACHINE ROOM
- 35. No. 11 PAPER MACHINE ROOM
- 36. No. 12 PAPER MACHINE ROOM
- 37. INSTRUMENT SHOP
- 38. No. 1 RESERVOIR
- 39. No. 2 RESERVOIR
- 40. COOLING TOWER
- 41. SERVICE WATER PUMP HOUSE
- 42. REFINING BUILDING
- 43. TURBINE ROOM
- 44. TELEPHONE EQUIP. BUILDING
- 45. 500' DIAMETER TANK
- 46. PULP & CALCIUM CARBONATE STORAGE
- 47. No. 2 RESERVOIR
- 48. BLEACH BUILDING
- 49. FIRE PUMP HOUSE
- 50. CONTINUOUS CARBONATION
- 51. RESEARCH BUILDING
- 52. RESEARCH BUILDING
- 53. WASHERS
- 54. No. 3 RESERVOIR
- 55. DATA PROCESSING BUILDING
- 56. STOREROOM
- 57. STOREROOM
- 58. BLEACH MAKE-UP
- 59. No. 9 PAPER MACHINE ROOM
- 60. SALES & ADMINISTRATION BUILDING
- 61. BLACK LIQUOR TANK
- 62. BULKER HOUSE
- 63. PULP & WATER MAINTENANCE SHOP
- 64. COAL CONVEYOR
- 65. FIRE WATER TANK
- 66. OFFICES
- 67. SHIPPING
- 68. PULP CONVEYOR
- 69. PULP CONVEYOR
- 70. CAUSTIC STORAGE BUILDING
- 71. ESSENTIAL MATERIALS
- 72. GATE HOUSE
- 73. CARBONATE PLANT
- 74. BLACK LIQUOR STORAGE TANKS
- 75. STORAGE BUILDING
- 76. STORAGE BUILDING
- 77. R.C. BUILDING
- 78. TOP COATER BUILDING
- 79. CAFETERIA
- 80. SITTING
- 81. SLEEPING
- 82. SOLVENT RECOVERY
- 83. COATING TOWERS
- 84. LAG STORAGE
- 85. SOLVENT STORAGE
- 86. SOLVENT STORAGE STATION
- 87. FIBRE WAREHOUSES
- 88. WAREHOUSES
- 89. WAREHOUSES
- 90. FUEL OIL STORAGE TANKS
- 91. LABORATORY
- 92. EMPTY DRUM STORAGE
- 93. SHOPS & STORES
- 94. CASTING ROOM
- 95. COAGULATING BATH
- 96. V.R. ROOM
- 97. V.R. ROOM
- 98. CHEMICAL BUILDING
- 99. CHEMICAL BUILDING
- 100. FILM DEVELOPMENT BUILDING
- 101. WOOD PULP STORAGE
- 102. SANITARY WASTE TREATMENT PLANT
- 103. SLUDGE STORAGE PAD
- 104. CHEMICAL TANK TARM
- 105. FIELD SHOPS
- 106. FIELD SHOPS
- 107. OPERATIONS BUILDING
- 108. CLARIFIERS
- 109. STORAGE SHEDS
- 110. PAPER MILL
- 111. PAPER MILL
- 112. BLACK LIQUOR STORAGE LAGOON
- 113. PIPE STORAGE SHED

		11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)		BUILDING LAYOUT		CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK	
OFFICE: Alpharetta		DRAWING DATE: 03/14/2008		ACAD FILE: FIGURE2-4.DWG		LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA		CHECKED: RS	
						DESIGNED: AA	DETAILED: TFR	PROJECT NO.: 131497	FIGURE: 2-4



Mixed Use Town Center

Town Center Park

Lodge

Community Park

Neighborhood Park

Riverside Park & Outfitters

Residential Neighborhood

Davidson River Trail

FROM DRAWING PROVIDED BY:



DESIGNWORKSHOP

WILLIAM G. LARLEY
& ASSOCIATES, P.A.



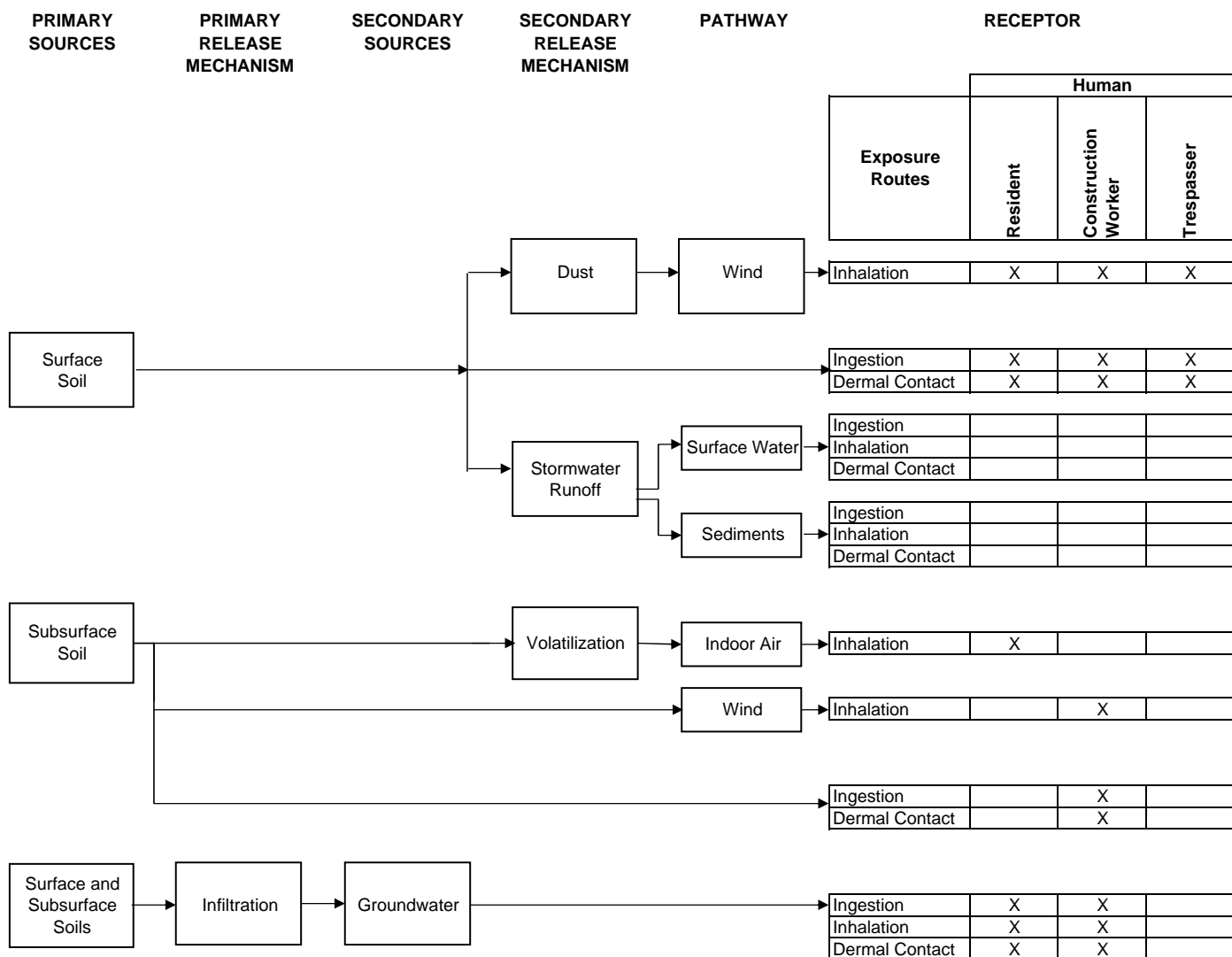
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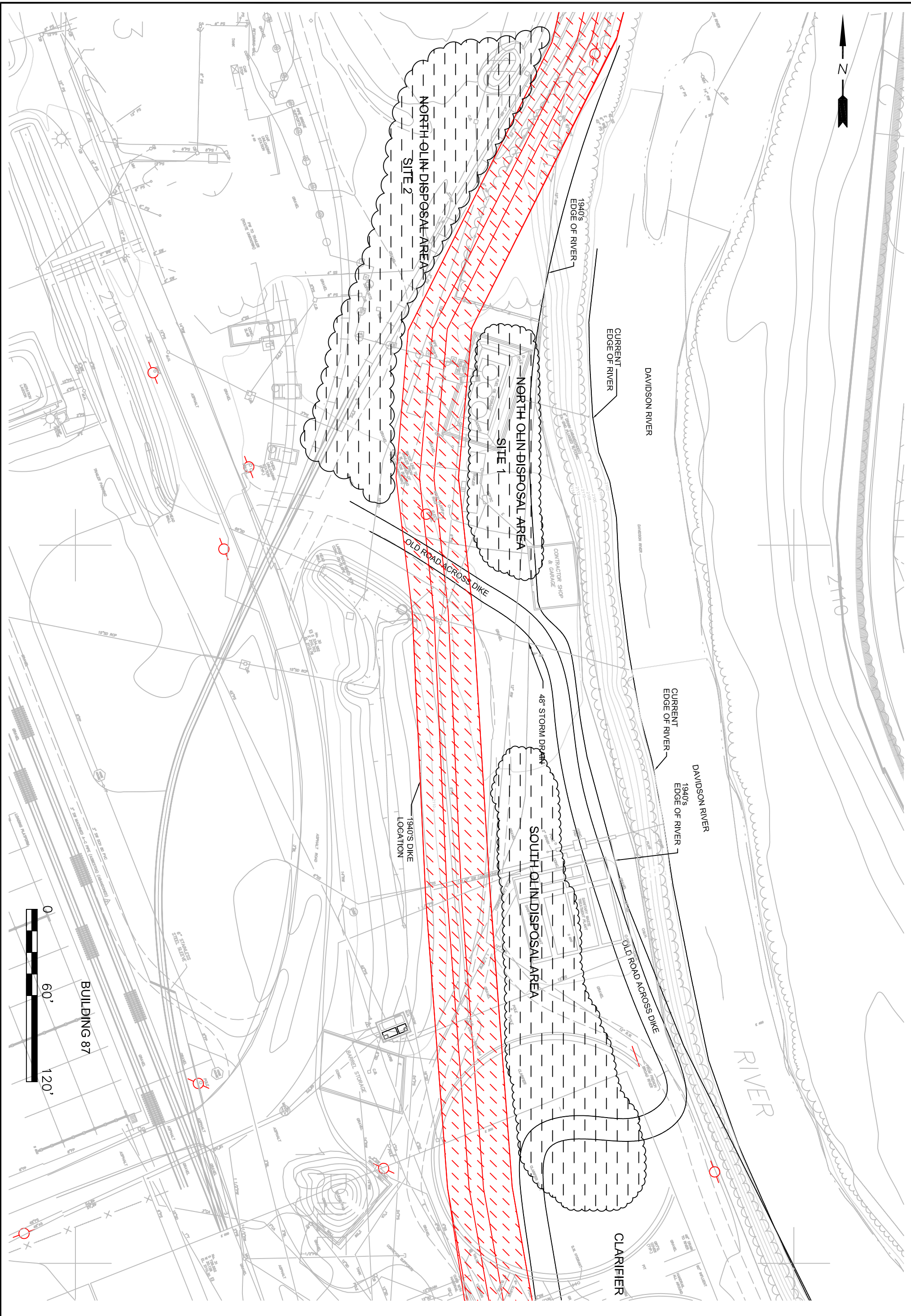
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CONCEPTUAL DEVELOPMENT PLAN

CLIENT: DAVIDSON RIVER VILLAGE LLC			PM: RK
LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA			CHECKED: RS
DESIGNED: AA	DETAILED: TFR	PROJECT NO.: 131497	FIGURE: 2-5

FIGURE 3-1
CONCEPTUAL SITE MODEL FOR HUMAN HEALTH EXPOSURE TO SOILS
Former Ecusta Paper Mill, Brevard, NC

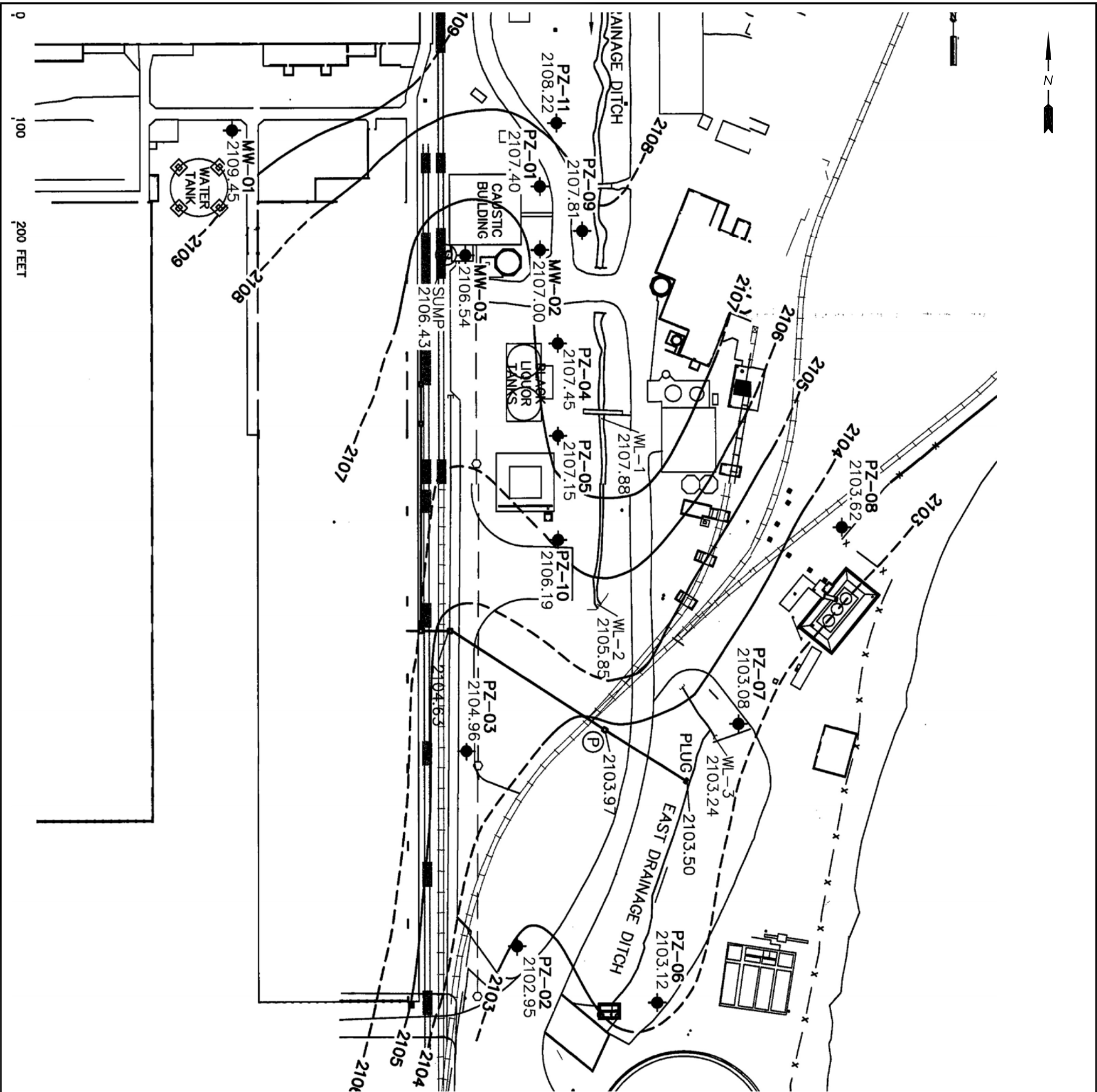




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OFFICE: Alpharetta	DRAWING DATE: 03/14/2008	ACAD FILE: FIGURE 4-2.DWG			

TCRA WORK PLAN OLIN DISPOSAL AREA DETAILED LAYOUT					

CLIENT: DAVIDSON RIVER VILLAGE LLC			PM: RK		
LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA			CHECKED: RS		
DESIGNED: AA	DETAILED:	PROJECT NO.: 131497	FIGURE: 4-2		



NOTES:

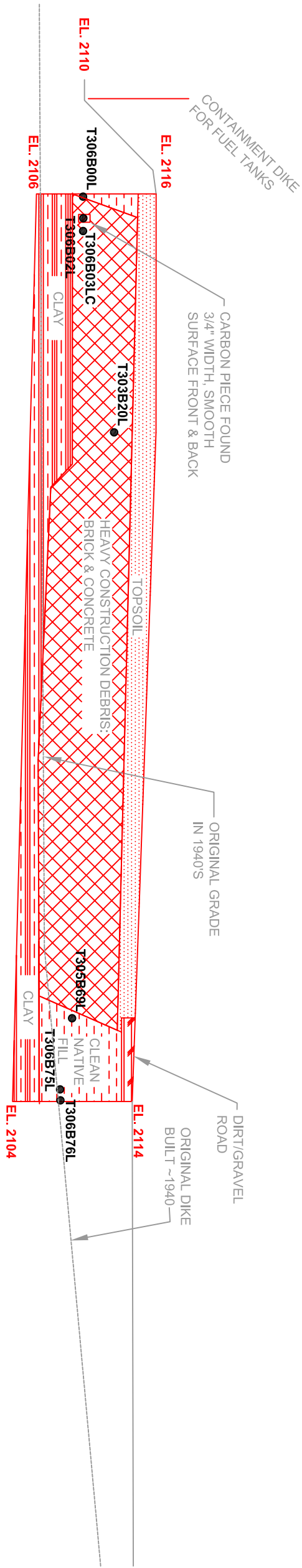
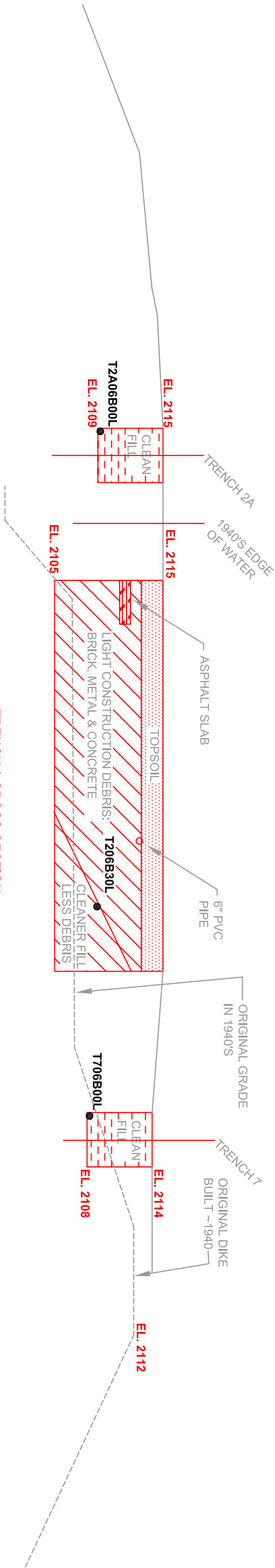
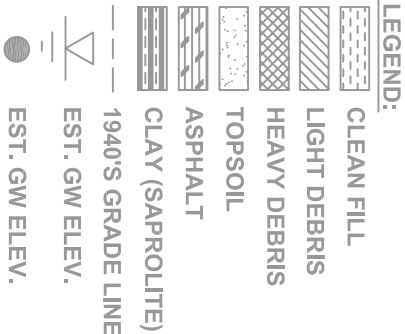
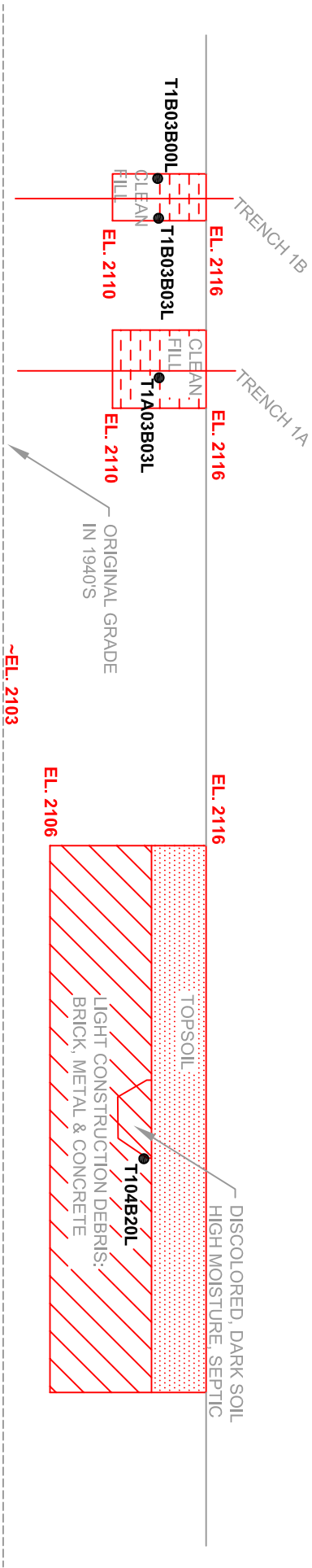
1. SAMPLES COLLECTED BY DISPOSABLE BAILER ON MARCH 20, 2003.
2. TOPOGRAPHIC AND SITE FEATURES TAKEN FROM ECUSTA AUTOCAD FILE DRAWINGS OF UNDERGROUND PIPING, NUMBERED D-2 (6/15/00), E-2 (9/15/99) AND E-1 (9/15/94). FEATURES ILLUSTRATED HAVE NOT BEEN FIELD CHECKED FOR ACCURACY.
3. WELL AND PIEZOMETER ELEVATIONS SURVEYED ON MARCH 21, 2003 BY JACK GARREN AND MIKE COTE OF ECUSTA. WELL & PIEZOMETER LOCATIONS TAKEN FROM TAPE MEASUREMENTS BY SME ON MARCH 22, 2003. ALL LOCATIONS ARE APPROXIMATE.


LEGEND

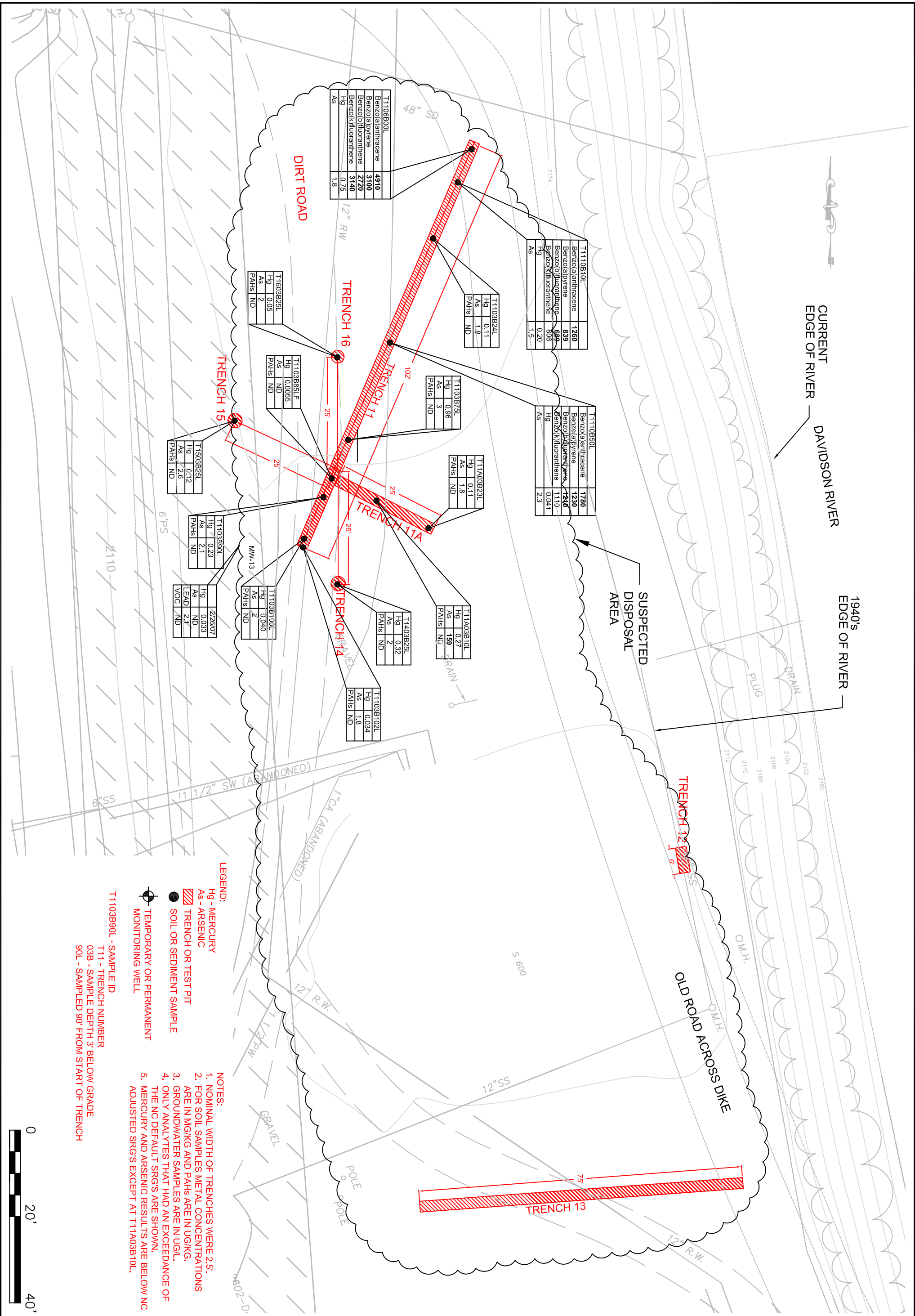
- 100— INTERPRETIVE WATER LEVEL ELEVATION CONTOURS (FT/MSL)
- ◆ MW-03 MONITORING WELL/PIEZOMETER WATER LEVEL ELEVATION (FT/MSL)
185
- Ⓟ SUMP PUMP TO REMOVE SODIUM HYDROSULFATE FROM CAUSTIC BUILDING
- WL-1 WATER LEVEL ELEVATION OF EAST DRAINAGE DITCH ON 3/21/03.
- RELEVANT UNDERGROUND PIPING
 - CATCH BASIN INVERT ELEVATION 2103.97
 - 15" STORM DRAIN
 - 3" SERVICE WATER
 - 8" FIRE PROTECTION W/HYDRANT

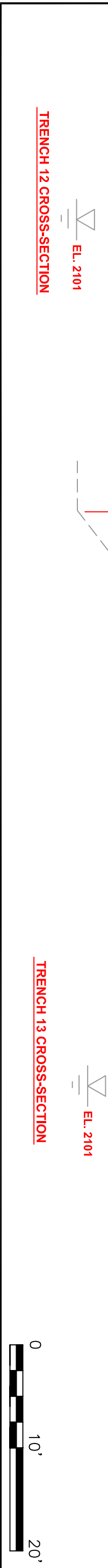
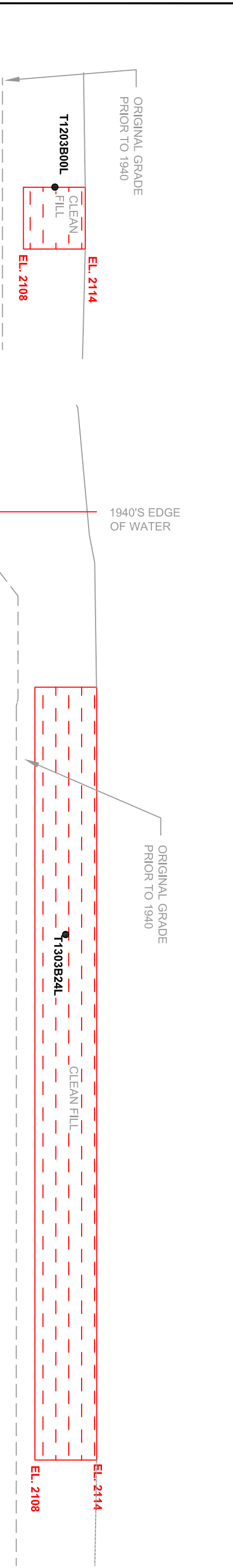
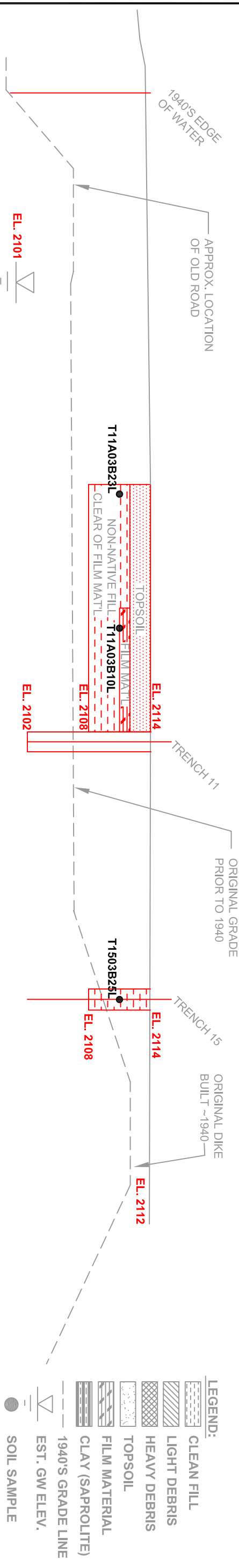
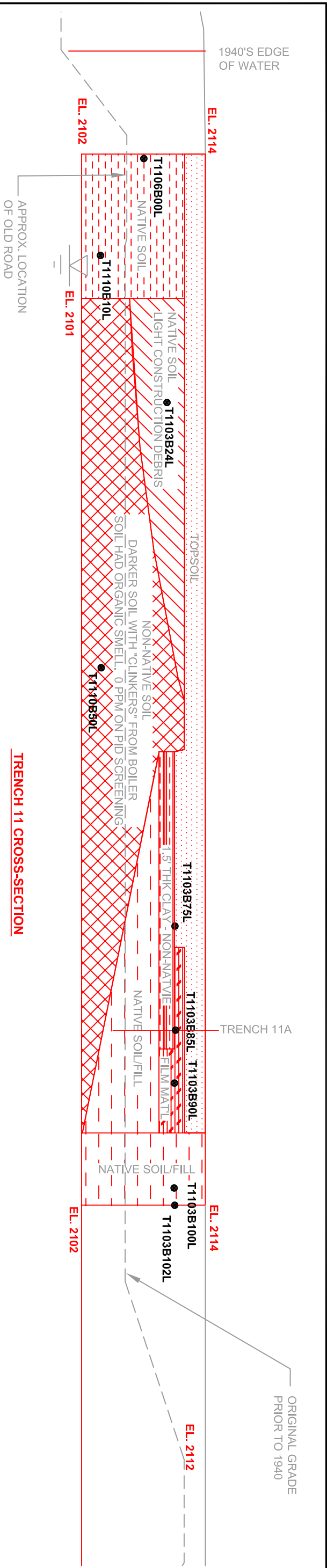
NOTE: DRAWING IS FROM FIGURE 3-1, WATER LEVEL, CAUSTIC BUILDING INVESTIGATION, SME, 5/5/03

		11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)		TCRA WORK PLAN OLIN DISPOSAL AREAS POTENTIOMETRIC SURFACE MAP				CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK					
OFFICE: Alpharetta		DRAWING DATE: 03/14/2008						ACAD FILE: FIGURE 4-3.DWG		LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA		CHECKED: RS			
								DESIGNED: AA		DETAILED: TFR		PROJECT NO.: 123445		FIGURE: 4-3	



		11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)		TCRA WORK PLAN NORTH OLIN DISPOSAL AREA INVESTIGATION TRENCHES CROSS-SECTIONS		CLIENT: ECUSTA PAPER MILL	PM: RK
OFFICE: Alpharetta	DRAWING DATE: 03/14/2008	ACAD FILE: FIGURE 4-5.DWG			LOCATION: PISGAH FOREST NORTH CAROLINA	CHECKED: RS	FIGURE: 4-5
					DESIGNED: AA	DETAILED:	PROJECT NO.: 123445






LEGEND:

- CLEAN FILL
- LIGHT DEBRIS
- HEAVY DEBRIS
- TOPSOIL
- FILM MATERIAL
- CLAY (SAPROLITE)
- 1940'S GRADE LINE
- EST. GW ELEV.
- SOIL SAMPLE

CLIENT: ECUSTA PAPER MILL			PM: RK
LOCATION: PISGAH FOREST NORTH CAROLINA			CHECKED: RS
DESIGNED: AA	DETAILED:	PROJECT NO.: 123445	FIGURE: 4-7



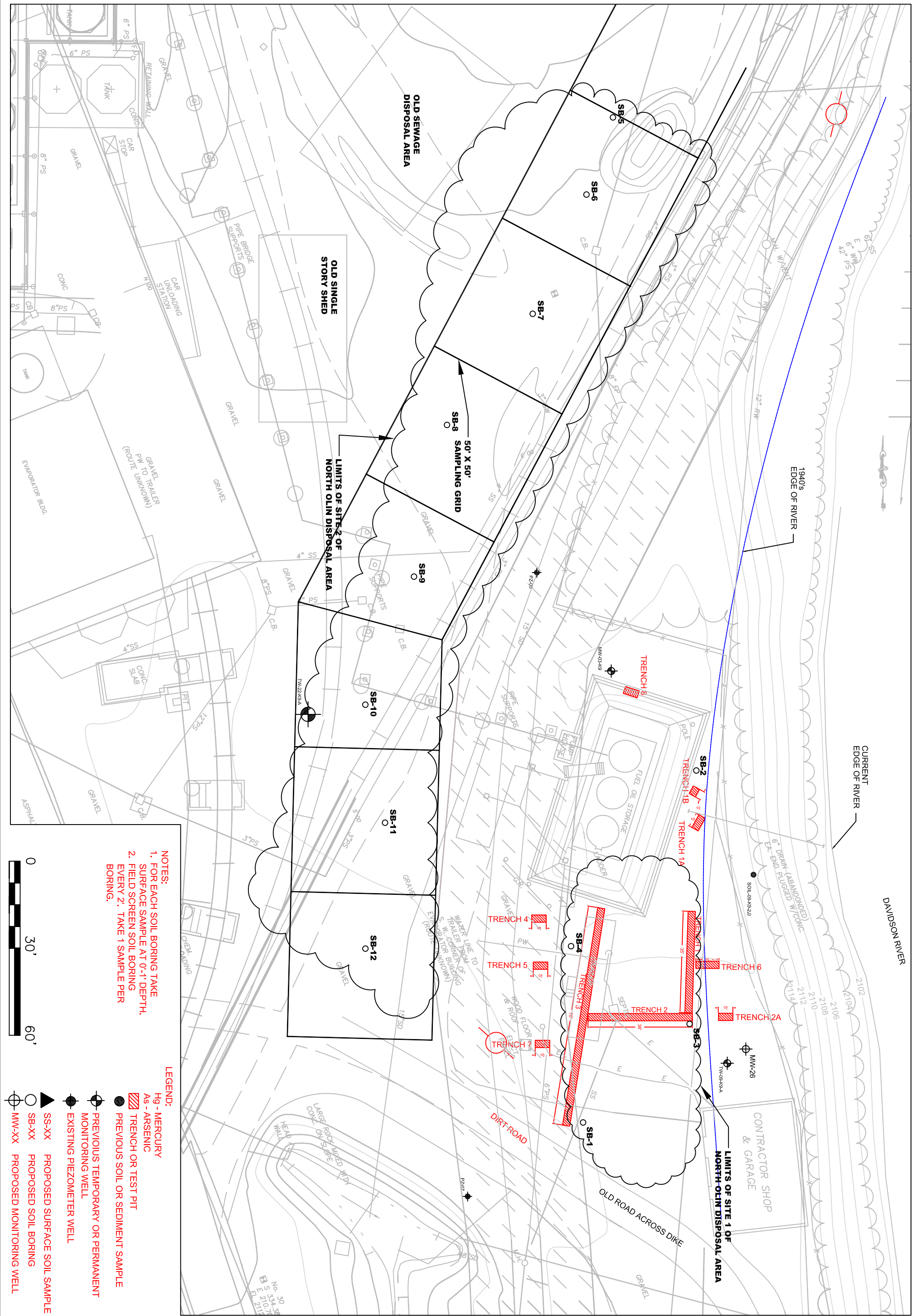
OFFICE: Alpharetta


DRAWING DATE: 03/14/2008

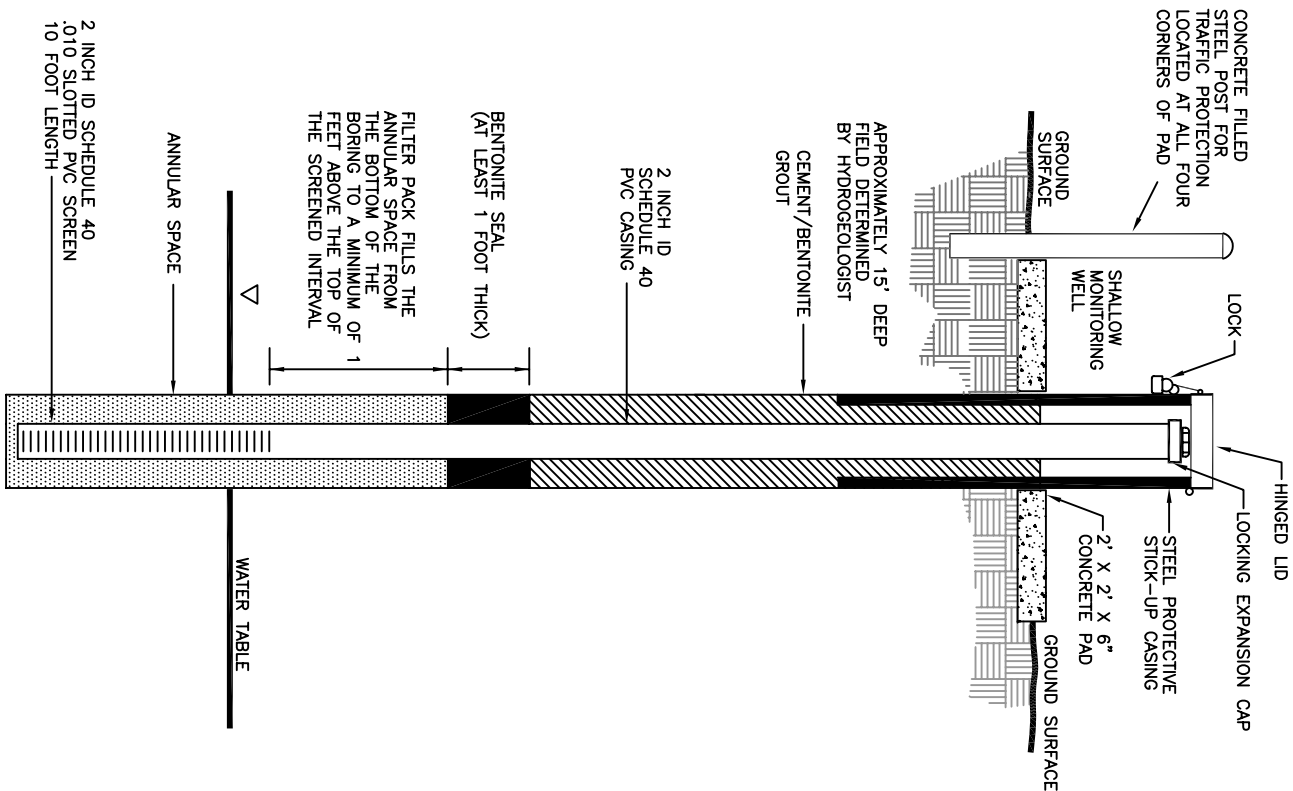
ACAD FILE: FIGURE 4-7.DWG

11560 GREAT OAKS WAY
SUITE 500
ALPHARETTA, GA 30022
(770) 475-8994 (TEL)
(770) 777-9545 (FAX)

**INVESTIGATION TRENCHES
CROSS-SECTIONS
SOUTH OLIN DISPOSAL AREA**



 Shaw™		11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)		PROPOSED SAMPLING LOCATIONS NORTH OLIN DISPOSAL AREA			CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK	
							LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA		CHECKED: RS	
OFFICE: Alpharetta	DRAWING DATE: 03/14/2008	ACAD FILE: FIGURE 4-8.DWG					DESIGNED: AA	DETAILED:	PROJECT NO.: 131497	FIGURE: 4-8



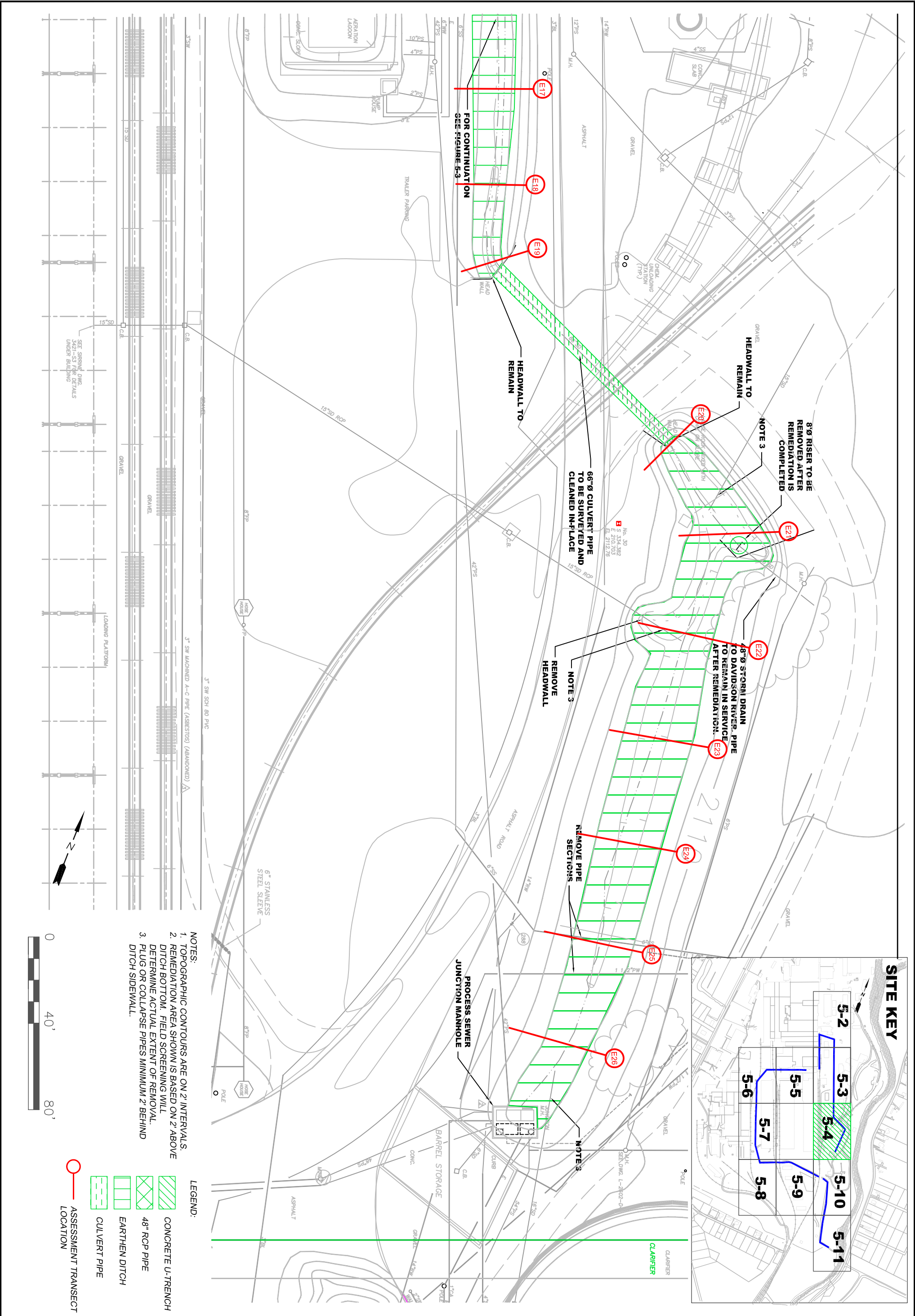
SHALLOW MONITORING WELL



OFFICE: Alpharetta
 DRAWING DATE: 03/14/2008
 ACAD FILE: FIGURE 4-10

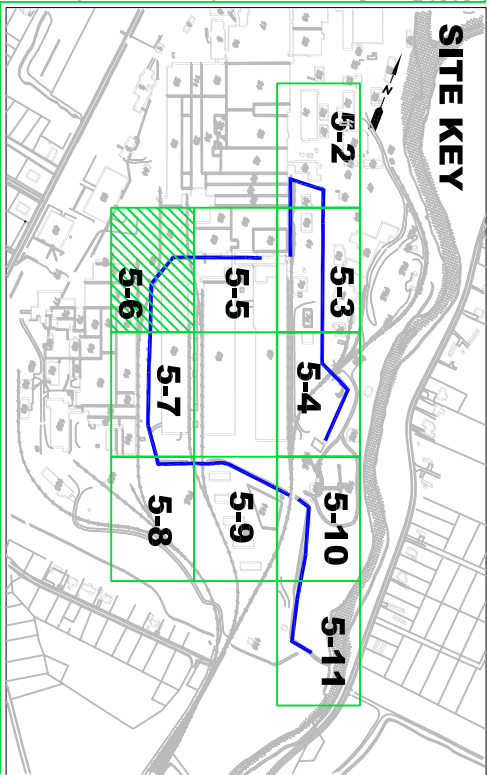
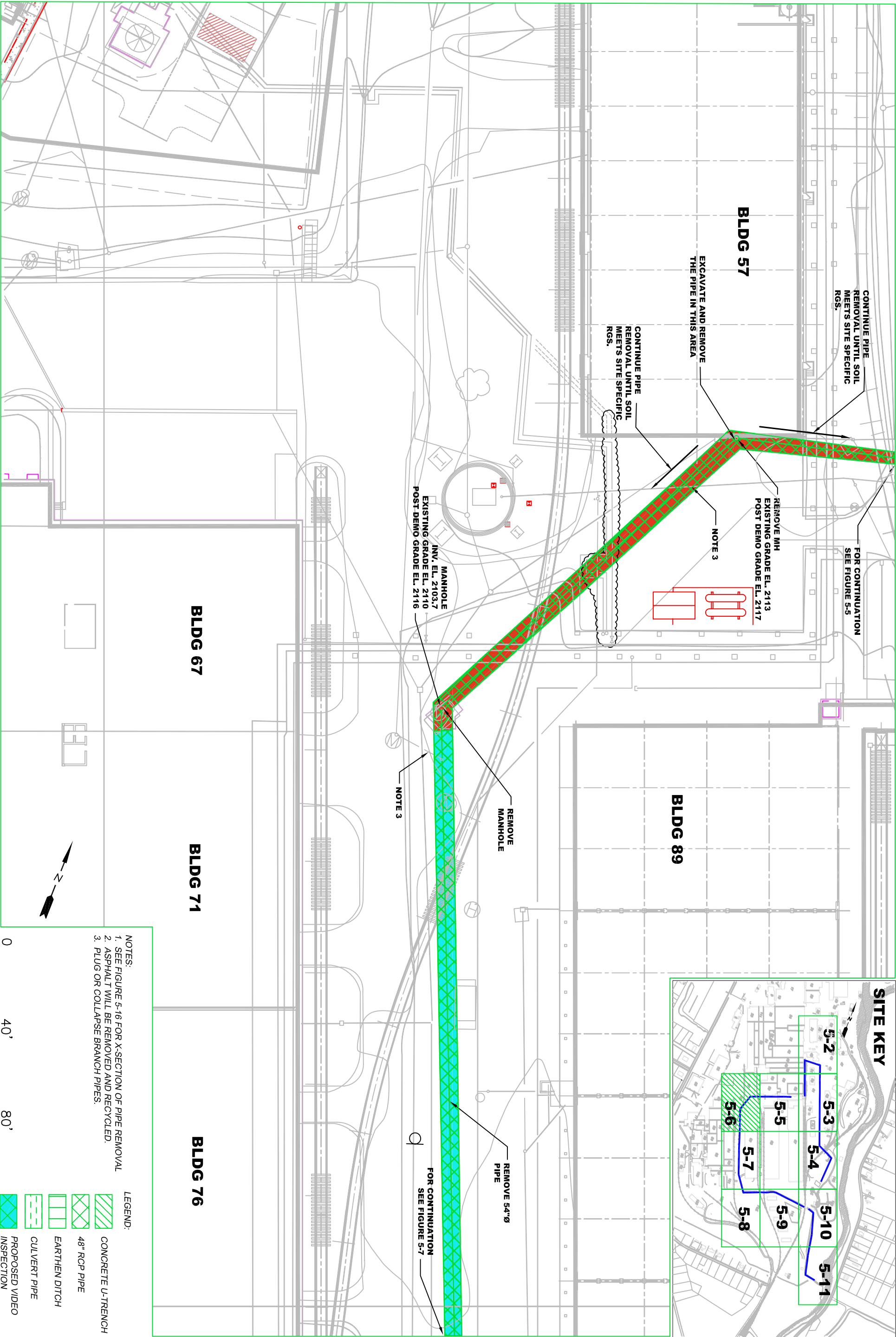
**OLIN DISPOSAL AREAS
 MONITORING WELLS
 DETAILS**

CLIENT: DAVIDSON RIVER VILLAGE LLC			PM: RK
LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA			CHECKED: RS
DESIGNED: AA	DETAILED: TFR	PROJECT NO.: 131497	FIGURE: 4-10



<div><div>11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)</div></div>			PARTIAL PLAN EAST DITCH		CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK
OFFICE: Alpharetta			DRAWING DATE: 9/12/08		LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA		CHECKED: RS
ACAD FILE: FIGURE5-4 R1.DWG			DESIGNED: AA		DETAILED: TFR	PROJECT NO.: 131497	FIGURE: 5-4





NOTES:
1. SEE FIGURE 5-16 FOR X-SECTION OF PIPE REMOVAL
2. ASPHALT WILL BE REMOVED AND RECYCLED.
3. PLUG OR COLLAPSE BRANCH PIPES.

0

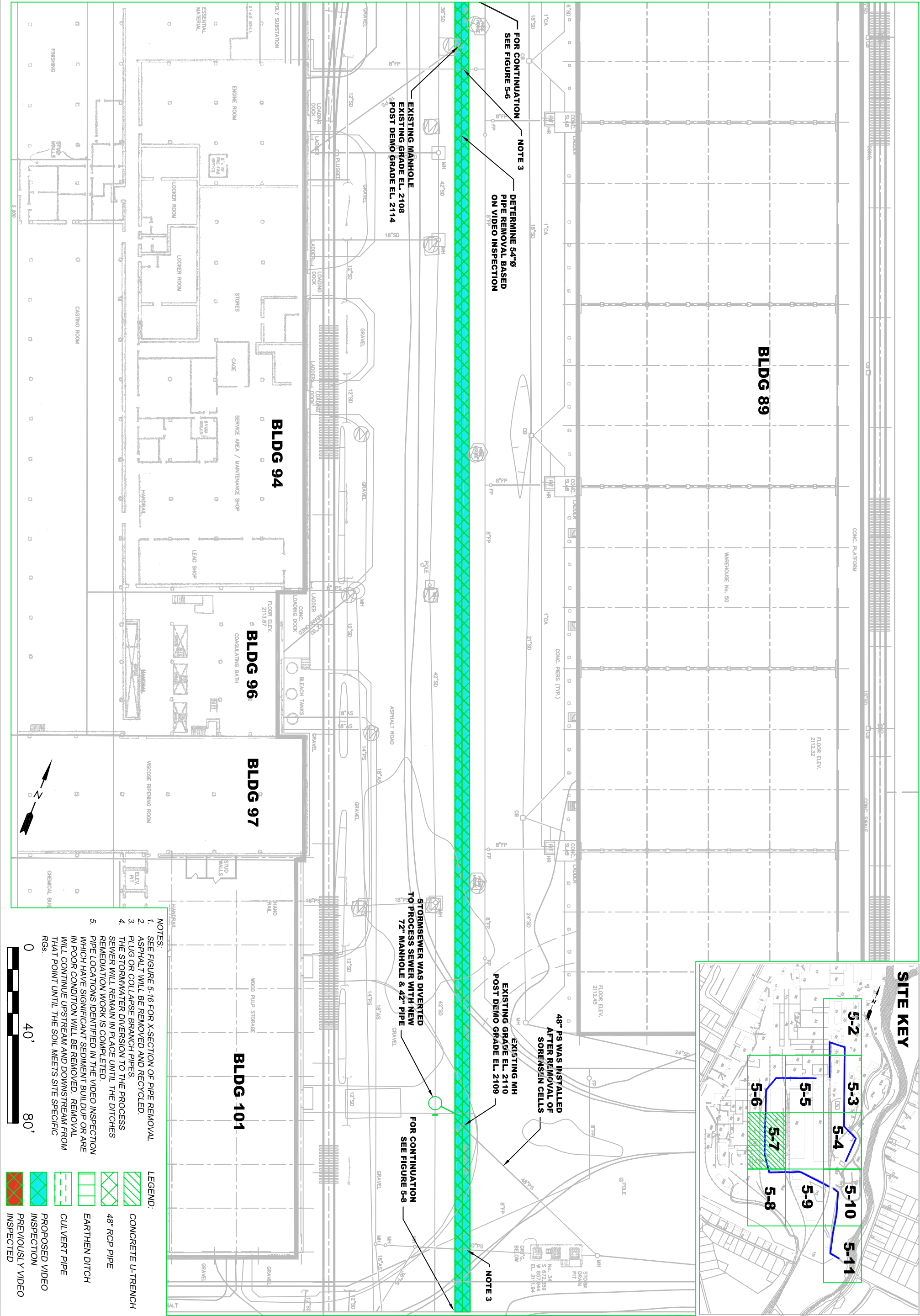
40'

80'

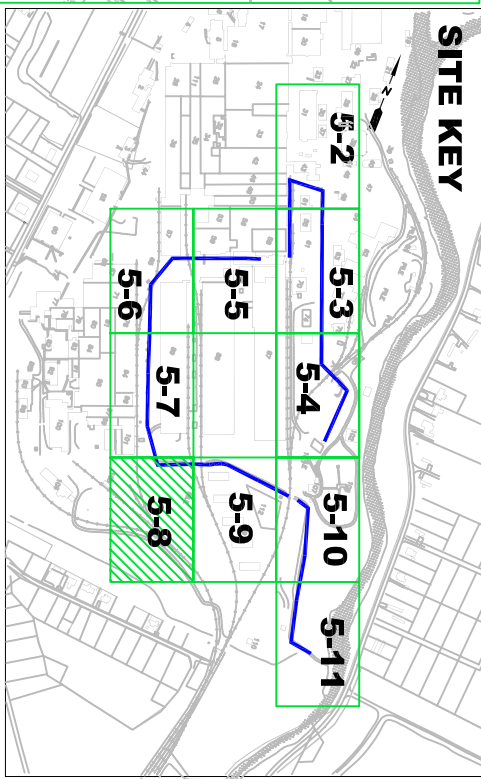
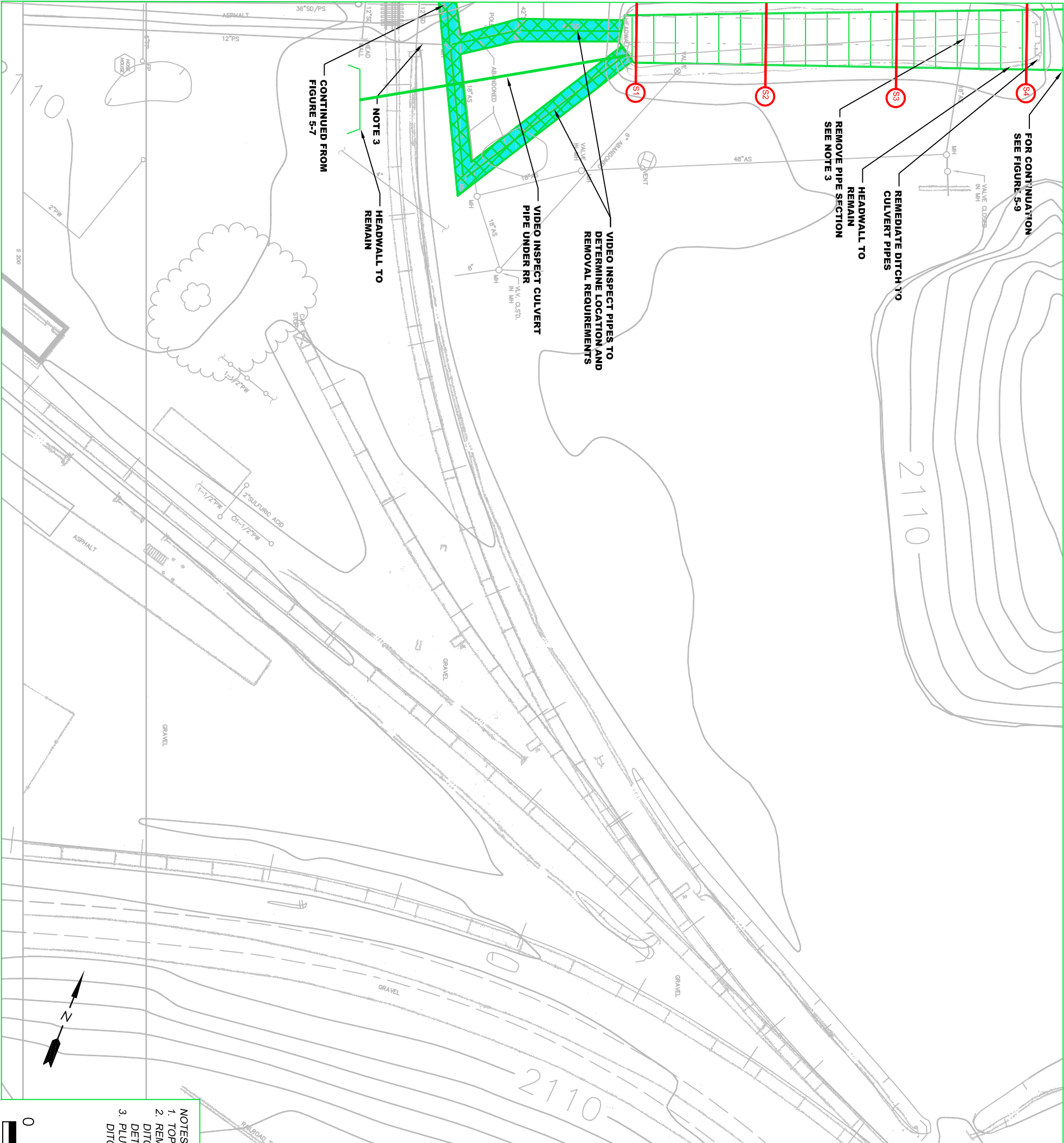
CONCRETE U-TRENCH

48" RCP PIPE

 <div>11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)</div>		<div>PARTIAL PLAN</div> <div>SOUTH PROCESS SEWER</div>		CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK					
LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA				CHECKED: RS							
DESIGNED: AA				DETAILED: TFR		PROJECT NO.: 131497		FIGURE: 5-6			
OFFICE: Alpharetta		DRAWING DATE: 9/12/08		ACAD FILE: FIGURE5-6 R1.DWG							



		11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)		PARTIAL PLAN SOUTH PROCESS SEWER				CLIENT:	DAVIDSON RIVER VILLAGE LLC	PM:	RK
								LOCATION:	ECUSTA MILL PISGAH FOREST, NORTH CAROLINA	CHECKED:	RS
OFFICE:	DRAWING DATE:	ACAD FILE:			DESIGNED:	DETAILED:	PROJECT NO.:			FIGURE:	5-7
Alpharetta	03/14/2008	FIGURE5-7 R1.DWG			AA	TFR	131497				



NOTES:

1. TOPOGRAPHIC CONTOURS ARE ON 2' INTERVALS.
2. REMEDIATION AREA SHOWN IS BASED ON 2' ABOVE DITCH BOTTOM. FIELD SCREENING WILL DETERMINE ACTUAL EXTENT OF REMOVAL.
3. PLUG OR COLLAPSE PIPES MINIMUM 2' BEHIND DITCH SIDEWALL.

LEGEND:

- CONCRETE U-TRENCH
- 48" RCP PIPE
- EARTHEN DITCH
- CULVERT PIPE
- PROPOSED VIDEO INSPECTION
- PREVIOUSLY VIDEO INSPECTED
- ASSESSMENT TRANSECT LOCATION

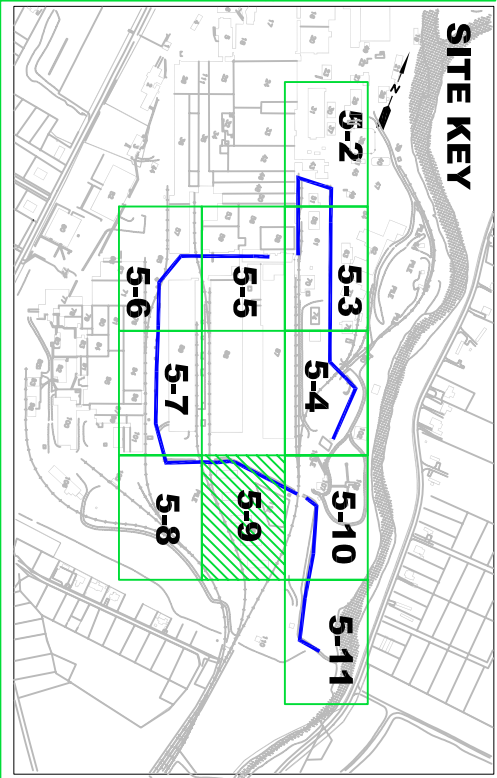
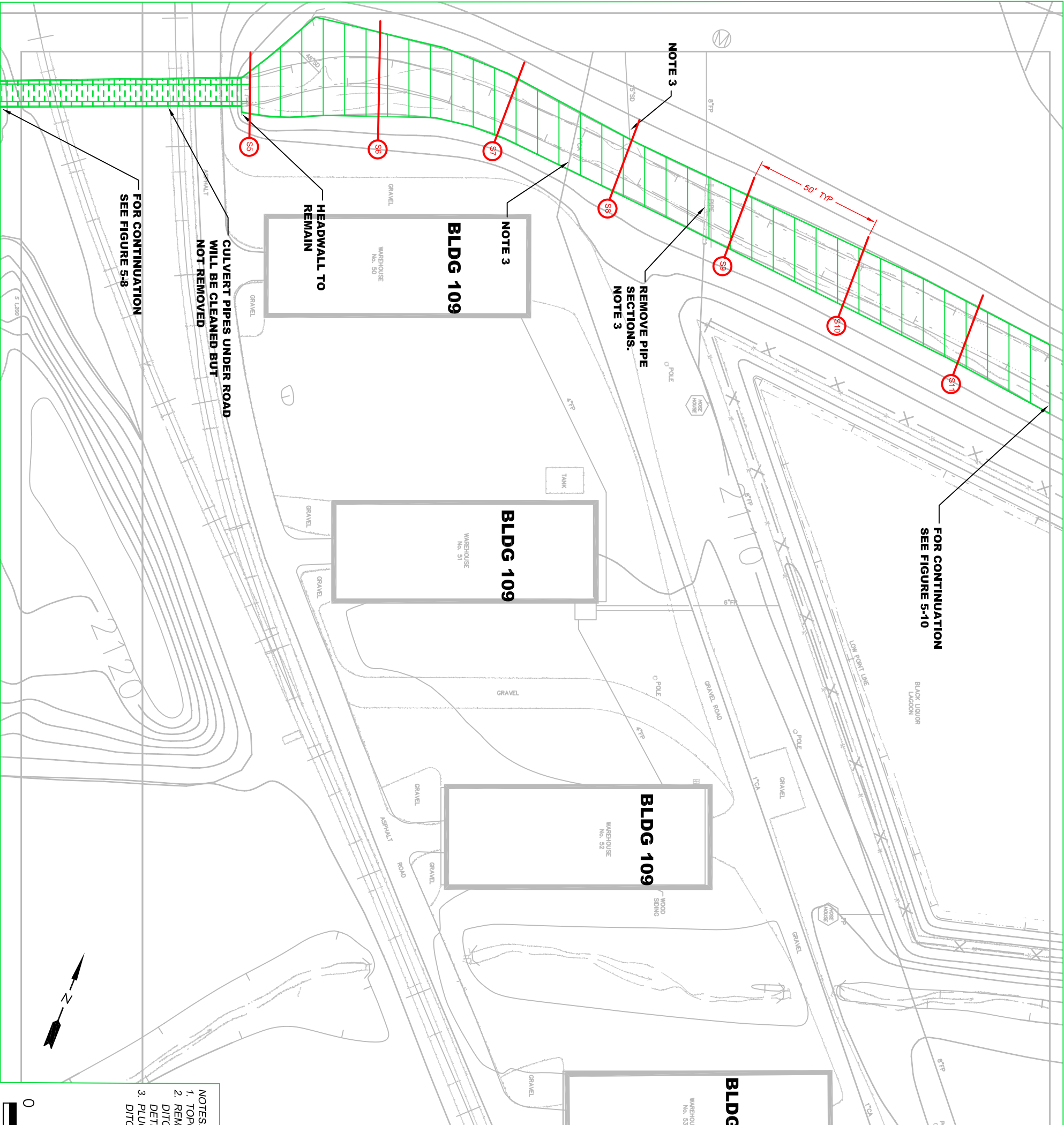
SCALE:

0 40' 80'

ORIENTATION:

N

<div><div>11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)</div></div>			<div>PARTIAL PLAN SOUTH DRAINAGE DITCH</div>				CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK		
							LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA				CHECKED: RS
							DESIGNED: AA	DETAILED: TFR	PROJECT NO.: 131497	FIGURE: 5-8	
							OFFICE: Alpharetta				DRAWING DATE: 9/12/08




NOTES:

- 1. TOPOGRAPHIC CONTOURS ARE ON 2' INTERVALS.
- 2. REMEDIATION AREA SHOWN IS BASED ON 2' ABOVE DITCH BOTTOM. FIELD SCREENING WILL DETERMINE ACTUAL EXTENT OF REMOVAL.
- 3. PLUG OR COLLAPSE PIPES MINIMUM 2' BEHIND DITCH SIDEWALL.

LEGEND:

- CONCRETE U-TRENCH
- 48" RCP PIPE
- EARTHEN DITCH
- CULVERT PIPE
- PROPOSED VIDEO INSPECTION
- PREVIOUSLY VIDEO INSPECTED
- ASSESSMENT TRANSECT LOCATION

0 40' 80'



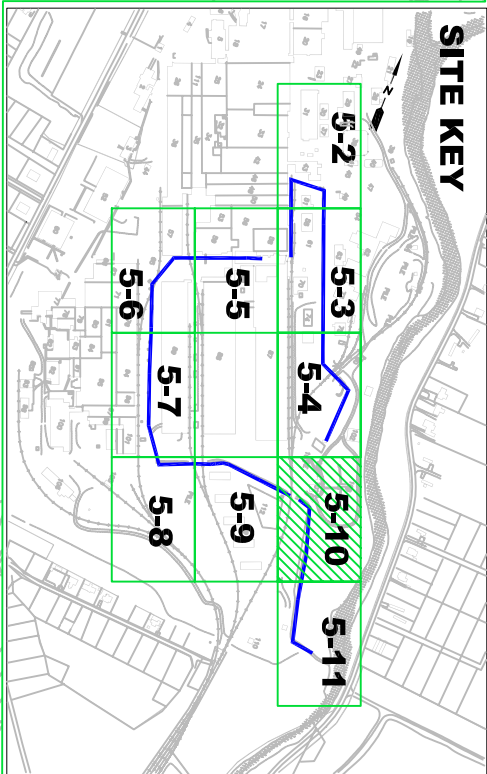
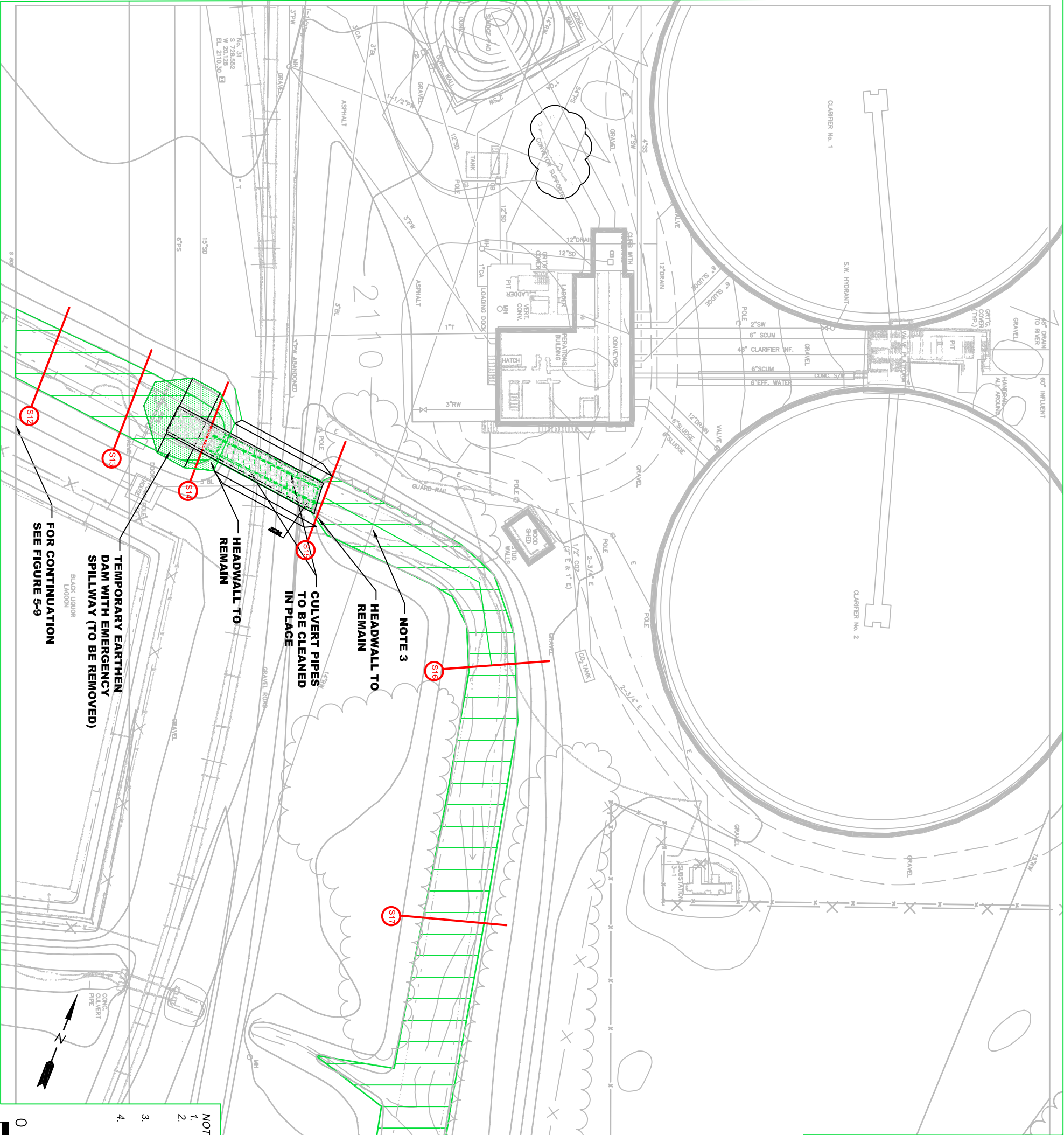
11560 GREAT OAKS WAY
SUITE 500
ALPHARETTA, GA 30022
(770) 475-8994 (TEL)
(770) 777-9545 (FAX)

OFFICE:
Alpharetta

DRAWING DATE:
9/12/08

ACAD FILE:
FIGURE5-9 R1.DWG

PARTIAL PLAN SOUTH DRAINAGE DITCH				CLIENT: DAVIDSON RIVER VILLAGE LLC	PM: RK
				LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA	CHECKED: RS
DESIGNED: AA		DETAILED: TFR	PROJECT NO.: 131497	FIGURE: 5-9	



NOTES:

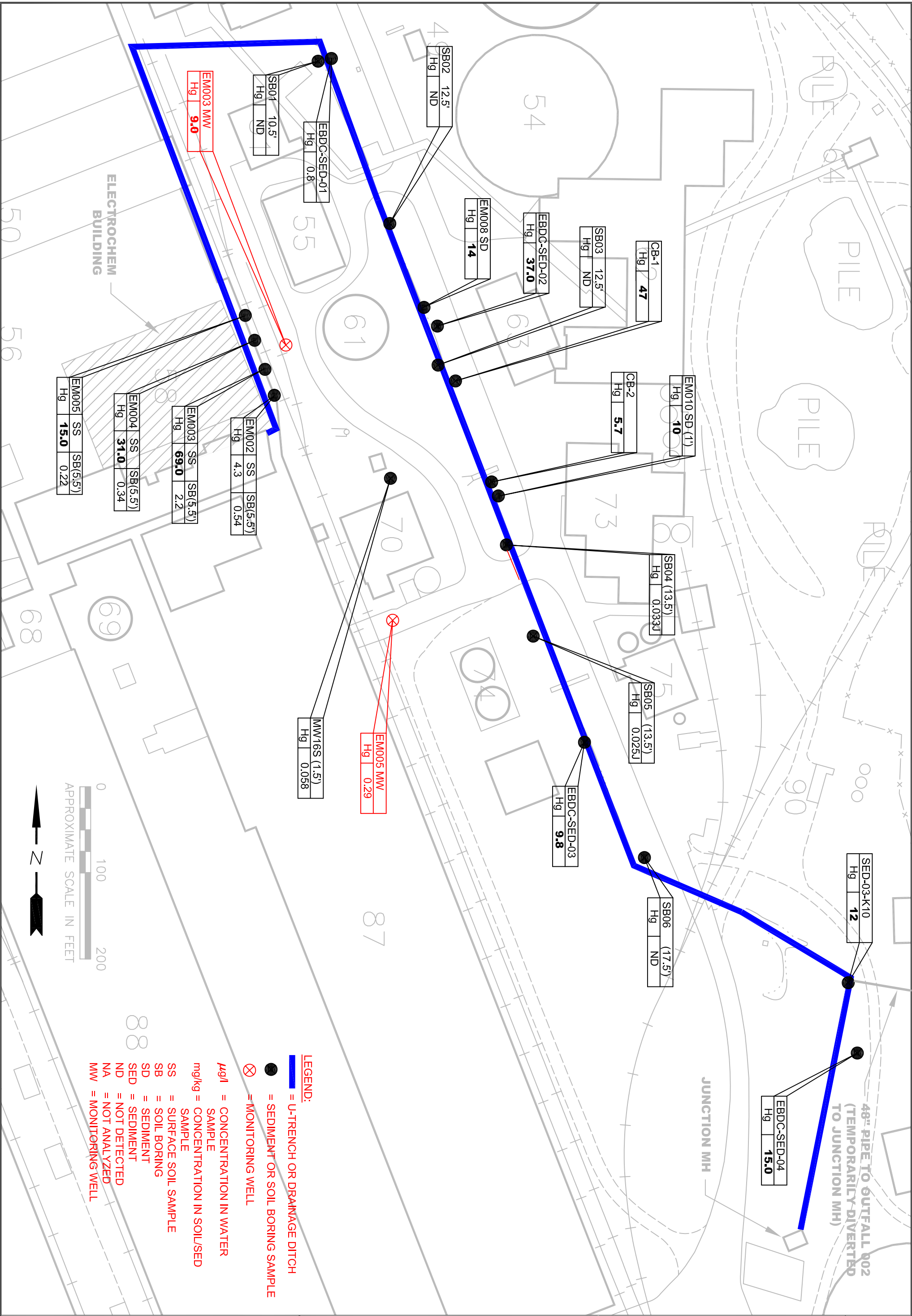
1. TOPOGRAPHIC CONTOURS ARE ON 2' INTERVALS.
2. REMEDIATION AREA SHOWN IS BASED ON 2' ABOVE DITCH BOTTOM. FIELD ASSESSMENT WILL DETERMINE ACTUAL EXTENT OF REMOVAL.
3. PLUG OR COLLAPSE PIPES MINIMUM 2' BEHIND DITCH SIDEWALL.
4. AFTER TEMPORARY DAM THE TRANSECTS WILL BE SPACED ON 100 FT. CENTERLINES.

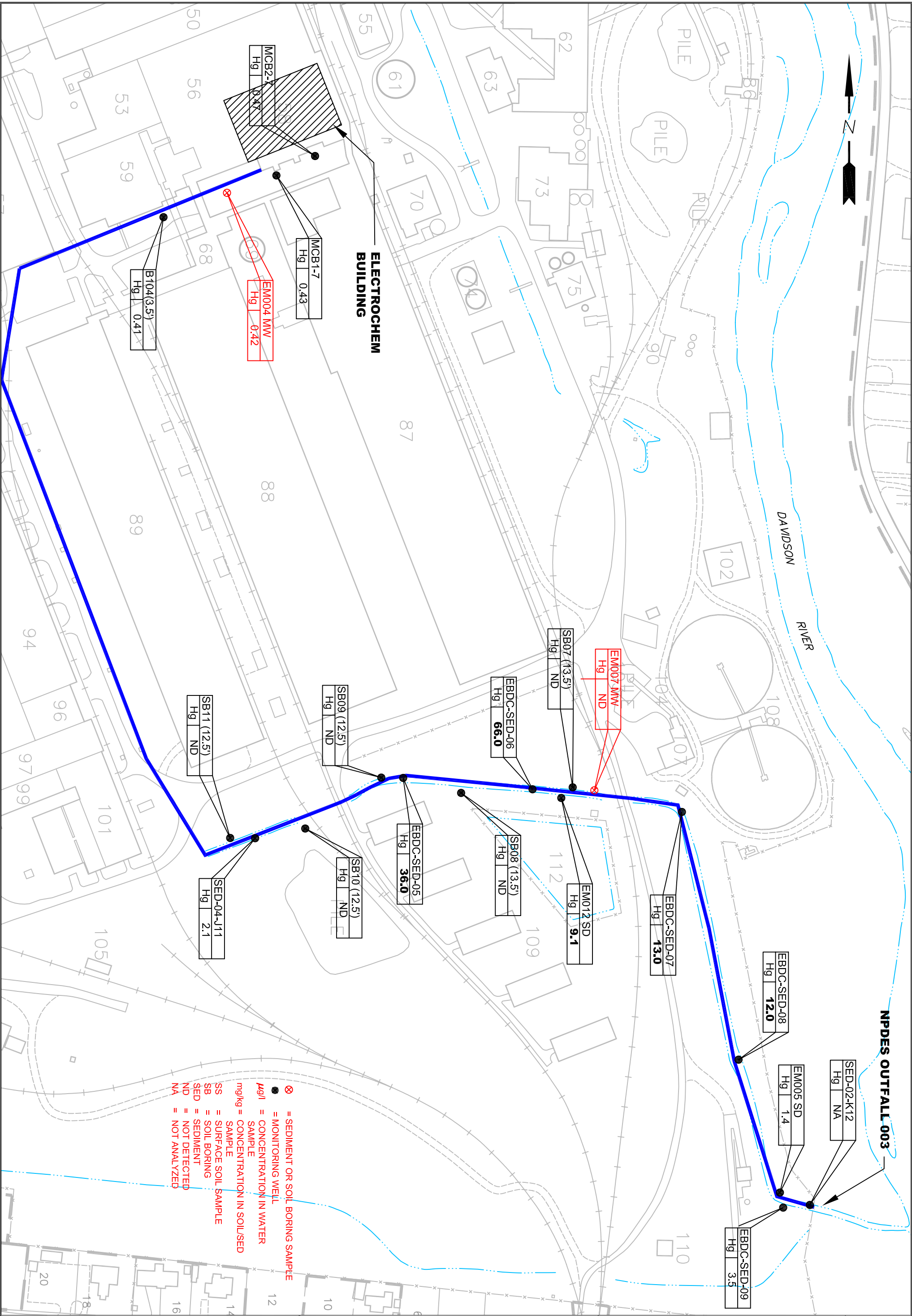
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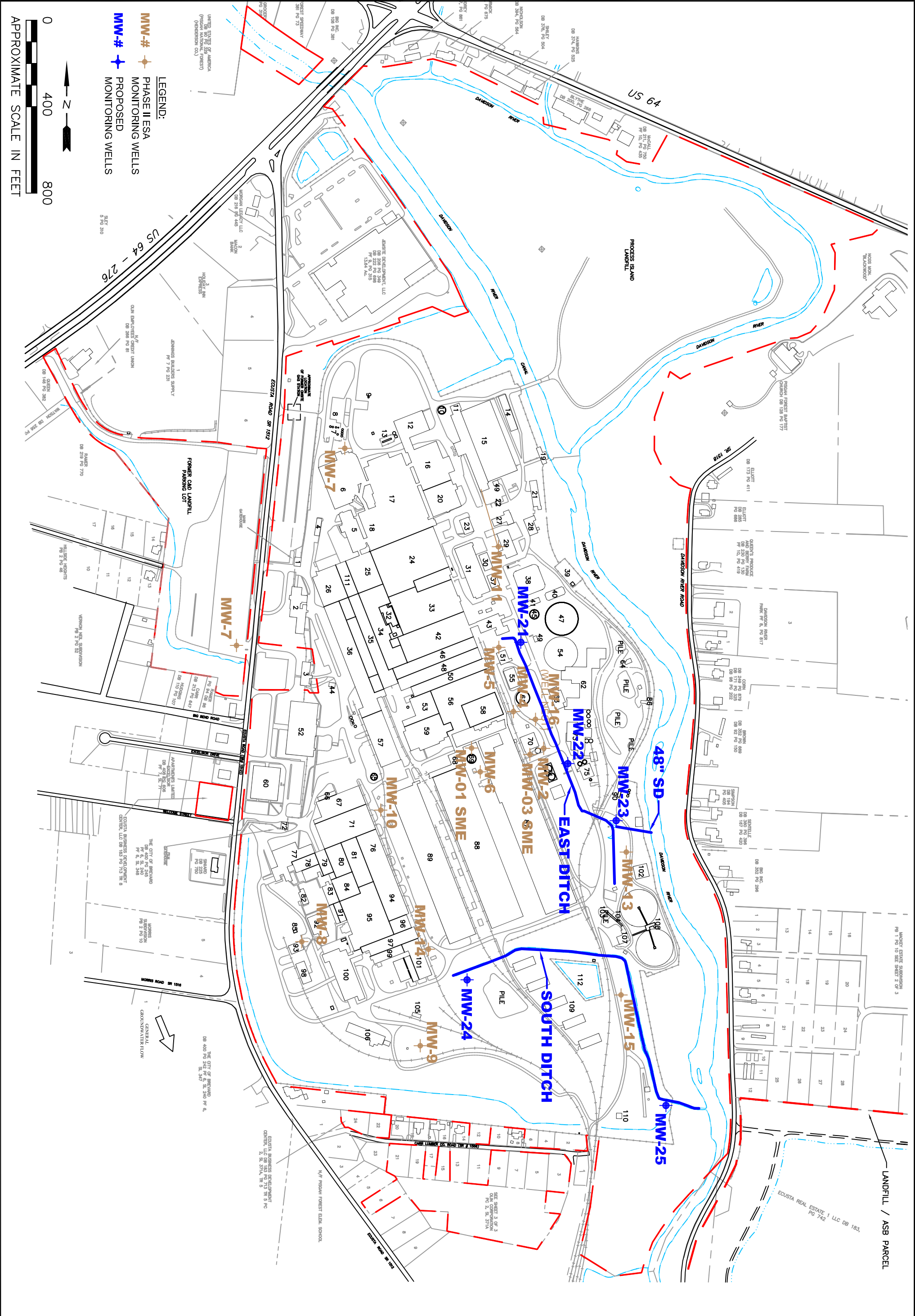
- CONCRETE U-TRENCH
- 48" RCP PIPE
- EARTHEN DITCH
- CULVERT PIPE
- PROPOSED VIDEO INSPECTION
- PREVIOUSLY VIDEO INSPECTED
- ASSESSMENT TRANSECT LOCATION

0 40' 80'

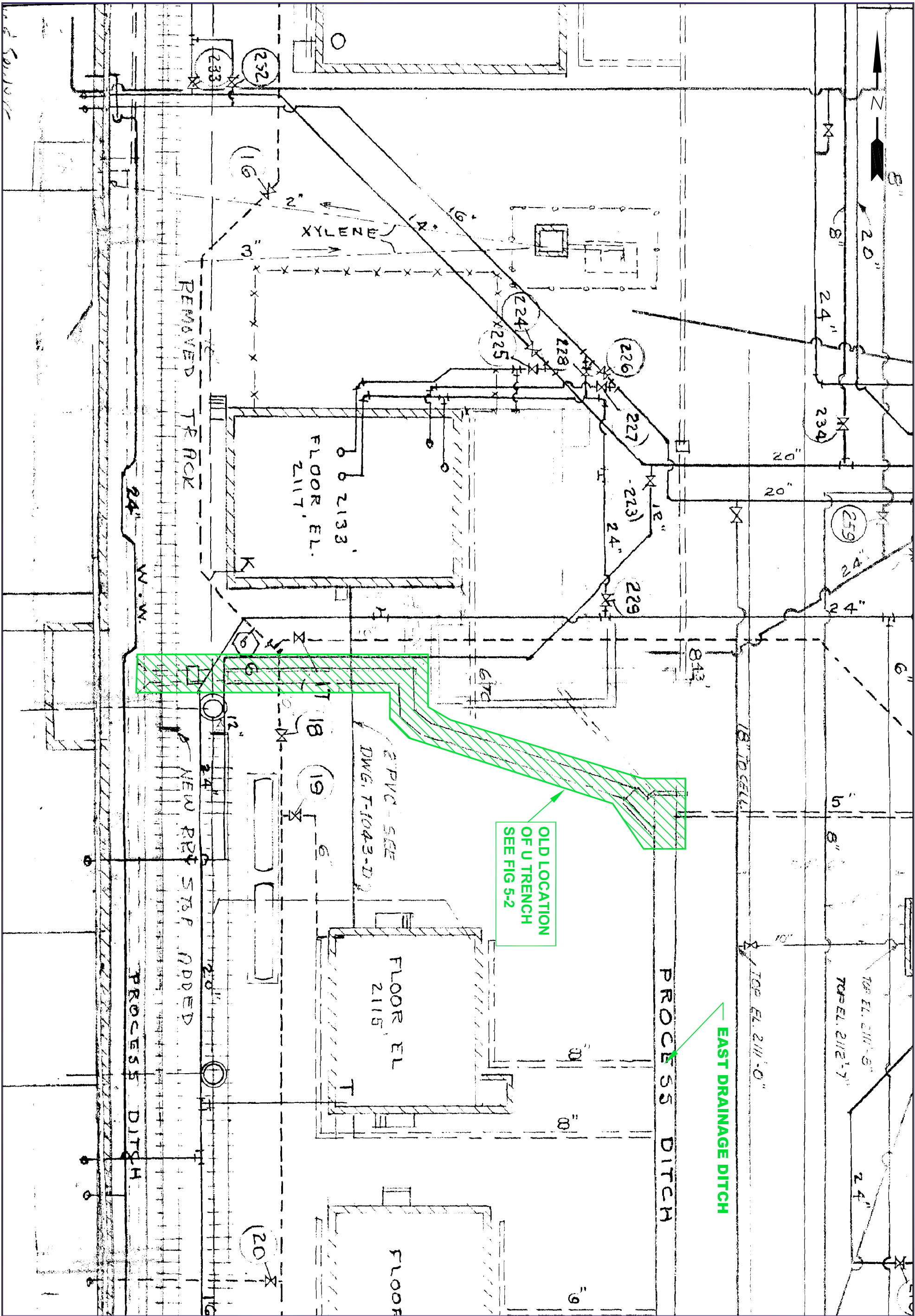
		11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)		PARTIAL PLAN SOUTH DRAINAGE DITCH		CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK	
OFFICE: Alpharetta		DRAWING DATE: 9/12/08		ACAD FILE: FIGURE5-10 R1.DWG		LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA		CHECKED: RS	
						DESIGNED: AA		PROJECT NO.: 131497	
						DETAILED: TFR		FIGURE: 5-10	




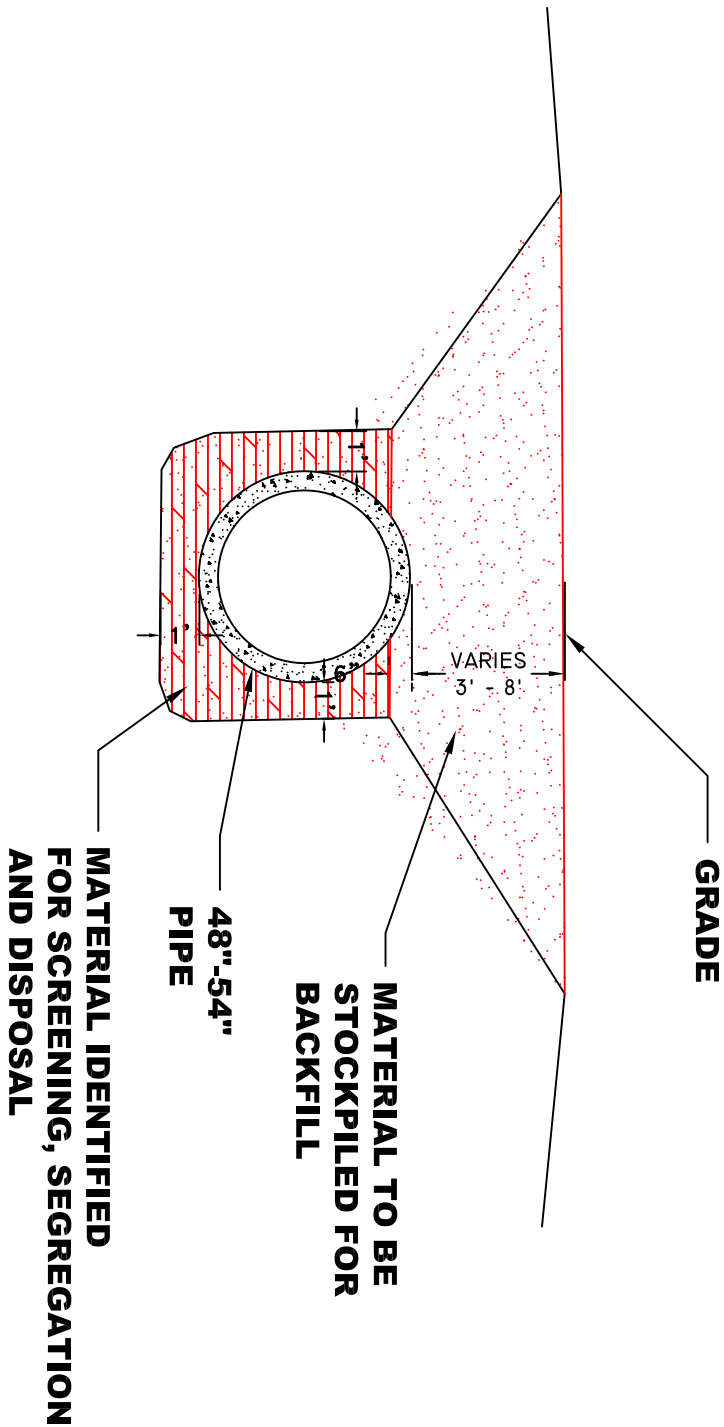




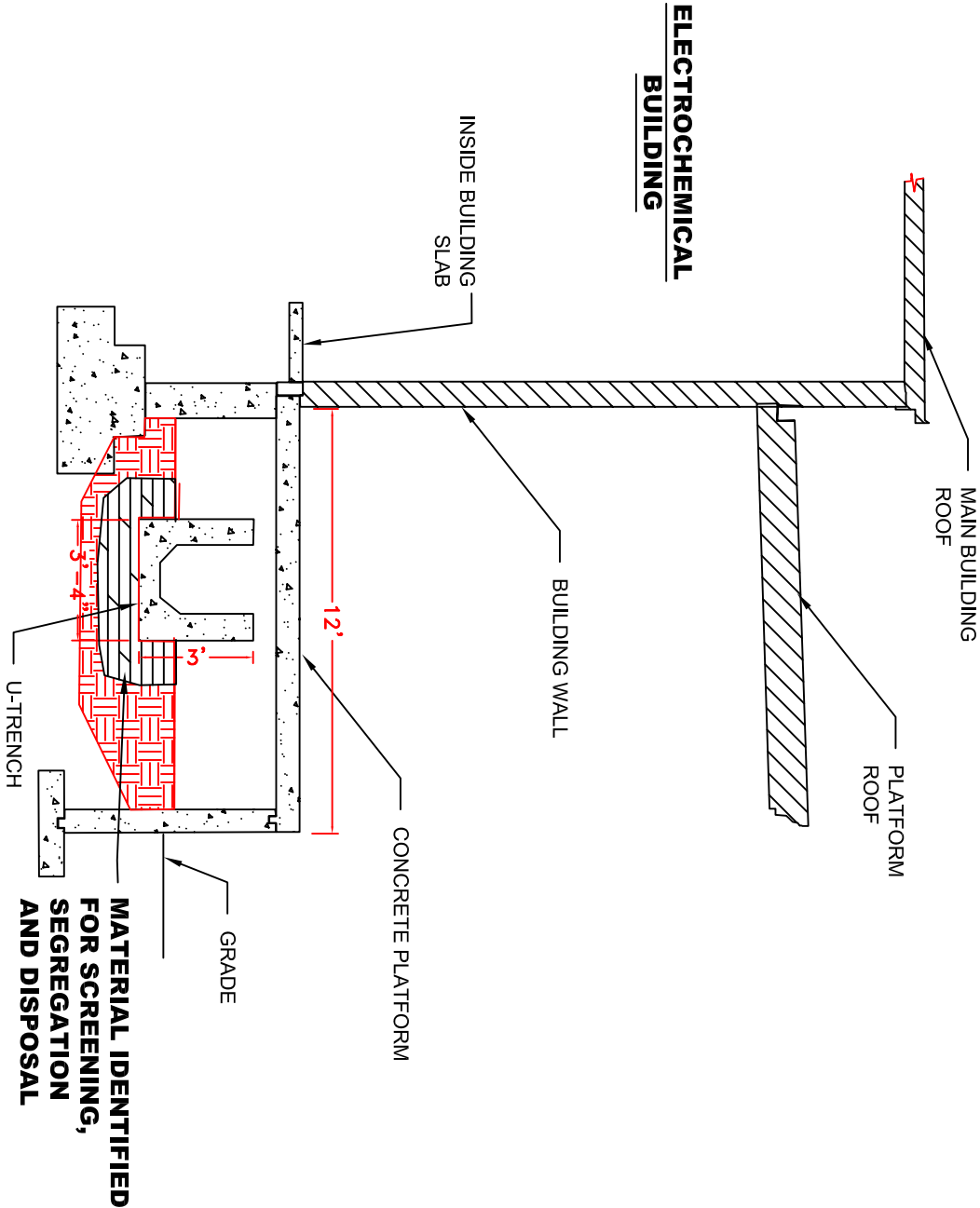
 <div>11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)</div>		DRAINAGE DITCHES PROPOSED MONITORING WELLS		CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK
				LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA		CHECKED: AB
OFFICE: Alpharetta	DRAWING DATE: 9/12/08	ACAD FILE: FIGURE5-14.DWG			DESIGNED: AB	FIGURE: 5-14
					DETAILED: TFR	
					PROJECT NO.: 131497	



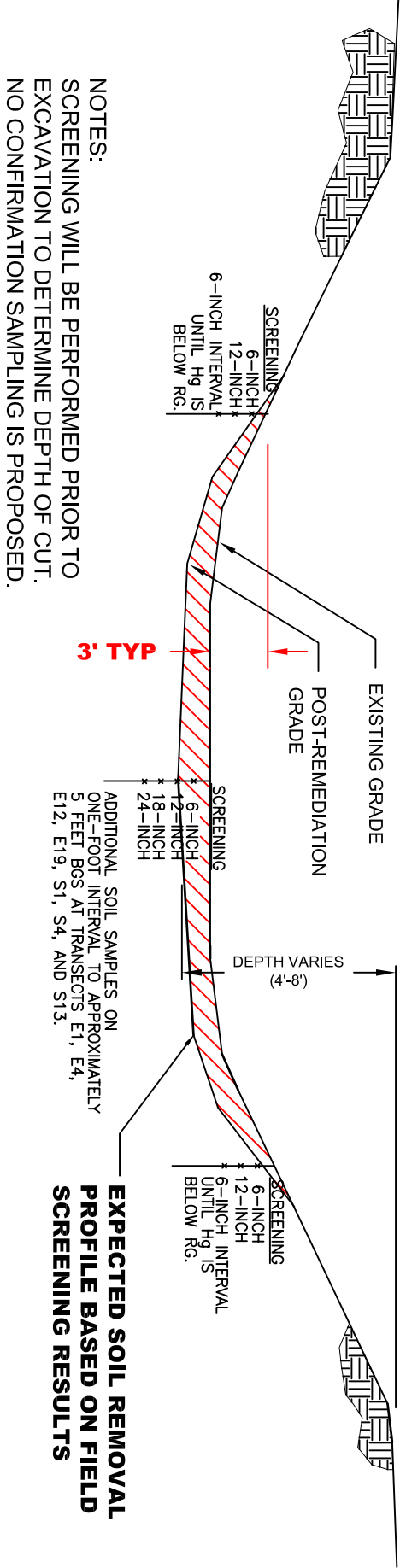
		11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)		SITE LOCATION MAP OLD LOCATION OF U TRENCH		CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK	
						LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA		CHECKED: AA	
OFFICE: Alpharetta	DRAWING DATE: 03/17/2008	ACAD FILE: 123445-FIG1.DWG				DESIGNED: AA	DETAILED: TFR	PROJECT NO.: 123445	FIGURE: 5-15



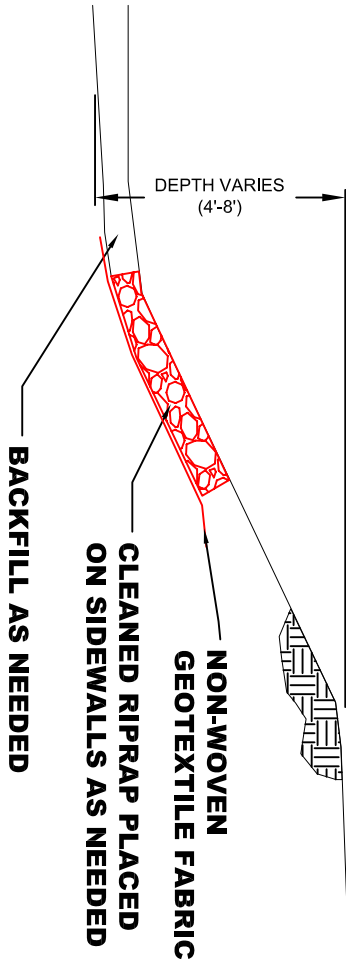
SECTION A-A
TYPICAL PIPE TRENCH EXCAVATION (WHERE REQ'D)
NOT TO SCALE



SECTION B-B
TYPICAL U-TRENCH EXCAVATION
NOT TO SCALE

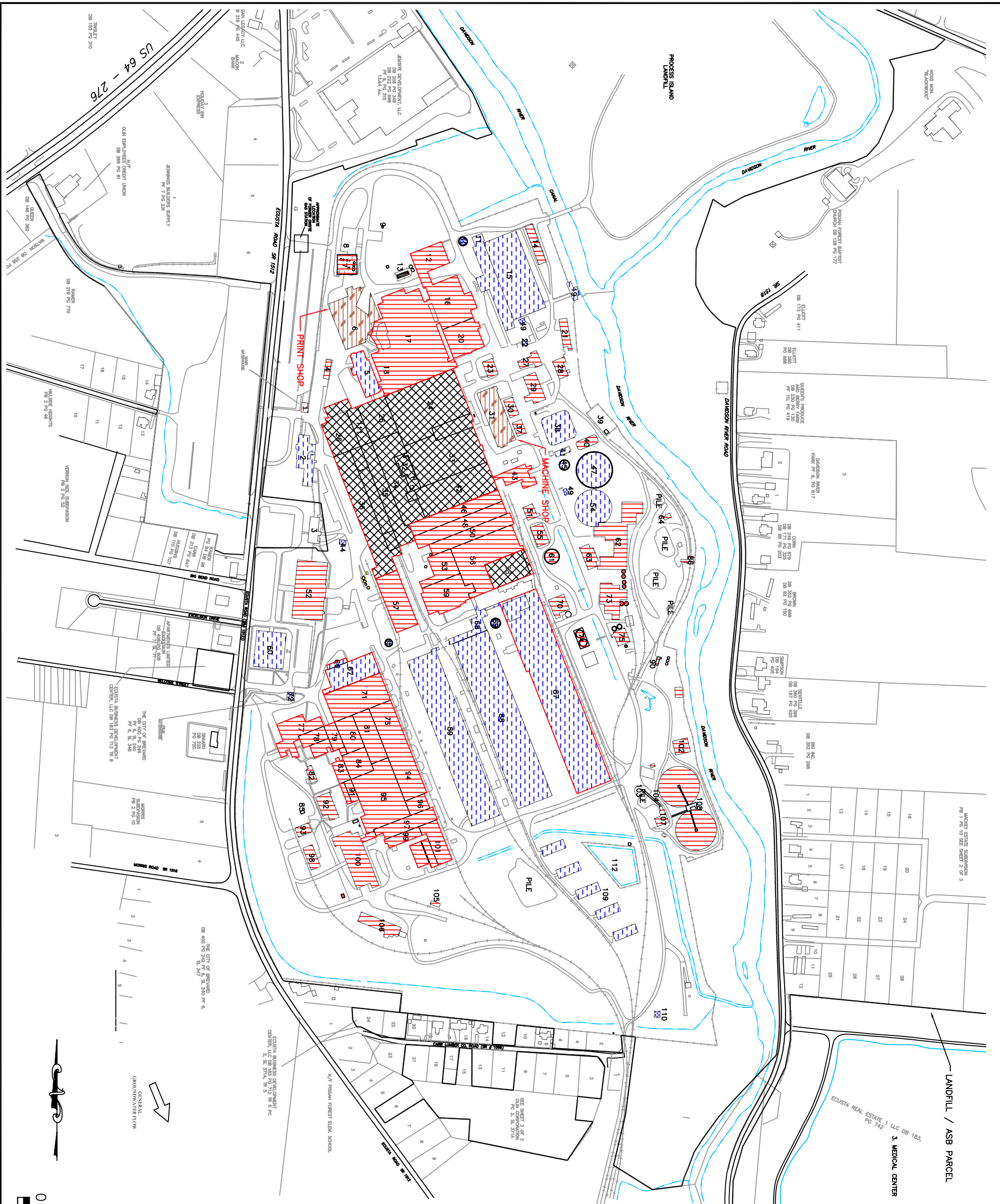


SECTION C-C
TYPICAL DITCH EXCAVATION
NOT TO SCALE



TYPICAL DITCH SECTION - POST REMEDIATION
NOT TO SCALE

<div><div>11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)</div></div> <div>DITCH CROSS SECTIONS</div>			CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK	
			LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA		CHECKED: AB	
			DESIGNED: AA	DETAILED: TFR	PROJECT NO.: 131497	FIGURE: 5-16
			OFFICE: Alpharetta	DRAWING DATE: 12/18/08	ACAD FILE: FIGURE5-16 R2.DWG	



- LOW RISK BUILDING SLABS/STRUCTURES - NO SCREENING

1. MAIN ENTRANCE & GATE HOUSE

2. MAIN OFFICE BUILDING

5. CAFETERIA

10. BACKWASH TANK

11. POTABLE WATER FILTER PLANT

15. FILTER PLANT

19. DAVIDSON RIVER PUMP HOUSE

22. PROPANE STORAGE (2 PLC'S)

38. No. 1 RESERVOIR

41. SERVICE WATER PUMP HOUSE

44. TELEPHONE EQUIP. BUILDING

45. SERVICE WATER TANK

47. No. 2 RESERVOIR

49. FIRE PUMP HOUSE

54. No. 3 RESERVOIR

60. SALES & ADMINISTRATION BUILDING

65. FIRE WATER TANK

66. SHEDDING

68. FLUX CONVERTOR

72. GATE HOUSE

87. FIRE WAREHOUSES

88. WAREHOUSES (SLABS TO REMAIN)

100. BOOSTER PUMP HOUSE

110. BOOSTER PUMP HOUSE
- BUILDING SLABS REMAINING - SCREENED

24. FINISHING

25. CALDERING

32. EMERGENCY MAINTENANCE SHOP

33. No. 1 - 8 PAPER MACHINE ROOM

34. No. 10 PAPER MACHINE ROOM

35. No. 11 PAPER MACHINE ROOM

36. No. 12 PAPER MACHINE ROOM

40. REPAIR BUILDING

109. STORAGE SHEDS

111. PAPER ROLL WRAPPING
- BUILDING SLABS REMOVED - SCREENED

4. GARAGE

7. SOLVENT RECOVERY

8. INK DRUM STORAGE

12. STORAGE BUILDING TANK

13. SALVAGE BUILDING

14. SALVAGE BUILDING

16. STORAGE BUILDING

17. CONVERTER BUILDING

18. STORAGE BUILDING

20. STERILIZATION STORAGE

23. PAINT & OIL STORAGE

26. PAINT SHOP

28. SHEET METAL & PIPE SHOP

30. INSTRUMENT SHOP

37. INSTRUMENT SHOP

39. DUKE POWER SUBSTATION

40. COOLING TOWER

43. TURBINE ROOM

46. PULP & CALCIUM CARBONATE STORAGE

48. BLEACH BUILDING

50. CONTINUOUS CARBONATION

51. PULP BUILDING

52. RESEARCH BUILDING

53. WASHERS

55. DATA PROCESSING BUILDING

57. STORAGE BUILDING

58. SLUDGE DRYING BUILDING

59. No. 9 PAPER MACHINE ROOM

61. BLACK LIQUOR TANK

62. BOILER HOUSE

63. POWER & WATER MAINTENANCE SHOP

70. ESSENTIAL MATERIALS

71. ESSENTIAL MATERIALS

73. CARBONATE PLANT

74. BLACK LIQUOR STORAGE TANKS

75. EVAPORATOR BUILDING

76. BLACK LIQUOR STORAGE TANKS

77. BLACK LIQUOR STORAGE TANKS

78. TOP COATER BUILDING

79. TOP COATER BUILDING

80. CHEMICAL BUILDING

81. SULTING

82. SOLVENT RECOVERY

83. COATING TOWERS

84. LAG STORAGE

85. COALIN STORAGE

86. COALIN STORAGE STATION

90. FUEL OIL STORAGE TANKS

91. LABORATORY

92. COATING BATH MIX PLANT

93. EMPTY DRUM STORAGE

94. CASTING ROOM

95. CASTING ROOM

96. COAGULATING BATH

97. PA STORAGE

98. CHEMICAL BUILDING

99. CHEMICAL BUILDING

100. SANITARY WASTE TREATMENT PLANT

103. SLUDGE STORAGE PAD

104. SLUDGE CONVEYOR

105. CHEMICAL TANK FARM

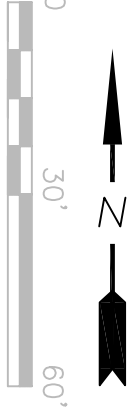
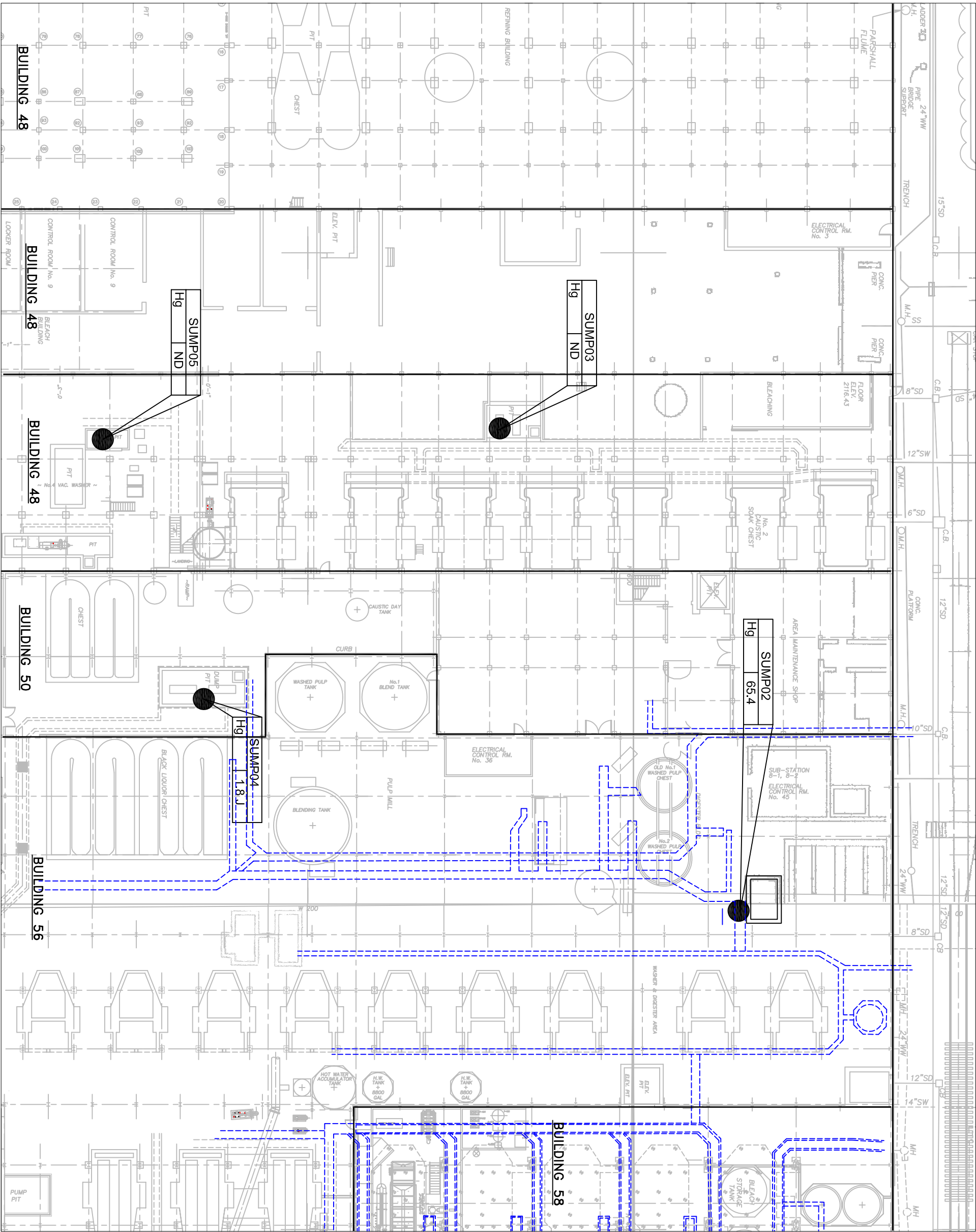
106. CHEMICAL TANKS

107. CHEMICAL TANKS

108. CLARIFIERS

112. BLACK LIQUOR STORAGE LAGOON

113. PIPE STORAGE SHED




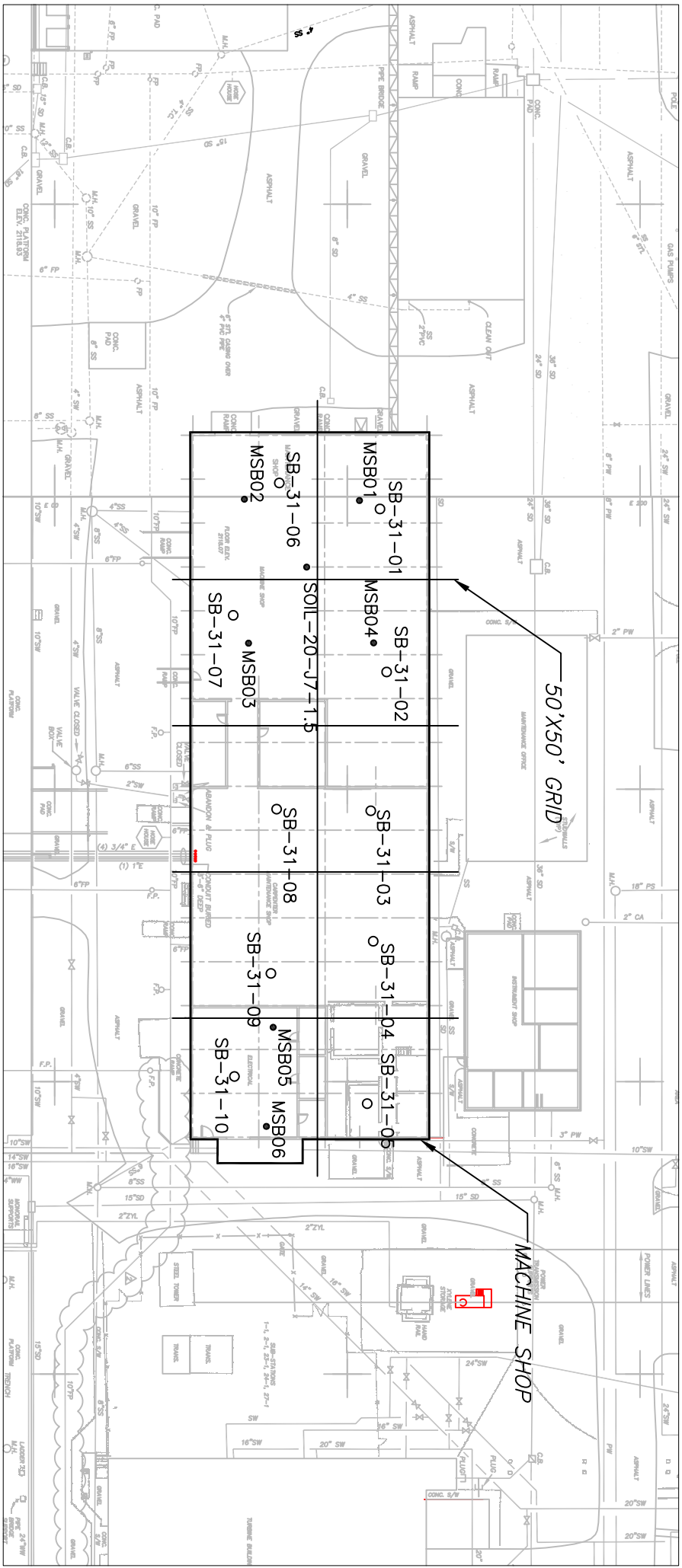
- NOTES:**
1. FOR SUMP SAMPLES METAL CONCENTRATIONS ARE IN UG/L.
 2. ONLY ANALYTES THAT HAD AN EXCEEDANCE OF THE NC DEFAULT SRGS ARE SHOWN.
 3. SUMP04 SAMPLE IS SHOWN ON FIGURE 6-3 IN THE PRINT SHOP.

LEGEND:

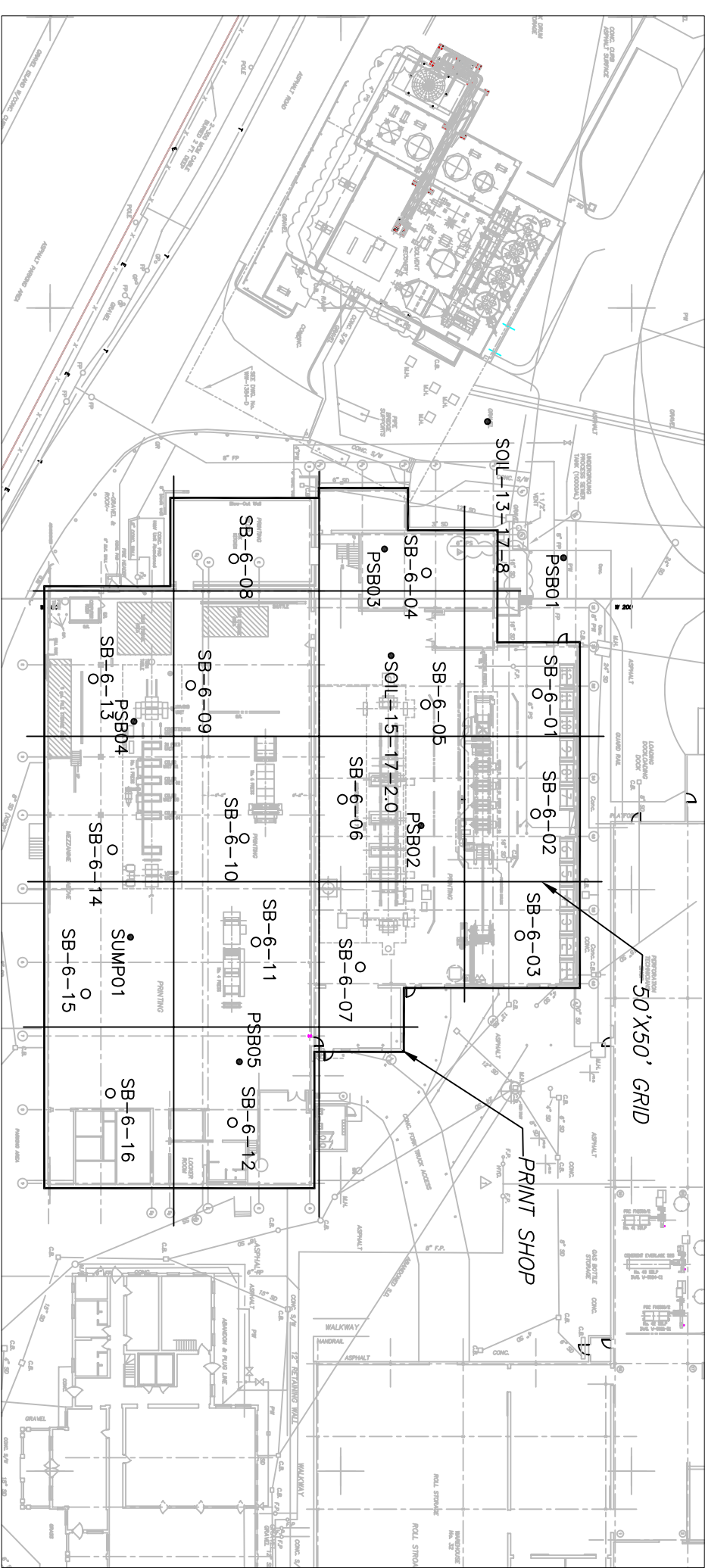
Hg - MERCURY

● SUMP WATER SAMPLE

<div><div>11560 GREAT OAKS WAY SUITE 500 ALPHARETTA, GA 30022 (770) 475-8994 (TEL) (770) 777-9545 (FAX)</div></div>			RESULTS OF SUMPS INVESTIGATIONS PHASE II ESA (SHAW 2007)			CLIENT: DAVIDSON RIVER VILLAGE LLC		PM: RK
LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA						CHECKED: RS		
OFFICE: Alpharetta	DRAWING DATE: 03/14/2008	ACAD FILE: FIGURE 6-4.DWG				DESIGNED: AA	DETAILED:	PROJECT NO.: 131497



MACHINE SHOP (BLDG 31)



PRINT SHOP (BLDG 6)

LEGEND:

- PREVIOUS SOIL OR SEDIMENT SAMPLE
- SB-XX-## PROPOSED SAMPLING LOCATION
- XX-## BUILDING NUMBER
- ##-## SAMPLE NUMBER

- NOTES:
1. FOR EACH SOIL BORING TAKE SURFACE SAMPLE AT 0-1' DEPTH.
 2. FIELD SCREEN SOIL BORING EVERY 2'. TAKE 1 SAMPLE PER BORING.
 3. AT REMOVAL ACTION TAKE 1 CONFIRMATION SAMPLE ON BOTTOM OF EXCAVATION AND 2 ON SIDEWALLS.

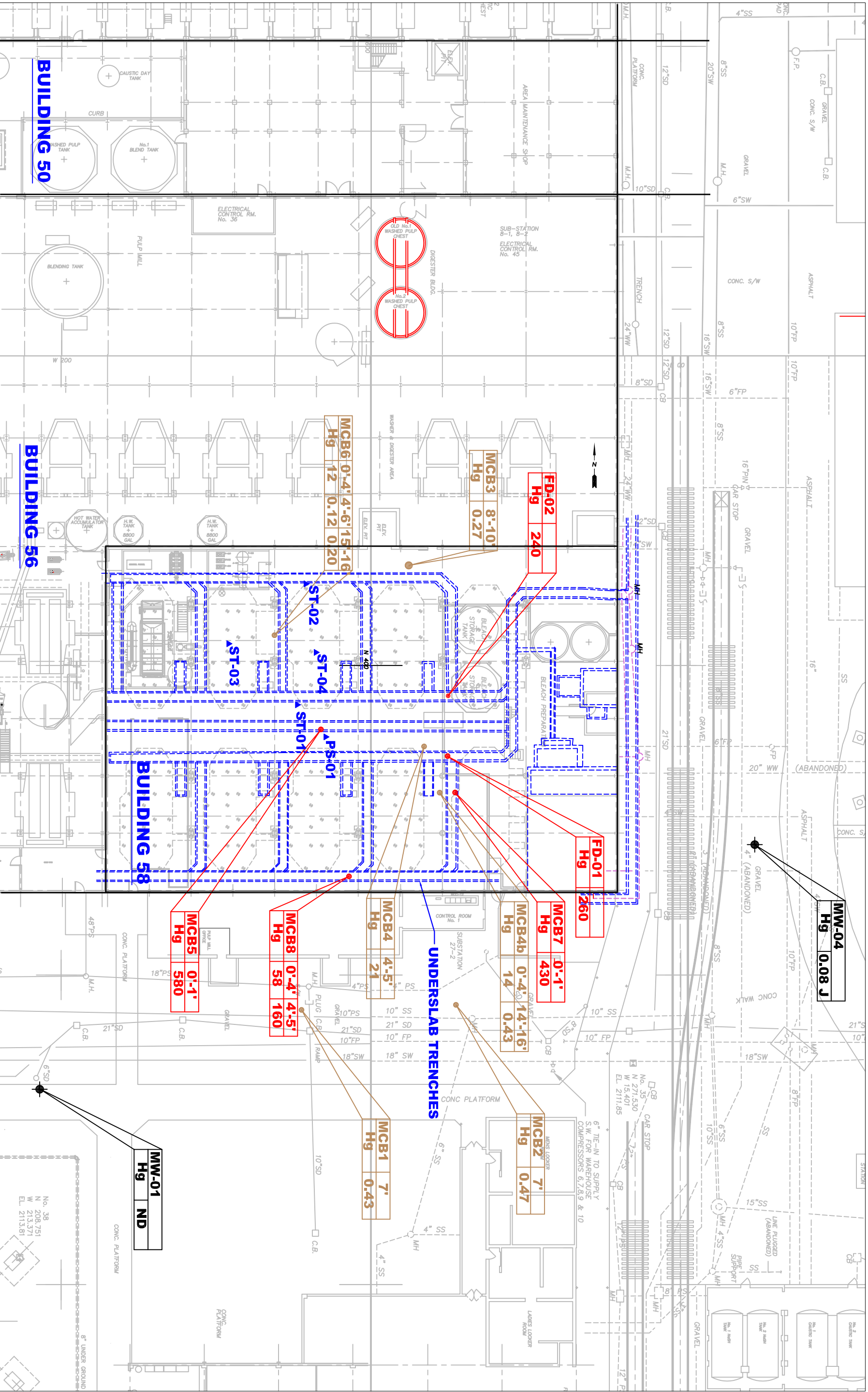


11560 GREAT OAKS WAY
SUITE 500
ALPHARETTA, GA 30022
(770) 475-8994 (TEL)
(770) 777-9545 (FAX)

PROPOSED SAMPLE LOCATIONS AT
PRINT & MACHINE SHOPS

OFFICE: Alpharetta	DRAWING DATE: 03/14/2008	ACAD FILE: FIGURE 6-5.DWG
-----------------------	-----------------------------	------------------------------

CLIENT: DAVIDSON RIVER VILLAGE LLC			PM: RK
LOCATION: ECUSTA MILL PISGAH FOREST, NORTH CAROLINA			CHECKED: RS
DESIGNED: AA	DETAILED:	PROJECT NO.: 131497	FIGURE: 6-5



NOTES:

- ANALYTICAL RESULTS SHOWN IN ELECTROCHEMICAL BUILDING ARE FOR MERCURY.
- LOCATIONS FOR VAPOR SAMPLING IN NOVEMBER 2004 WERE NOT SPECIFICALLY IDENTIFIED IN THE REPORT.

LEGEND:

- MCB#** • PHASE II ESA SOIL BORINGS
- MW-XX#** • EXISTING MONITORING WELL
- FD-##** • PHASE II ESA FLOOR DRAIN SAMPLES
- ▲** EXISTING VAPOR MONITOR POINT



OFFICE: Alpharetta

DRAWING DATE: 4/3/08

ACAD FILE: FIGURE7-2.DWG

11560 GREAT OAKS WAY
SUITE 500
ALPHARETTA, GA 30022
(770) 475-8994 (TEL)
(770) 777-9545 (FAX)

DETAILED LAYOUT &
PREVIOUS INVESTIGATIONS
ELECTROCHEMICAL BUILDING

CLIENT: DAVIDSON RIVER VILLAGE LLC

LOCATION: ECUSTA MILL
PISGAH FOREST, NORTH CAROLINA

DESIGNED: AB

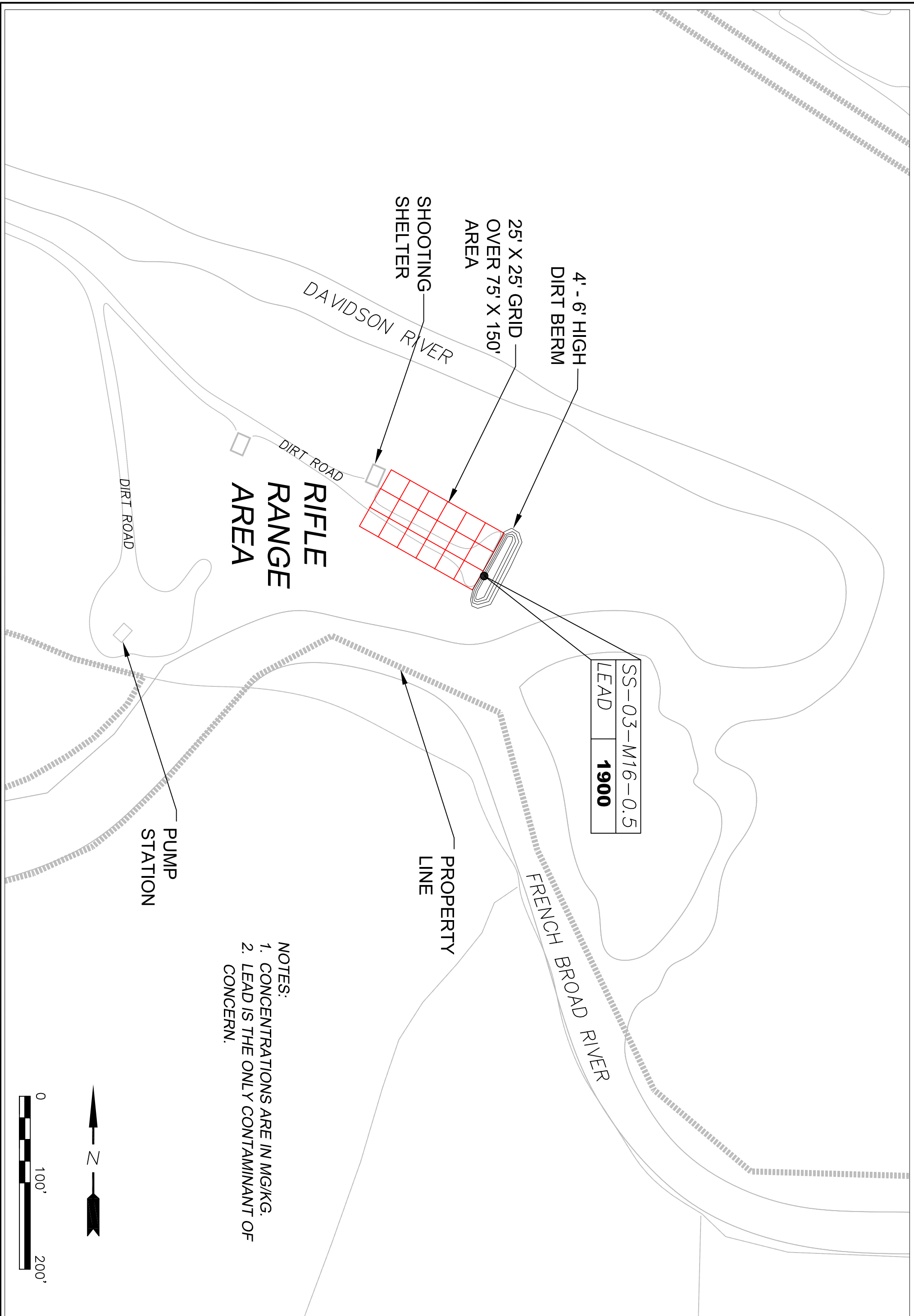
DETAILED:

PROJECT NO.: 123445

PM: RK

CHECKED: AB

FIGURE: 7-2



EPA REGION IV
REMEDATION PROJECT MGR
JENNIFER WENDEL
ON-SCENE COORDINATOR
DAVID ANDREWS

NC DENR
PROJECT MANAGER
JIM BATESON

DAVIDSON RIVER
VILLAGE LLC
PROJECT DIRECTOR
MIKE SINGER

D.H. GRIFFIN
DEMOLITION CONTRACTOR
PROJECT MANAGER
DAVID GRIFFIN

MOUNTAIN ENVIRONMENTAL
CHEMICAL INV. & DISPOSE
PROJECT MANAGER
DAVID WALKER

DAVIDSON RIVER
VILLAGE LLC
SITE MANAGER
BERNIE KELLY

ACM ASSESSMENT &
REMEDICATION

LBF ASSESSMENT &
REMEDICATION

DISPOSAL FACILITIES

RECYCLE FACILITIES

SHAW ENVIRONMENTAL
REMEDICATION CONTRACTOR
PROJECT MANAGER
RON KENYON

HEALTH & SAFETY
H & S MANAGER
PETE LARSON

SITE MANAGER
PAUL CAVANAUGH

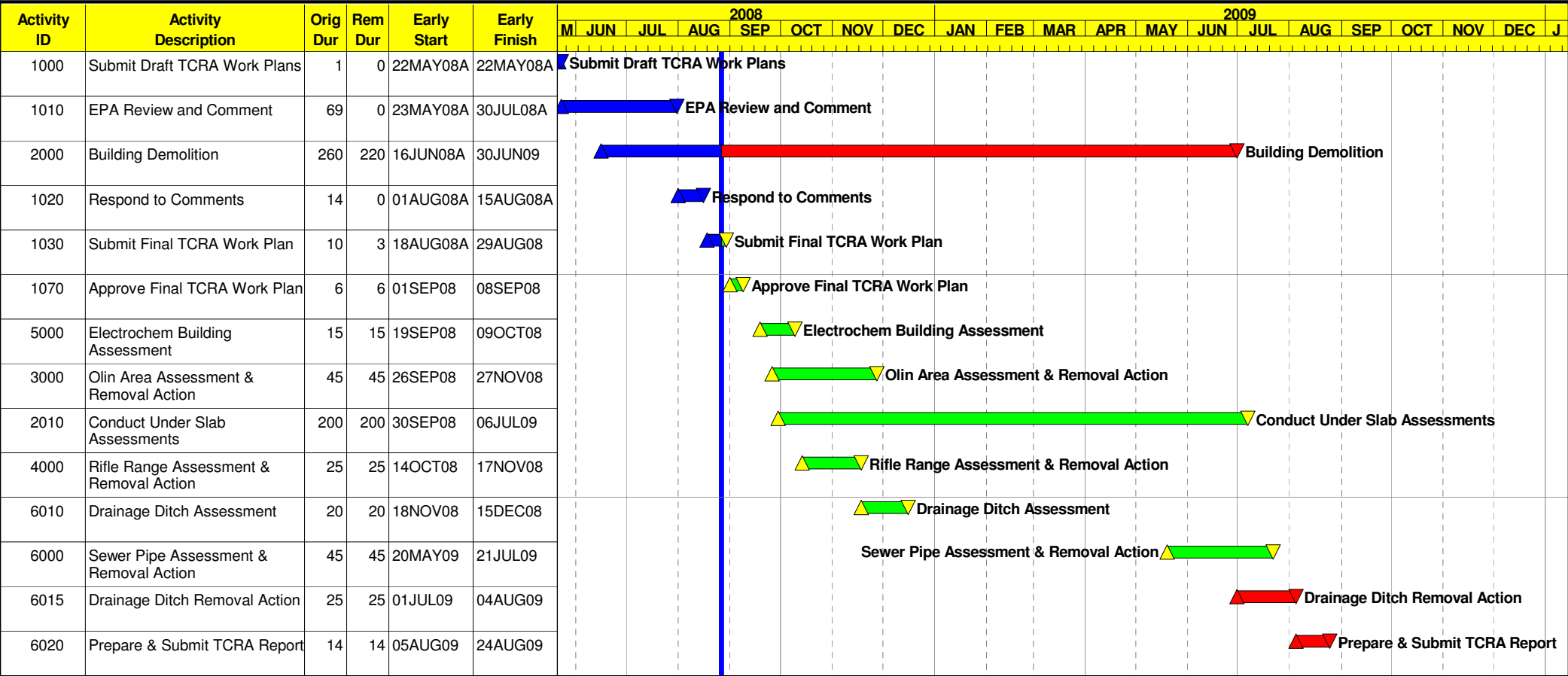
ENGINEERING
RESPONSIBLE ENGINEER
AMAR BUMB

DRILLER
TBD

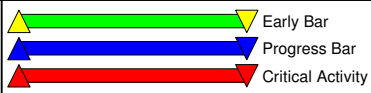
LABORATORY
PACE

DISPOSAL FACILITIES
TBD

HAULER
TBD



Start Date 21MAY08
Finish Date 24AUG09
Data Date 27AUG08
Run Date 27AUG08 08:50



Date	Revision	Checked	Approved

Tables

Table 3-1
Determination of Contaminants of Concern for Soils

Analyte ¹	Unit	Maximum Detected Value	NC Default Residential SRG	EPA Residential Screening Levels	COC? (Yes/No)
OLIN DISPOSAL AREA					
Arsenic	mg/kg	159	4.4*	0.39*	Yes
Barium	mg/kg	99.3	3750**	15,000	No
Chromium	mg/kg	26.1	44/2,400	230	No
Lead	mg/kg	135	400	400	No
Mercury	mg/kg	10.1	4.6	23	Yes
Selenium	mg/kg	9.7	78	390	No
PCB-1254	mg/kg	0.217	1	0.22	No
Acenaphthene	mg/kg	0.686	740	3,400	No
Anthracene	mg/kg	1.88	4,400	17,000	No
Benzo(a)anthracene	mg/kg	4.91	0.022	0.150	Yes
Benzo(a)pyrene	mg/kg	3.1	0.022	0.015	Yes
Benzo(b)fluoranthene	mg/kg	2.72	0.220	0.150	Yes
Benzo(k)fluoranthene	mg/kg	3.14	2.2	1.5	Yes
bis(2-ethylhexyl)phthalate	mg/kg	25.3	35	35	No
Chrysene	mg/kg	4.48	22	15	No
Di-n-butylphthalate	mg/kg	408	1,220	6,100	No
Fluoranthene	mg/kg	10.4	460	2,300	No
Fluorene	mg/kg	0.788	540	2,300	No
1-Methylnaphthalene	mg/kg	0.374	11.2	22	No
Phenanthrene	mg/kg	7.85	460 ²	1,700 ²	No
Pyrene	mg/kg	10.5	460	1,700	No
Acetone	mg/kg	0.264	2,800	61,000	No
p-isopropyltoluene	mg/kg	0.011	NE	NE	No
Naphthalene	mg/kg	0.009	11.2	3.9	No
Tetrachloroethene (PCE)	mg/kg	0.0074	0.48	0.57	No
1,2,4-Trimethylbenzene	mg/kg	0.0143	NE	67	No
1,3,5-Trimethylbenzene	mg/kg	0.0077	NE	NE	No
Toluene	mg/kg	0.0147	132	500	No
Xylene (Total)	mg/kg	0.0287	54	600	No
DRAINAGE DITCHES					
Arsenic	mg/kg	12	4.4*	0.39*	No*
Barium	mg/kg	170	3750**	15,000	No
Cadmium	mg/kg	0.26	7.4	70	No
Chromium	mg/kg	18	44/2,400	230	No
Lead	mg/kg	66	400	400	No
Mercury	mg/kg	69	4.6	23	Yes
Selenium	mg/kg	4.7	78	390	No
Methylene Chloride	mg/kg	0.013	9.1	11.0	No
1,2,4-Trimethylbenzene	mg/kg	0.0058	NE	67	No
BUILDING SLABS					
Arsenic	mg/kg	1.8	4.4*	0.39*	No*
Barium	mg/kg	60	3750**	15,000	No
Chromium	mg/kg	60	44/2,400	230	Yes
Lead	mg/kg	10	400	400	No
Mercury	mg/kg	0.17	4.6	23	No
Acetone	mg/kg	0.22	2,800	61,000	No
Methylcyclohexane	mg/kg	0.0066	NE	3,400	No
Naphthalene	mg/kg	0.43	11.2	3.9	No

Table 3-1
Determination of Contaminants of Concern for Soils

Analyte ¹	Unit	Maximum Detected Value	NC Default Residential SRG	EPA Residential Screening Levels	COC? (Yes/No)
1,1,1,2-Tetrachloroethane	mg/kg	0.35	3.2	2.0	No
Tetrachloroethene (PCE)	mg/kg	0.35	0.48	0.57	No
Toluene	mg/kg	0.02	132	500	No
Trichloroethene	mg/kg	0.087	0.053	2.8	Yes
cis-1,2-Dichloroethene	mg/kg	0.022	8.6	780	No
trans-1,2-Dichloroethene	mg/kg	0.0043	13.8	110	No
ELECTROCHEM BUILDING					
To Be Determined in the Electrochem Building EE/CA					
RIFLE RANGE					
Arsenic	mg/kg	4	4.4*	0.39*	No*
Barium	mg/kg	25	3750**	15,000	No
Lead	mg/kg	1900	400	400	Yes
Mercury	mg/kg	0.083	4.6	23	No
Selenium	mg/kg	0.72	78	390	No

* The background concentration for arsenic in the soil is 19.5 mg/kg per H. Zinn at NCDENR (8/19/08). Arsenic concentrations below 19.5 mg/kg are considered naturally occurring values.

** A default SRG is not listed for barium. Therefore, a default SRG was calculated using the procedure provided for the default SRGs.

COC - Contaminant of concern.

SRG - North Carolina Soil Remediation Goal

NL - Not listed.

1 - Only detected analytes are listed. Other analytes detected during the investigation will be screened following the same procedure outlined in Section 3.

2 - Pyrene values have been used as surrogate for phenanthrene.

3 - EPA Regional Screening Levels are as last updated on July 7, 2008.

Bodek I, Lymn WJ, Reehel WF, Rosenblott DH, Walton BI, Conway RA (1988), Environmental Inorganic Chemistry: Properties, Processes, and Estimation Methods, New York, Pergamon Press.

Table 3-2
Determination of Contaminants of Concern for Groundwater

Analyte ¹	Unit	Maximum Detected Value	MCL	2L Standard ²	COC? (Yes/No)
OLIN DISPOSAL AREA					
Barium	µg/L	150	2,000	2,000	No
Chromium	µg/L	3.2	100	50	No
Iron	µg/L	387	300 ³	300	Yes
Lead	µg/L	25	15	15	Yes
Manganese	µg/L	384	50 ³	50	Yes
Mercury	µg/L	0.033	2	1.05	Yes⁴
p-Isopropyltoluene	µg/L	3	NL	NL	No
DRAINAGE DITCHES					
Mercury	µg/L	0.29	2	1.05	Yes⁴
BUILDING SLABS					
To Be Determined in the Site-Wide Groundwater EE/CA					
ELECTROCHEM BUILDING					
To Be Determined in the Electrochem Building EE/CA					

COC - Contaminant of concern.

MCL - Maximum Contaminant Level for Drinking Water

NL - Not listed

1 - Only detected analytes are listed.

2 - Groundwater 2L Standard posted online as of May 7, 2008.

3 - National Secondary Drinking Water Regulations

4 - Mercury has been retained as a site-wide COC

Table 3-3
List of Contaminants of Concern

Area	Soil COCs	Groundwater COCs
Olin Disposal Area	Arsenic Mercury Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene	Iron Lead Manganese Mercury
Drainage Ditches	Mercury	Mercury
Building Slabs*	Chromium Trichloroethene Others TBD	TBD
Electrochem Building	TBD	TBD
Rifle Range	Lead	None

COC - Contaminant of concern.

TBD for groundwater will be determined during the non-time critical removal action process.

TBD for soils will be determined during this investigation.

* Other COCs may be identified under the building slabs during the investigation.

**Table 3-4
Remediation Goals for Groundwater**

Contaminant of Concern (COC)	North Carolina 2L Standard¹ (µg/L)	MCL (µg/L)	MCLG (µg/L)	Practical Quantitation Limits (µg/L)	Remediation Goal (µg/L)
Arsenic	50	10	0	1	10
Iron	300	300 ²	NL	100	300
Lead	15	15	0	1	15
Manganese	50	50 ²	NL	1	50
Mercury	1.05	2	2	0.2	1.05
Trichloroethene	2.8	5	0	0.5	2.8
Benzo(a)anthracene	0.0479	0.2	0	5	5
Benzo(a)pyrene	4.79E-03	0.2	0	5	5
Benzo(b)fluoranthene	0.0479	0.2	0	5	5
Benzo(k)fluoranthene	0.479	0.2	0	5	5

Notes:

MCL - Maximum Contaminant Level for Drinking Water

NL - Not listed

1 - Groundwater 2L Standard posted online as of May 7, 2008.

2 - National Secondary Drinking Water Regulations

Table 3-5
Exposure Factors for Surface Soils

	<u>Value</u>	<u>Source</u>
<u>Factors for Carcinogens</u>		
AT = Averaging time (yr)	70	(EPA, 2008)
EF = Exposure frequency (days/yr)	350	(EPA, 2008)
SFS adj = Age-adjusted dermal factor, soils (mg-yr/[kg-d])	361	(EPA, 2008)
IFSadj = Age-adjusted ingestion factor, soils (mg-yr/[kg-d])	114	(EPA, 2008)
ED = Exposure Duration (yr)	30	(EPA, 2008)
ET = Exposure Time (hrs/day)	24	(EPA, 2008)
PEF = Particulate emission factor (m ³ /kg)	1.40E+09	(EPA, 2008)
<u>Factors for Non-Carcinogens</u>		
BWc = Child body weight (kg)	15	(EPA, 2008)
AT = Averaging time (yr)	6	(EPA, 2008)
EF = Exposure frequency (days/yr)	350	(EPA, 2008)
EDc = Exposure Duration, Child (yr)	6	(EPA, 2008)
ETc = Exposure Time, child (hrs/day)	24	(EPA, 2008)
SSAc = Exposed Skin Surface Area, child (cm ²)	2,800	(EPA, 2008)
IRAc = Inhalation rate, child (m ³ /day)	10	(EPA, 2008)
IRSc = Soil ingestion rate, child (mg/day)	200	(EPA, 2008)
PEF = Particulate emission factor (m ³ /kg)	1.40E+09	(EPA, 2008)
AFc = Soil adherence rate, child (mg/cm ²)	0.20	(EPA, 2008)
<u>Factors for Soil-to-Air Volatilization</u>		
Q/C = Inverse of the mean conc at the center of 0.5 acre square source	68.81	(EPA, 2008)
T = Exposure interval (s) (= 25 yrs)	950,000,000	(EPA, 2008)
p = Density of solids (g/cm ³)	2.65	(EPA, 2008)
p _b = Dry bulk soil density (g/cm ³)	1.5	(EPA, 2008)
n = Total soil porosity (fraction)	0.43	(EPA, 2008)
n _w = water filled soil porosity	0.15	(EPA, 2008)
n _a = air filled porosity	0.28	(EPA, 2008)

Note: Surface soils are defined as soils from 0 to 12 inches below ground surface.

Table 3-6
Exposure Factors for Subsurface Soils

	<u>Value</u>	<u>Source</u>
<u>Factors for Carcinogens</u>		
BW = Adult body weight (kg)	70	(EPA, 2008)
AT = Averaging time (yr)	70	(EPA, 2008)
EF = Exposure frequency (days/yr)	100	(20 week construction cycle)
ED = Exposure Duration (yr)	1	(EPA, 2001)
SSA = Skin Surface Area (cm ²)	3,300	(EPA, 2001)
ET = Exposure time (hours/day)	8	(EPA, 2008)
IRs = Soil ingestion rate (mg/day)	330	(EPA, 2001)
PEF = Particulate emission factor (m ³ /kg)	1.40E+09	(EPA, 2008)
SAR = Soil adherence rate (mg/cm ²)	0.30	(EPA, 2004) (for construction worker)
<u>Factors for Non-Carcinogens</u>		
BW = Adult body weight (kg)	70	(EPA, 2008)
AT = Averaging time (yr)	1	(EPA, 2008)
EF = Exposure frequency (days/yr)	100	(20 week construction cycle)
ED = Exposure Duration (yr)	1	(EPA, 2001)
SSA = Skin Surface Area (cm ²)	3,300	(EPA, 2001)
ET = Exposure time (hours/day)	8	(EPA, 2008)
IRs = Soil ingestion rate (mg/day)	330	(EPA, 2001)
PEF = Particulate emission factor (m ³ /kg)	1.32E+09	(EPA, 2008)
SAR = Soil adherence rate (mg/cm ²)	0.30	(EPA, 2004) (for construction worker)
<u>Factors for Soil-to-Air Volatilization</u>		
Q/C = Inverse of the mean conc at the center of 0.5 acre square source	68.81	(EPA, 2008)
T = Exposure interval (s) (= 25 yrs)	950,000,000	(EPA, 2008)
p = Density of solids (g/cm ³)	2.65	(EPA, 2008)
p _b = Dry bulk soil density (g/cm ³)	1.5	(EPA, 2008)
n = Total soil porosity (fraction)	0.43	(EPA, 2008)
n _w = water filled soil porosity	0.15	(EPA, 2008)
n _a = air filled porosity	0.28	(EPA, 2008)

Note: Subsurface soils are defined as soils deeper than 12 inches below ground surface.

Table 3-7: Non-Cancer Toxicity Factors

Chemical	CAS No.	Chronic/ Subchronic	Oral RfD Value mg/kg-day	Oral to Dermal Adjustment Factor (1)	Oral to Dermal Adjustment Factor Source	Adjusted Dermal RfD mg/kg-day	Primary Target Organ	Source	Chronic/ Subchronic	Inhalation RfC mg/m3	Inhalation RfD mg/kg-day	Primary Target Organ	Source
TAL Inorganics													
Arsenic	7440-38-2	Chronic	3.00E-04	1.00E+00	EPA 2008	3.00E-04	skin, vascular no effects observed	IRIS	Chronic	3.00E-05	8.60E-06	developmental , cardiovascular , nervous system	CalEPA
Chromium (+3)	16065-83-1		1.50E+00		EPA 2008			IRIS					
Chromium (+6)	18540-29-9	Chronic	3.00E-03	2.50E-02	EPA 2008	7.50E-05	none reported	IRIS	Chronic	1.00E-04	2.20E-06	respiratory	EPA 2008
Lead	7439-92-1			1.00E+00	EPA 2008								
Mercuric chloride	7487-94-7	Chronic	3.00E-04	7.00E-02	EPA 2008	2.10E-05	immune system	IRIS					
Mercury	7439-97-6			1.00E+00	EPA 2008				Chronic	3.00E-04	8.60E-05	CNS	IRIS
TCL Volatile Organic Compounds (VOCs)													
Trichloroethene	79-01-6	Chronic		1.00E+00	EPA 2008								
TCL Semivolatile Organic Compounds (SVOCs)													
Benzo(a)anthracene	56-55-3			1.00E+00	EPA 2008								
Benzo(a)pyrene	50-32-8			1.00E+00	EPA 2008								
Benzo(b)fluoranthene	205-99-2	Chronic	3.00E-02	1.00E+00	EPA 2008	3.00E-02	kidney	VDEQ					
Benzo(k)fluoranthene	207-08-9	Chronic	5.00E-02	1.00E+00	EPA 2008	5.00E-02	kidney	IRIS					

N/A = Not Applicable

(1) Refer to RAGS, Part A, Appendix A

Table 3-8: Cancer Toxicity Data

Chemical	CAS No.	Oral Cancer Slope Factor 1/(mg/kg-day)	Oral to Dermal Adjustment Factor (1)	Oral to Dermal Adjustment Factor Source	Adjusted Dermal Cancer Slope Factor (1) 1/(mg/kg-day)	Weight of Evidence/ Cancer Guideline Description	Source	Inhalation Unit Risk 1(ug/m3)	Weight of Evidence/ Cancer Guideline Description	Source
TAL Inorganics										
Arsenic	7440-38-2	1.50E+00	1.00E+00	EPA 2008	1.50E+00	A	IRIS	4.30E-03	A	EPA 2008
Chromium (+3)	16065-83-1		2.50E-02	EPA 2008		D	IRIS		D	IRIS
Chromium (+6)	18540-29-9		1.00E+00	EPA 2008		D	IRIS	1.20E-02	A	EPA 2008
Lead	7439-92-1		1.00E+00	EPA 2008		B2	IRIS			
Mercuric chloride	7487-94-7		7.00E-02	EPA 2008		C	IRIS			
Mercury	7439-97-6		1.00E+00	EPA 2008		D	IRIS		D	IRIS
TCL Volatile Organic Compounds (VOCs)										
Trichloroethene	79-01-6	1.30E-02	1.00E+00	EPA 2008	4.00E-01	under review	NCEA, Region III	2.00E-06	highly likely	EPA 2008
TCL Semivolatile Organic Compounds (SVOCs)										
Benzo(a)anthracene	56-55-3	7.30E-01	1.00E+00	EPA 2008	7.30E-01	B2	NCEA, Region III	1.10E-04	B2	EPA 2008
Benzo(a)pyrene	50-32-8	7.30E+00	1.00E+00	EPA 2008	7.30E+00	B2	IRIS	1.10E-03	B2	EPA 2008
Benzo(b)fluoranthene	205-99-2	7.30E-01	1.00E+00	EPA 2008	7.30E-01	B2	NCEA, Region III	1.10E-04	B2	EPA 2008
Benzo(k)fluoranthene	207-08-9	7.30E-02	1.00E+00	EPA 2008	7.30E-02	B2	NCEA, Region III	1.10E-04	B2	EPA 2008

IRIS = Integrated Risk Information System

HEAST= Health Effects Assessment Summary Tables

EPA Group:

A - Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

NA - Weight-of-evidence classification not available

Weight of Evidence:

Known/Likely

Cannot be Determined

Not Likely

Mutagenic Mode of Action

Table 3-9
Direct Contact Site-Specific Remediation Goals for Soil

Soil Contaminant of Concern (COC) ³	Background Soil Concentration (mg/kg)	Direct Contact Remediation Goals for Surface Soils (mg/kg)			Direct Contact Remediation Goals for Subsurface Soils (mg/kg)		
		For Carcinogenic Effects	For Non-Carcinogenic Effects	Overall Direct Contact RG	For Carcinogenic Effects	For Non-Carcinogenic Effects	Overall Direct Contact RG
Arsenic	19.5 ²	3.9	21.6	19.5	331	213	213
Chromium (3+)	52	NA	117,321	117,321	NA	1,000,000	1,000,000
Chromium (6+)	52	2,839	234	234	894,250	2,319	2,319
Lead	17	NA	NA	400 ¹	NA	NA	400 ¹
Mercury	0.12	NA	23.5	23.5	NA	232	232
Benzo(a)anthracene	0	6.2	NA	6.2	534	NA	534
Benzo(a)pyrene	0	0.62	NA	0.62	53	NA	53
Benzo(b)fluoranthene	0	6.2	NA	6.2	534	NA	534
Benzo(k)fluoranthene	0	62	NA	62	5,341	NA	5,341

NA - not applicable

RG - site-specific remediation goal

mg/kg - milligrams per kilogram

1 - RG based on the IUEBK model

2 - Arsenic background concentration for the area as provided by Harry Zinn of NCDENR (August 19, 2008).

3 - Other COCs may be identified under the building slabs during the investigation.

Surface soils are defined as soils from 0 to 12 inches below ground surface.

Subsurface soils are defined as soils deeper than 12 inches below ground surface.

**Table 3-10: Calculations for Soil-to-Groundwater Protection Goals
Former Ecusta Paper Mill, Brevard, NC**

Parameter	Symbol (unit)	Value	Basis
Soil Dry Bulk Density	ρ_b (g/cm ³)	1.6	Assumed bulk density of 110 lbs/ft ³
Total Porosity	n (unitless)	0.40	Calculated value = $(1-(\rho_b/\rho_d))$ [ρ_d =particle density =2.65]
Volumetric Water Content of Soil	θ_w (unitless)	0.30	EPA (1996)
Soil Air Filled Porosity (θ_{as}) = $n - \theta_w$	θ_a (unitless)	0.096	Calculated value
Henry's Law Constant	H' (unitless)	chemical specific	Montgomery (1996)
Soil Water Partition Coefficient	K_d (L/kg)	chemical specific	See below
Naturally Occurring Carbon Content	f_{oc} (unitless)	0.006	EPA (2004) default value
Dilution Attenuation Factor	DAF (unitless)	20	EPA (1996) default value
Groundwater Goals	C_w (ug/L)	chemical specific	From Table 3-4
Soil-to-Groundwater Protection Goal	C_s (mg/kg)	chemical specific	Calculated value

$C_s = C_w \times DAF \times [K_d + (\theta_w + \theta_a H')/\rho_b]$						
CHEMICAL OF CONCERN (COC)	K_{oc} (L/kg)	K_d (L/kg)	Source of K_d or K_{oc}	H'	C_w (ug/L)	C_s (mg/kg)
Chromium (3+)	NA	6.30E+05	EPA (1996b) for pH=6.33 su	0	50	630000
Chromium (6+)	NA	102	Rai et al (1988)/ EPA (1999) for pH=6.33 su	0	50	102
Lead	NA	1,953	EPA (1999) for pH=6.33 su	0	15	586
Benzo(a)anthracene	100,000	600	Montgomery (1996)	3.28E-04	5	60
Benzo(a)pyrene	891,251	5,348	Montgomery (1996)	1.38E-05	5	535
Benzo(b)fluoranthene	549,541	3,297	Montgomery (1996)	2.06E-05	5	330
Benzo(k)fluoranthene	977,237	5,863	Montgomery (1996)	1.74E-05	5	586
Trichloroethene	65	0.39	Montgomery (1996)	0.373	2.8	0.033

NA - not applicable.

**Table 3-11
Overall Remediation Goals for Soils**

Soil Contaminant of Concern (COC)	Remediation Goals for Surface Soils (mg/kg)			Remediation Goals for Subsurface Soils (mg/kg)		
	Direct Contact RGs	Soil-to-Groundwater RG	Overall RG	Direct Contact RGs	Soil-to-Groundwater RG	Overall RG
OLIN DISPOSAL AREA						
Arsenic	19.5	TBD ¹	19.5	213	TBD ¹	213
Mercury	23.5	TBD ¹	23.5	232	TBD ¹	232
Benzo(a)anthracene	6.2	>60	6.2	534	>60 ¹	534
Benzo(a)pyrene	0.62	>535	0.62	53	>535	53
Benzo(b)fluoranthene	6.2	>330	6.2	534	>330	534
Benzo(k)fluoranthene	62	>586	62	5,341	>586 ¹	5,341
DRAINAGE DITCHES						
Mercury	23.5	NI	23.5	232	NI	232
BUILDING SLABS						
TO BE DETERMINED						
RIFLE RANGE						
Lead	400	1900*	400	750	1900*	400

NI - Mercury was not detected in groundwater samples collected from monitoring wells installed next to the drainage ditches indicating that mercury levels in ditch soils are protective of groundwater quality.

RG - site-specific remediation goal

TBD - To be determined using procedure outlined in Section 3 during the time critical removal action process.

* EPA's VLEACH Model calculations have shown that the maximum detected lead concentration in soil is protective of the groundwater quality at the Rifle Range.

1 - Final soil-to-groundwater RGs will be calculated after TCRA investigation is complete. However, initial calculations indicate that soil-to-groundwater RGs will not impact overall RGs.

Table 3-12. Preliminary Identification of Potential Chemical-Specific ARARs for the Removal of Surface and Shallow Subsurface Soil

ARAR/TBC	Citation	Requirement	Comments
Inactive Hazardous Sites Response Act of 1987	15A NCAC 130A-310 <i>et. seq.</i>	Soil remediation and confirmation sampling and analysis requirements outlined in <i>Guidelines for Assessment and Cleanup</i> .	Applicable.
Safe Drinking Water Act: National Primary Drinking Water Standards	40 CFR 141	Establishes health-based standards for public water systems [maximum contaminant level goals (MCLGs) and maximum contaminant levels (MCLs)].	Applicable
Safe Drinking Water Act: National Secondary Drinking Water Standards	40 CFR 143	Establishes standards for the aesthetic qualities (e.g., taste, odor, color, appearance) of public water systems (secondary MCLs).	Applicable
North Carolina Water Quality Standards	15A NCAC 18c.1500	Establishes MCLs and Secondary MCLs for contaminants in public water systems	Applicable
Clean Water Act: Toxic Pollutant Effluent Standards	40 CFR 129	Establishes effluent standards or prohibitions for certain toxic pollutants.	Not an ARAR. Removal action will not include a water discharge.
Clean Water Act: USEPA Ambient Water Quality Criteria (AWQC)	40 CFR 131	Establishes nonenforceable criteria for selected constituents in surface water.	Not an ARAR. Removal action will not include a water discharge.

Table 3-12. Preliminary Identification of Potential Chemical-Specific ARARs for the Removal of Surface and Shallow Subsurface Soil

ARAR/TBC	Citation	Requirement	Comments
Classifications and Water Quality Standards Applicable to the Surface Water of North Carolina	15A NCAC 2B	Establishes chemical specific standards for surface waters.	Not an ARAR. Removal action will not include a water discharge.
Clean Air Act: National Ambient Air Quality Criteria	40 CFR 61	Sets emissions standards for designated air contaminants from stationary sources to protect the public health and welfare.	Not an ARAR. Removal action will not create new stationary source.
Clean Air Act: National Emission Standard for Hazardous Air Pollutants (NESHAP)	40 CFR 61	Sets emissions standards for pollutants for which no Ambient Air Quality Standard exists.	Not an ARAR. Regulated NESHAP sources will not be present onsite as part of removal action.
North Carolina Air Pollution Control Requirements	15A NCAC 2D	Provide for the enforcement of CAA statutes relating to NAAQS and NSPSs within North Carolina.	Applicable to particulate emissions generated during implementation of the removal action.

Table 3-13. Preliminary Identification of Potential Action-Specific ARARs for the Removal of Surface and Shallow Subsurface Soil

ARAR/TBC	Citation	Requirement	Comments
Occupational Safety and Health Administration (OSHA) Regulations	29 CFR 1904, 1910, and 1926	Occupational safety and health requirements applicable to workers engaged in onsite work during remedial investigations and implementation of remedial actions.	Applicable.
Resource Conservation and Recovery Act (RCRA): Identification and listing of hazardous waste	40 CFR 261	Defines those solid wastes that are subject to regulation as hazardous wastes under 40 CFR 262-265, and 124, 127, and 271	Applicable if excavated soil meets definition of characteristic hazardous waste.
RCRA: Standards applicable to owners/operators of hazardous waste treatment, storage, and disposal facilities	40 CFR 264	Establishes minimum national standards that define the acceptable management of hazardous waste for owners and operators of facilities that treat, store, or dispose of hazardous waste. Allows for managing wastes in a Corrective Action management Unit (CAMU) at 264.552	Applicable to removal action involving a CAMU for ex-situ treatment of soil identified as hazardous waste.
RCRA: Toxicity Characteristic Rule, Land Disposal Restrictions (LDRs) and Universal Treatment Standards	40 CFR 261 and 268	Defines hazardous waste based on Toxicity Characteristic Leachability Procedure. Prohibits land disposal of specified untreated hazardous wastes and establishes treatment criteria for land disposal.	Applicable to excavated soil identified as hazardous waste.
North Carolina Hazardous Waste Management Regulations	15A NCAC 13A	Standards for owners and operators of hazardous waste treatment, storage, and disposal facilities. Also addresses LDRs for listed or characteristic hazardous wastes and CAMUs.	Applicable to excavated soil identified as hazardous waste.
North Carolina Solid Waste Management Regulations	15A NCAC 13B	Landfill design criteria (i.e., bottom liner, leachate collection, cover system, drainage layer, vegetative cover)	Applicable to onsite soil disposal.
North Carolina Sedimentation Pollution Control Act of 1973	15A NCAC 4	Sedimentation control required for land disturbances greater than one acre.	Relevant and appropriate. Although not required for land disturbances less than 1 acre, sedimentation controls are recommended for all land disturbances.

Table 3-13. Preliminary Identification of Potential Action-Specific ARARs for the Removal of Surface and Shallow Subsurface Soil

ARAR/TBC	Citation	Requirement	Comments
RCRA: Standards Applicable to Transporters of Hazardous Waste	40 CFR 263	Establishes standards that apply to persons transporting hazardous waste within the U.S. if the transportation requires a manifest under 40 CFR 262	Applicable to excavated soil identified as hazardous waste which is transported offsite.
Hazardous Materials Transportation Act; Hazardous Material Transportation Regulations	44 USC 1801-1813; 40 CFR 107, 171-179	Regulates transportation of hazardous materials	Applicable to excavated soil identified as hazardous waste which is transported offsite.
Solid Waste Disposal Act as Amended by the Resource Conservation and Recovery Act (RCRA); Criteria for Classification of Solid Waste Disposal Facilities and Practice	40 CFR 257	Establishes criteria for use in determining which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on health or the environment and thereby constitute prohibited open dumps.	Applicable to offsite disposal of excavated soil.
Clean Water Act	Section 410 and 404 40 CFR 122	Regulates discharges of dredged or fill materials into waters of the United States.	Not an ARAR. Removal action will not cause a discharge of dredge or fill material into a surface water or associated wetland.
North Carolina Water Pollution Control Regulations	15 NCAC H.0100	State regulations addressing discharges to surface water.	Not an ARAR. Removal action will not include water discharge.
Clean Air Act: National Primary and Secondary Ambient Air Quality Standards (NAAQS)	40 CFR 50	Establishes standards for ambient air quality to protect public health and welfare.	Applicable to particulate emissions generated during implementation of the removal action.

Table 3-14. Preliminary Identification of Potential Location-Specific ARARs for the Removal of Surface and Shallow Subsurface Soil

ARAR/TBC	Citation	Requirement	Comments
Resource Conservation and Recovery Act (RCRA)	40 CFR 264.18	Establishes the siting and design requirements for hazardous waste treatment, storage and disposal (TSD) facilities.	Not an ARAR. Removal action will not involve siting a RCRA TSD facility.
North Carolina Hazardous Waste Management Regulations	15A NCAC 13A	Establishes the siting and design requirements for hazardous waste TSD facilities.	Not an ARAR. Removal action will not involve siting a RCRA TSD facility.
North Carolina Solid Waste Disposal Regulations	15A NCAC 13B	Establishes the design, operation, and closure requirements for solid waste disposal facilities in the State of North Carolina.	Potentially applicable for on-site disposal of excavated soil.
North Carolina Surface Water Standards	15A NCAC 2B.0220	Establishes Tidal Salt Water Quality Standards for Class SC Waters.	Not an ARAR. No discharge to tidal salt waters involved.
Clean Water Act	Section 404 33 CFR 320-330	Establishes guidelines for work in and around federally jurisdictional wetlands as defined by the U.S. Army Corps of Engineers.	Not an ARAR. Removal action will not affect a wetland area.
Executive Order on Wetlands	Executive Order 11990	Must avoid destruction or loss of wetlands if a practical alternative exists.	Not an ARAR. Removal action will not affect a wetland area.
Executive Order on Floodplains	Executive Order 11988	Must take action to avoid or minimize potential harm to floodplains, and restore and preserve natural and beneficial values.	Applicable. Removal action at the Rifle Range is in 100 year flood plain area.
Navigable Waters	33 CFR 320 to 329	Establishes regulations pertaining to activities that affect the navigation of the waters of the United States	Not an ARAR. Removal action will not affect navigable waters.

Table 3-14. Preliminary Identification of Potential Location-Specific ARARs for the Removal of Surface and Shallow Subsurface Soil

ARAR/TBC	Citation	Requirement	Comments
Wild and Scenic Rivers Act	16 USC 1271 et seq. 40 CFR 6.302	Provides protection for any river (and the bordering or adjacent lands) designated as wild and scenic or recreational.	Not an ARAR. Site is not located on a wild and scenic river.
Fish and Wildlife Coordination Act	16 USC 661 et. Seq. 50 CFR 83	Must take action to protect fish or wildlife	Not an ARAR. Removal actions will not modify a body of water or associated wetlands.
Magnuson Fishery Conservation and Management Act	16 USC 1801 et seq.	Provides for conservation and management of specified fisheries within specified fishery conservation zones.	Not an ARAR. Removal actions will not affect a fishery.
Endangered Species Act of 1973	16 USC 1531 et. Seq. 50 CFR 200 50 CFR 402	Must take action to conserve endangered/threatened species and preserve or restore a critical habitat.	Not an ARAR. The site is not a critical habitat upon which endangered species or threatened species depend.
Migratory Bird Treaty Act of 1972	16 USC 703	Protects almost all species of native birds in the United States from unregulated taking.	Not an ARAR. Removal actions will not result in the taking of migratory birds.
Wilderness Act	16 USC 1131 et seq. 50 CFR 35.1 et. seq.	Federally-owned wilderness areas must be maintained in an unimpacted condition.	Not an ARAR. The site is not part of a Federally-owned wilderness area.
National Wildlife Refuge System	16 USC 668 50 CFR 27	Restricts activities within a National Wildlife Refuge.	Not an ARAR. The site is not part of a National Wildlife Refuge.
Coastal Zone Management Act	16 USC 1451 et. seq.	Must conduct activities in a manner consistent with approved state management.	Not an ARAR. The site not located in coastal area.

Table 3-14. Preliminary Identification of Potential Location-Specific ARARs for the Removal of Surface and Shallow Subsurface Soil

ARAR/TBC	Citation	Requirement	Comments
Coastal Barrier Resources Act	16 USC 3504	Prohibits new federal expenditure within the Coastal Barrier Resource System.	Not an ARAR. Removal action will not include federal expenditure on a coastal barrier.
North Carolina Coastal Area Management Act	NCGS Chapter 113A	Establishes requirements within the Coastal Zone for land development in Areas of Environmental Concern.	Not an ARAR. The site not located in coastal area.
National Archeological and Historical Preservation Act	16 USC 469 36 CFR 65	Must take action to recover and preserve historical data and artifacts.	Not an ARAR. The area has previously been disturbed. No historical or archaeological data would be disturbed due to the removal action.
Historic Sites, Buildings and Antiquities Act	16 USC 461 to 467 40 CFR 6.301	Must avoid undesirable impacts upon landmarks on the National Registry of Natural Landmarks.	Not an ARAR. The area has been previously disturbed. No known landmarks are present.
National Historic Preservation Act	16 USC 470 et. seq. 36 CFR 6.300	Must take action to preserve historic properties included on or eligible for inclusion on the National Register of Historic Places.	Not an ARAR. The area has been previously disturbed. No known historic properties are present.

Table 4-1 A
Summary of Groundwater Analytical Results - Inorganic Parameters
Phase 2 Environmental Site Assessment (Altamont, July 2003)

REC	Monitoring Well	Sample Date	Metals							
			Arsenic ug/L	Barium ug/L	Cadmium ug/L	Chromium ug/L	Lead ug/L	Mercury ug/L	Selenium ug/L	Silver ug/L
15	MW-03-K9	6/4/2003	<5	150	<1	3.2	25	<0.2	<5	<0.2
<i>2L Standard</i>			<i>50</i>	<i>2,000</i>	<i>1.75</i>	<i>50</i>	<i>15</i>	<i>1.05</i>	<i>50</i>	<i>17.5</i>

Notes: 1. 2L Standards from NC Administrative Code (NCAC) Title 15A, Subchapter 2L.
2. Bold indicates exceedance of applicable standard.
3. ug/L = micrograms per liter

Table 4-1 B
Summary of Groundwater Analytical Results - Organic Parameters
Phase 2 Environmental Site Assessment (Altamont, July 2003)

REC	Monitoring Well	Sample Date	VOCs	SVOCs
			p-Isopropyltoluene ug/L	All SVOC ug/L
15	MW-03-K9	6/4/2003	<5.0	NA
<i>2L Standard</i>			<i>NL</i>	<i>NL</i>

Notes: 1. 2L Standards from NC Administrative Code (NCAC) Title 15A, Subchapter 2L.
2. Bold indicates exceedance of applicable standard.
3. NA indicates no analysis.
4. ND indicates not detected.
5. NL indicates standard not listed.
6. ug/L = micrograms per liter
7. Only detected analytes are listed.

Table 4-1 C
Summary of Soil Analytical Results - Inorganic Parameters
Phase 2 Environmental Site Assessment (Altamont, July 2003)

REC	Sample ID	Sample Date	Total Metals					
			Arsenic mg/kg	Barium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Selenium mg/kg
15	SOIL-09-K9-2.0	6/12/2003	2.4	66.0	18.0	12	0.068	0.94
<i>SRG Standard</i>			<i>4.4</i>	<i>1080*</i>	<i>44/24,000</i>	<i>400</i>	<i>4.6</i>	<i>78</i>

- Notes:
1. SRG Standard from DENR Inactive Hazardous Sites Program, 2003.
 2. SRG Standard for chromium is for chromium VI.
 3. NL indicates standard not listed.
 4. mg/kg = micrograms per kilogram
 5. Only detected analytes are listed.
- * NC Default SRG is not listed in the tables and was calculated using assumptions for NC Default SRGs.

Table 4-1 D
Summary of Soil TCLP Analytical Results - Inorganic Parameters
Phase 2 Environmental Site Assessment (Altamont, July 2003)

REC	Sample ID	Sample Date	TCLP Leachate							
			Arsenic mg/L	Barium mg/L	Cadmium mg/L	Chromium mg/L	Lead mg/L	Mercury mg/L	Selenium mg/L	Silver mg/L
15	SOIL-09-K9-2.0	6/12/2003	<0.025	0.23	<0.0050	<0.010	0.050	<0.00020	<0.025	<0.010
<i>Characteristic Hazardous Waste Criteria</i>			<i>5.0</i>	<i>100</i>	<i>1.0</i>	<i>5.0</i>	<i>5.0</i>	<i>0.2</i>	<i>1.0</i>	<i>5.0</i>

- Notes:
1. Bold indicates exceedance of applicable standard.
 2. mg/L = milligrams per liter

Table 4-1 E
Summary of Soil Analytical Results - Organic Parameters
Phase 2 Environmental Site Assessment (Altamont, July 2003)

REC	Sample ID	Sample Date	VOCs	SVOCs
			All VOCs ug/kg	All SVOCs ug/kg
15	SOIL-09-K9-2.0	6/12/2003	ND	ND
<i>SRG Standard</i>			<i>NL</i>	<i>NL</i>

- Notes:
1. SRG Standard from DENR Inactive Hazardous Sites Program, 2003
 2. NL indicates standard not listed.
 3. ND indicates not detected.
 4. ug/L = micrograms per liter

Table 4-2
Detected Constituents in Groundwater
Phase 2 Environmental Site Assessment (Shaw, June 2007)

Sample ID	pH	Mercury ug/L	Iron ug/L	Manganese ug/L	VOCs ug/L
MW-13	6.51	0.033	387	384	ND
<i>2L Standard</i>	<i>6.5 - 8.5</i>	<i>1.05</i>	<i>300</i>	<i>50</i>	

Notes:

1. 2L Standards from NC Administrative Code (NCAC) Title 15A, Subchapter 2L.
2. Bold indicates exceedance of applicable standard.
3. ug/L = micrograms per liter
4. Only detected analytes are listed.

Table 4-3A
Detected Analytes for Soil Samples from the North Olin Disposal Area
Olin Area Investigation Report (Shaw, 2008)

Sample ID	Arsenic mg/kg	Barium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Selenium mg/kg	PCB-1254 mg/kg
NC Default SRG ¹	4.4 (nc)	1,080* (nc)	44 / 24,000	400**	4.6 (nc)	78 (nc)	1.0 (c)
EPA Residential PRGs ²	22 (nc) (0.39)	5,400 (nc)	210 (C)	400**	23 (nc)	390 (nc)	0.220 (c)
T104B20L	2.8	58.4	12.8	15.7	2.3	3.4	NA
T1A03B03L	2.4	98.8	15.4	8.4	0.059	7.0	NA
T1B03B00L	3.3	78.6	9.6	12.8	0.14	1.2	NA
T1B03B03L	3.5	99.3	13.1	135	7.9	6.0	NA
T206B30L	0.61	52.1	5.5	5.2	0.017	1.8	NA
T2A06B00L	2.5	84.3	17.5	10.2	0.12	5.9	NA
T306B00L	0.65	20.4	3.0	4.7	2.5	2.3	0.217
T306B02L	3.4	89.0	26.1	42.7	9.8	ND	NA
T306B03LC ***	1.5	47.0	15.6	30.3	0.22	ND	NA
T303B20L	2.4	85.3	11.0	18.9	2.1	6.4	NA
T305B69L	3.5	53.2	6.0	17.3	5.4	4.3	NA
T306B75L	9.2	69.5	16.7	48.7	10.1	4.8	NA
T306B76L	10.2	113	13.6	67.3	4.0	ND	NA
T406B00L	2.8	66.6	12.1	9.7	0.39	5.7	NA
T506B00L	5.4	59.1	13.0	29.2	0.15	9.7	NA
T606B00L	1.8	70.0	7.1	4.9	0.058	3.3	NA
T706B00L	3.4	63.8	15.2	56.5	1.8	6.6	NA

1 - North Carolina default Soil Remediation Goals (SRGs) for Inactive Hazardous sites (August 2007) for non-carcinogens are based on Hazard Index of 1.0 and assumes five non-carcinogens are present, i.e., Hazard Quotient=0.2.

2 - US EPA Preliminary Remediation Goals (PRGs) for non-carcinogens are based on Hazard Index of 1.0 and assumes one non-carcinogen is present, i.e., Hazard quotient=1.0.

c - SRGs and PRGs are based on carcinogenic effects. For arsenic, carcinogenic value is less than the method detection limit (MDL).

nc - SRGs and PRGs are for non-carcinogenic effects.

NA - Not analyzed.

mg/kg = milligrams per kilogram

* NC Default PRG is not listed in the tables and was calculated using assumptions for NC Default SRGs.

** US EPA Guidance on lead cleanup levels. This value cannot be adjusted.

*** This sample is of concrete.

Note - Bolded values exceed either NC Default SRG and/or EPA Residential PRG value.

ND - Not detected.

Table 4-3B
Detected Metal Analytes for Soil Samples from the South Olin Disposal Area
Olin Area Investigation Report (Shaw, 2008)

Sample ID	Arsenic mg/kg	Barium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Selenium mg/kg
NC Default SRG ¹	4.4 (nc)	1,080* (nc)	44 / 24,000	400**	4.6 (nc)	78 (nc)
EPA Residential PRGs ²	22 (nc) (0.39 c)	5,400 (nc)	210 (c)	400**	23 (nc)	390 (nc)
T1106B00L	1.8	55.1	5.0	11.4	0.75	3.7
T1110B10L	1.5	90.5	13.8	15.1	0.2	6
T1103B24L	1.8	77.8	13.6	17.2	0.11	5.5
T1110B50L	2.3	48.3	4.9	5.8	0.041	3.2
T1103B75L	3	74.9	11.4	18.5	0.96	3.9
T1103B85LF ***	ND	2	0.7	11.7	0.0055	ND
T1103B90L	2.1	70.6	22.1	19	0.23	5.0
T1103B100L	2	80.8	11.9	12.8	0.04	4.9
T1103B102L	1.8	72.2	11.3	9.7	0.034	5.6
T11A03B10L	159	68.4	6.6	15.3	0.27	6.5
T11A03B23L	1.8	77.6	15.4	16.4	0.11	5.5
T1403B25L	2	79.2	9.7	18.9	0.32	5.6
T1503B25L	2.6	71	9.6	17	0.12	5.6
T1603B25L	2	59.7	10.8	10.8	0.05	4.5

1 - North Carolina default Soil Remediation Goals (SRGs) for Inactive Hazardous sites (August 2007) for non-carcinogens are based on Hazard Index of 1.0 and assumes five non-carcinogens are present, i.e., Hazard Quotient=0.2.

2 - US EPA Preliminary Remediation Goals (PRGs) for non-carcinogens are based on Hazard Index of 1.0 and assumes one non-carcinogen is present, i.e., Hazard quotient=1.0.

c - SRGs and PRGs are based on carcinogenic effects. For arsenic, carcinogenic value is less than the method detection limit (MDL).

nc - SRGs and PRGs are for non-carcinogenic effects.

ND - Not detected.

mg/kg = milligrams per kilogram

* NC Default PRG is not listed in the tables and was calculated using assumptions for NC Default SRGs.

** US EPA Guidance on lead cleanup levels. This value cannot be adjusted.

*** This sample is of film material.

Note - Bolded values exceed either NC Default SRG and/or EPA Residential PRG value.

Table 4-3C
Detected SVOC Analytes for Soil Samples from the South Olin Disposal Area
Olin Area Investigation Report (Shaw, 2008)

Sample ID	Acenaphthene ug/kg	Anthracene ug/kg	Benzo(a)anthracene ug/kg	Benzo(a)pyrene ug/kg	Benzo(b)fluoranthene ug/kg	Benzo(k)fluoranthene ug/kg	his(2-ethylhexyl)phthalate ug/kg	Chrysene ug/kg	Di-n-butylphthalate ug/kg	Fluoranthene ug/kg	Fluorene ug/kg	1-Methylnaphthalene ug/kg	Phenanthrene ug/kg	Pyrene ug/kg
NC Default SRG ¹	740,000 (nc)	4,400 (nc)	22 (c)	22 (c)	220 (c)	2,200 (c)	35,000 (c)	22,000 (c)	1,220,000 (nc)	460,000 (nc)	540,000 (nc)	11,200 (nc)	NE	460,000 (nc)
EPA Residential PRGs ²	3,700,000 (nc)	22,000 (nc)	620 (c)	62 (c)	620 (c)	6,200 (c)	35,000 (c)	62,000 (c)	6,100,000 (nc)	2,300,000 (nc)	2,700,000 (nc)	NE	NE	2,300,000 (nc)
T1106B00L	686	1880	4910	3100	2720	3140	ND	4480	ND	10400	788	ND	7850	10500
T1110B10L	ND	ND	1,260	839	689	806	ND	1,190	ND	2,170	ND	ND	1,040	1,980
T1103B24L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1110B50L	ND	700	1,780	1,230	1,210	1,110	ND	1,710	ND	3,750	ND	ND	2,770	3,580
T1103B75L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1103B85LF *	ND	ND	ND	ND	ND	ND	ND	ND	408,000	ND	ND	ND	ND	ND
T1103B90L	ND	ND	ND	ND	ND	ND	ND	ND	2,430	ND	ND	ND	ND	ND
T1103B100L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1103B102L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T11A03B10L	ND	ND	ND	ND	ND	ND	24,100	ND	ND	ND	ND	374	ND	ND
T11A03B23L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1403B25L	ND	ND	ND	ND	ND	ND	25,300	ND	1470	ND	ND	ND	ND	ND
T1503B25L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1603B25L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

1 - North Carolina default Soil Remediation Goals (SRGs) for Inactive Hazardous sites (August 2007) for non-carcinogens are based on Hazard Index of 1.0 and assumes five non-carcinogens are present, i.e., Hazard Quotient=0.2.

2 - US EPA Preliminary Remediation Goals (PRGs) for non-carcinogens are based on Hazard Index of 1.0 and assumes one non-carcinogen is present, i.e., Hazard quotient=1.0.

c - SRGs and PRGs are for carcinogenic effects.

nc - SRGs and PRGs are for non-carcinogenic effects.

* This is a film material sample.

ND - Not detected.

NE - SRG or PRG is not established.

ug/kg = micrograms per kilogram

Note - Bolded values exceed either NC Default SRG and/or EPA Residential PRG value.

Table 4-3D
Detected VOC Analytes for Soil Samples from the South Olin Disposal Area
Olin Area Investigation Report (Shaw, 2008)

Sample ID	Acetone ug/kg	p-isopropyltoluene ug/kg	Naphthalene ug/kg	Tetrachloroethene (PCE) ug/kg	1,2,4 Trimethylbenzene ug/kg	1,3,5 Trimethylbenzene ug/kg	Toluene ug/kg	Xylene (Total) ug/kg
NC Default SRG ¹	2,800,000 (nc)	NE	11,200 (nc)	480 (c)	NE	NE	132,000 (nc)	54,000 (nc)
EPA Residential PRGs ²	1,400,000 (nc)	NE	56,000 (nc)	480 (c)	52,000 (nc)	21,000 (nc)	520,000 (nc)	270,000 (nc)
T1106B00L	ND	ND	8.8	7.4	6.2	ND	ND	11.5
T1110B10L	154	ND	ND	ND	ND	ND	ND	ND
T1103B24L	169	ND	ND	ND	6.6	ND	8.6	14.5
T1110B50L	ND	ND	ND	ND	10.4	ND	13.1	22.8
T1103B75L	ND	ND	ND	ND	ND	ND	6.7	ND
T1103B85LF *	100	11.0	ND	ND	ND	ND	ND	ND
T1103B90L	145	ND	ND	ND	6.2	7.7	9.2	14.3
T1103B100L	ND	ND	ND	ND	14.3	ND	6.4	17.8
T1103B102L	244	ND	ND	ND	ND	ND	6.9	ND
T11A03B10L	264	ND	9.0	ND	ND	ND	ND	ND
T11A03B23L	ND	ND	ND	ND	ND	ND	10.2	15.4
T1403B25L	ND	ND	ND	ND	6.3	ND	7.5	11.8
T1503B25L	ND	ND	ND	ND	13.8	ND	ND	23.0
T1603B25L	169	ND	ND	ND	12.7	ND	14.7	28.7

1 - North Carolina default Soil Remediation Goals (SRGs) for Inactive Hazardous sites (August 2007) for non-carcinogens are based on Hazard Index of 1.0 and assumes five non-carcinogens are present, i.e., Hazard Quotient=0.2.

2 - US EPA Preliminary Remediation Goals (PRGs) for non-carcinogens are based on Hazard Index of 1.0 and assumes one non-carcinogen is present, i.e., Hazard quotient=1.0.

c - SRGs and PRGs are for carcinogenic effects.

nc - SRGs and PRGs are for non-carcinogenic effects.

* This sample is of film material.

ND - Not detected.

NE - SRG or PRG is not established.

ug/kg = micrograms per kilogram

Note - Bolded values exceed either NC Default SRG and/or EPA Residential PRG value.

Table 4-4
Site-Specific Remediation Goals for Soils at Olin Disposal Areas

Soil Contaminant of Concern (COC)	Remediation Goals for Surface Soils (mg/kg)			Remediation Goals for Subsurface Soils		
	Direct Contact RGs	Soil-to-Groundwater RG	Overall RG	Direct Contact RGs	Soil-to-Groundwater RG	Overall RG
Arsenic	19.5	TBD ¹	19.5	213	TBD ¹	213
Mercury	23.5	TBD ¹	23.5	232	TBD ¹	232
Benzo(a)anthracene	6.2	>60	6.2	534	>60 ¹	534
Benzo(a)pyrene	0.62	>535	0.62	53	>535	53
Benzo(b)fluoranthene	6.2	>330	6.2	534	>330	534
Benzo(k)fluoranthene	62	>586	62	5,341	>586 ¹	5,341

Notes:

RG - site-specific remediation goal

TBD - To be determined using procedure outlined in Section 3 during the time critical removal action process.

1 - Final soil-to-groundwater RGs will be calculated after TCRA investigation is complete. However, initial calculations indicate that soil-to-groundwater RGs will not impact overall RGs.

Table 4-5
Site-Specific Remediation Goals for Groundwater at Olin Disposal Areas

Contaminant of Concern (COC)	North Carolina 2L Standard ¹ (µg/L)	MCL (µg/L)	MCLG (µg/L)	Practical Quantitation Limits (µg/L)	Remediation Goal (µg/L)
Iron	300	300 ²	NL	100	300
Lead	15	15	0	1	15
Manganese	50	50 ²	NL	1	50
Mercury	1.05	2	2	0.2	1.05

Notes:

MCL - Maximum Contaminant Level for Drinking Water

NL - Not listed

1 - Groundwater 2L Standard posted online as of May 7, 2008.

2 - National Secondary Drinking Water Regulations

**TABLE 4-6
FIELD SAMPLING SCHEDULE
OLIN DISPOSAL AREA**

Olin Disposal Area	Action	Samples and Location	Media	Sampling Methods and Number of Samples Per Area				
				SW8260B VOCs	SW8270C PAHs	SW6010B /7000 Metal COCs	Field Parameters (note 2)	TOC in Soil
North Olin Disposal Area	Surface soil sampling	12 locations	Soil		12	12		
North Olin Disposal Area	Subsurface extent of disposal area	12 locations	Soil		16	16		
North Olin Disposal Area	Monitor groundwater	1 new MWs	GW		1	1	1	1
South Olin Disposal Area	Surface soil sampling	8 locations	Soil		8	8		
South Olin Disposal Area	Subsurface extent of disposal area	5 locations	Soil		5	5		2
South Olin Disposal Area	Monitor groundwater	1 new MWs	GW		1	1	1	1
South Olin Disposal Area	Confirmatory sampling for removed soil contaminated with arsenic	3 locations, 1 On bottom and 2 on sidewalls	Soil			3		
		TOTAL GROUNDWATER SAMPLES		0	2	2	2	
		TOTAL SOIL SAMPLES			43	46		4
		TOTAL SEDIMENT SAMPLES						
		WATER-MATRIX DUPLICATES (Note 3)						
		SOIL-MATRIX DUPLICATES (Note 3)						
		SEDIMENT-MATRIX DUPLICATES (Note 3)						

Notes:

1. GW = groundwater
2. Field parameters include temperature, pH, conductivity, ORP, and turbidity.
3. See Field Sampling Plan for Duplicates, MS/MSD, & blanks.

Table 5-1
Previous Drainage Ditches Investigations
Phase 1 Environmental Site Assessment, June 2003

Recognized Environmental Concern	Phase 1 ESA Finding
Drainage ditches	Potential soil and/or groundwater contamination associated with historical wastewater disposal practices and surface releases of black liquor.

Table 5-2 A
Summary of Soil Analytical Results - Inorganic Parameters
Phase 2 Environmental Site Assessment (Altamont, July 2003)

Sampling Location	Sample Date	Total Metals							Remarks
		Arsenic mg/kg	Barium mg/kg	Cadmium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Selenium mg/kg	
SED-02-K12	6/2/2003	NA	NA	NA	NA	NA	NA	NA	Near Parshall flume. This sample was analyzed only for VOCs and PCBs.
SED-03-K10	6/2/2003	12	170	<0.15	18	31	12	4.7	E. ditch near Olin.
SED-04-J11	6/4/2003	2.2	50	0.26	18	66	2.1	<0.68	S. ditch
Default SRG		4.4 (19.5)	NL	7.4	44/24,000	400	4.6	78	

Notes:

1. Default SRG Standard from NCDENR Inactive Hazardous Sites Program, 2007. Arsenic concentrations below 19.5 mg/kg are considered naturally occurring values.
2. Default SRG Standard for chromium is for chromium VI.
3. NL indicates standard not listed.
4. Only detected analytes are listed.
5. mg/kg = milligrams per kilogram
6. NA = not analyzed.

Table 5-2 B
Summary of Soil Analytical Results - Organic Parameters
Phase 2 Environmental Site Assessment (Altamont, July 2003)

Sample ID	Sample Date	VOCs		SVOCs	Remarks
		Methylene chloride mg/kg	1,2,4-Trimethyl benzene mg/kg	All SVOC ug/kg	
SED-02-K12	6/2/2003	0.0063	<0.0058	NA	Near Parshall flume.
SED-03-K10	6/2/2003	<0.005	0.0058	NA	E. ditch near Olin.
SED-04-J11	6/4/2003	0.013	<0.0078	NA	S. ditch
		9.1	NL	NL	

Notes:

1. Default SRG Standard from NCDENR Inactive Hazardous Sites Program, 2007
2. NL indicates standard not listed.
3. NA = not analyzed
4. Only detected analytes are listed.
5. mg/kg = milligrams per kilogram

Table 5-2 C
Summary of Soil Analytical Results - Mercury
US EPA Soil, Sediment, & Fly Ash Data (May 2003)

Sample ID	Sample Date	Total Mercury mg/kg	TCLP Leachate Mercury mg/L	Remarks
MCB1-7	2003	0.43	NA	S of Electrochem Bldg
MCB2-7	2003	0.47	NA	S of Electrochem Bldg
CB-1	2003	47	NA	E. Ditch
CB-2	2003	5.7	NA	E. Ditch
		4.6		

Notes:

1. Default SRG Standard from NCDENR Inactive Hazardous Sites Program, 2007
2. NA = not analyzed
3. Only detected analytes are listed.
4. mg/kg = milligrams per kilogram
5. mg/L = milligrams per liter

Table 5-3
Summary of Analytical Results - Mercury in Soils
Ditch Sediment Sampling Results (ERM, March 2004)

Sample ID	Sample Date	Sample Depth feet bgs	Mercury mg/kg	Notes
EBDC-SED-01	3/2/2004	0.25-0.50	0.8	E. Ditch
EBDC-SED-02	3/2/2004	0.25-0.50	37.0	E. Ditch
EBDC-SED-03	3/2/2004	0.25-0.50	9.8	E. Ditch
EBDC-SED-04	3/2/2004	0.25-0.50	15.0	E. Ditch
EBDC-SED-05	3/2/2004	0.25-0.50	36.0	S. Ditch
EBDC-SED-06	3/2/2004	0.25-0.50	66.0	S. Ditch
EBDC-SED-07	3/2/2004	0.25-0.50	13.0	S. Ditch
EBDC-SED-08	3/2/2004	0.25-0.50	12.0	S. Ditch
EBDC-SED-09	3/2/2004	0.25-0.50	3.5	S. Ditch
<i>Default SRG</i>			4.6	
<i>SL</i>			23	

Notes:

1. Default SRG Standard from NCDENR Inactive Hazardous Sites Program, August 2007.
2. SL = Screening level from Regional Screening Levels for Chemical Contaminants at Superfund Sites (EPA, 2008).
3. bgs = below ground surface.
4. Bold indicates exceedance of applicable standard.
5. mg/kg = milligrams per kilogram

Table 5-4A
Summary of Analytical Results - Mercury in Soils
Expanded Site Inspection (NCDENR, May 2005)

Sample ID	Sample Date	Sample Depth feet bgs	Mercury mg/kg	Notes
EM002SS	March 2004	surface	4.3	@ Electrochem Bldg
EM002SB	March 2004	4 to 7 feet	0.54	@ Electrochem Bldg
EM003SS	March 2004	surface	69.0	@ Electrochem Bldg
EM003SB	March 2004	4 to 7 feet	2.20	@ Electrochem Bldg
EM004SS	March 2004	surface	31.0	@ Electrochem Bldg
EM004SB	March 2004	4 to 7 feet	0.34	@ Electrochem Bldg
EM005SS	March 2004	surface	15.0	@ Electrochem Bldg
EM005SB	March 2004	4 to 7 feet	0.22	@ Electrochem Bldg
EM005SD	March 2004	sediment	1.40	@ Parshall flume
EM008SD	March 2004	sediment	14	E. Ditch
EM010SD	March 2004	sediment	10	E. Ditch
EM012SD	March 2004	sediment	9.1	S. Ditch
<i>Default SRG</i>			<i>4.6</i>	
<i>SL</i>			<i>23</i>	

Notes:

1. Default SRG Standard from NCDENR Inactive Hazardous Sites Program, August 2007.
2. SL = Screening level from Regional Screening Levels for Chemical Contaminants at Superfund Sites (EPA, 2008).
3. bgs = below ground surface.
4. Bold indicates exceedance of applicable standard.
5. mg/kg = milligrams per kilogram

Table 5-4B
Summary of Analytical Results - Mercury in Groundwater
Expanded Site Inspection (NCDENR, May 2005)

Sample ID	Sample Date	Sample Depth feet bgs	Mercury ug/L	Notes
EM003MW	March 2004	5 to 8 feet	9.0	Temporary Well @ Electrochem Bldg
EM004MW	March 2004		0.42	MW1 S. of Electrochem Bldg
EM005MW	March 2004		0.29	MW3 S. of Caustic Bldg
EM007MW	March 2004		ND	S. Ditch
<i>2L Standard</i>			<i>1.05</i>	

Notes:

1. 2L Standards from NC Administrative Code (NCAC) Title 15A, Subchapter 2L.
2. bgs = below ground surface.
3. Bold indicates exceedance of applicable standard.
4. ND indicates not detected.
5. ug/L = micrograms per liter

Table 5-5
Summary of Analytical Results - Mercury in Soils
Phase 2 Environmental Site Assessment (Shaw, June 2007)

Sample ID	Sample Date	Sample Depth feet bgs	Estimated Depth from Base of Ditch feet	Mercury mg/kg	Notes
SB01	1/17/2007	10-11	5-6	<0.041	E. Ditch
SB02	1/17/2007	12-13	6-7	<0.037	E. Ditch
SB03	1/17/2007	12-13	8-9	<0.04	E. Ditch
SB04	1/17/2007	13-14	8-9	0.033 J	E. Ditch
SB05	1/17/2007	13-14	8-9	0.025 J, J1	E. Ditch
SB06	1/17/2007	17-18	11-12	<0.04	E. Ditch
SB07	1/17/2007	13-14	7-8	<0.042	S. Ditch
SB08	1/17/2007	13-14	7-8	<0.044	S. Ditch
SB09	1/17/2007	12-13	6-7	<0.044	S. Ditch
SB10	1/17/2007	12-13	7-8	<0.05	S. Ditch
SB11	1/17/2007	12-13	7-8	<0.045	S. Ditch
B104	2/20/2007	3-4	NA	0.410	S of #9 Paper Machine Bldg #59
MW16S	2/27/2007	1-2	NA	0.058	N of Caustic Bldg #70
<i>Default SRG</i>				4.6	
<i>SL</i>				23	

Notes:

1. Default SRG Standard from NCDENR Inactive Hazardous Sites Program, August 2007.
2. SL = Screening level from Regional Screening Levels for Chemical Contaminants at Superfund Sites (EPA, 2008).
3. bgs = below ground surface.
4. J = estimated concentration.
5. J1 = estimated concentration due to high Duplicate Relative Percent Difference.
6. mg/kg = milligrams per kilogram.

Table 5-6
Overall Remediation Goals for Soils in Drainage Ditches and Sewer Pipes

Soil Contaminant of Concern (COC)	Remediation Goals for Surface Soils (mg/kg)			Remediation Goals for Subsurface Soils		
	Direct Contact RGs	Soil-to-Groundwater RG	Overall RG	Direct Contact RGs	Soil-to-Groundwater RG	Overall RG
DRAINAGE DITCHES						
Mercury	23.5	NI	23.5	232	NI	232
Sewer Pipes						
Mercury	23.5	TBD ¹	23.5	232	TBD ¹	232

NI - Mercury was not detected in groundwater samples collected from monitoring wells installed next to the drainage ditches indicating that mercury levels in ditch soils are protective of groundwater quality.

RG - site-specific remediation goal

TBD - To be determined using procedure outlined in Section 3 during the time critical removal action process.

1 - Final soil-to-groundwater RGs will be calculated after TCRA investigation is complete. However, initial calculations indicate that soil-to-groundwater RGs will not impact overall RGs.

Table 5-7
Remediation Goals for Groundwater for Drainage Ditches and Sewer Pipes

Contaminant of Concern (COC)	North Carolina 2L Standard¹ (µg/L)	MCL (µg/L)	MCLG (µg/L)	Practical Quantitation Limits (µg/L)	Remediation Goal (µg/L)
Mercury	1.05	2	2	0.2	1.05

Notes:

MCL - Maximum Contaminant Level for Drinking Water

NL - Not listed

1 - Groundwater 2L Standard posted online as of May 7, 2008.

2 - National Secondary Drinking Water Regulations

TABLE 5-8
Field Sampling Schedule for Drainage Ditches and Sewer Pipes

Drainage Ditch	Action	Samples and Location	Media	Sampling Methods and Number of Samples Per Area				
				SW8260B VOCs	SW8270C PAHs	7471A Mercury	7470A Mercury	Field Parameters (note 2)
East Sewer Pipe	Soil sampling for confirmation	5 transects 25' apart	Soil			6		
South Sewer Pipe	Soil sampling for confirmation	At each suspect area	Soil			as needed		
East Drainage Ditch	Soil sampling for assessment	26 transects 50' apart	Soil			260		
East Drainage Ditch	Monitor groundwater	5 MWs	GW				5	5
South Drainage Ditch	Soil sampling for assessment	21 transects 50 to 100' apart	Soil			210		
South Drainage Ditch	Monitor groundwater	6 MWs	GW				6	6
		TOTAL GROUNDWATER SAMPLES				476	11	11
		TOTAL SOIL SAMPLES						
		TOTAL SEDIMENT SAMPLES						
		WATER-MATRIX DUPLICATES (Note 3)						
		SOIL-MATRIX DUPLICATES (Note 3)						
		SEDIMENT-MATRIX DUPLICATES (Note 3)						

Notes:

1. GW = groundwater
2. Field parameters include temperature, pH, conductivity, ORP, and turbidity.
3. See Field Sampling Plan for Duplicates, MS/MSD, & blanks.

TABLE 5-9
Groundwater Sampling Results for Monitoring Wells Near Drainage Ditches - November 2008

Monitoring Well	Sampling Date	pH (su)	ORP (mV)	Turbidity (NTU)	DO (mg/L)	Mercury (ug/L)
RG						1.05
Drainage Ditches						
MW-1	11/20/2008	6.95	-45.10	0.95	3.36	ND
MW-5	well plugged with sediments					
MW-10	11/22/2008	6.42	-17.10	0.30	4.92	0.22
MW-13	11/21/2008	6.69	-39.70	0.70	5.92	ND
MW-14	11/22/2008	6.06	2.00	0.30	4.00	0.40
MW-15	11/21/2008	5.92	11.20	2.20	6.62	ND
MW-21	11/18/2008	5.89	12.40	0.30	4.95	ND
MW-22	11/18/2008	6.69	-30.90	13.00	5.95	ND
MW-23	11/19/2008	6.17	-4.50	4.90	8.61	ND
MW-24	11/19/2008	5.92	9.20	2.50	3.74	ND
MW-25	11/19/2008	6.37	-14.80	0.20	5.57	ND

ND = Not detected

TABLE 5-10
Relationship of Drainage Ditches Bottoms and Groundwater Levels in Adjacent Monitoring Wells

Well	Depth to Water in MW (ft TOC)	Depth to Ditch Bottom (ft below TOC of MW)	MW Water Depth - Ditch Bottom (feet)	Ditch Bottom in Contact With Groundwater?
East Drainage Ditch				
MW-21	10.69	9.70	0.99	No
MW-22	11.25	12.26	-1.01	Yes
South Drainage Ditch				
MW-23	14.74	15.10	-0.36	Yes
MW-24	9.32	9.41	-0.09	Yes
MW-25	9.23	8.42	0.81	No

Notes: 1. Water levels in wells measured on November 5, 2008 by Jeff Alexander and Jack Garren
2. Depth to ditch bottoms measured using a transit.

TABLE 6-1
Summary of Detected Analytes in Soils at the Print Shop (Bldg 6)
Phase II Environmental Site Assessment (Altamont, July 2003)

Location or Sample Name	Sample Date	Sample Media	Metals					VOC	SVOC
			Arsenic mg/kg	Barium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Toluene mg/kg	all SVOCs
SOIL-15-17-2.0	6/12/2003	soil	1.6	52	60	9.5	0.048	0.020	ND
SOIL-13-17-8	6/3/2003	soil	1.8	60	18	10	0.17	ND	ND
<i>SRG Standard</i>			<i>4.4</i>	<i>NL</i>	<i>44/24,000</i>	<i>400</i>	<i>4.6</i>	<i>132</i>	
<i>PRG Standard</i>			<i>22</i>	<i>5,400</i>	<i>210</i>	<i>400</i>	<i>23</i>	<i>520</i>	

- Notes: 1. Bold indicates an exceedance of applicable standard.
2. NA = not analyzed
3. ND = not detected
4. NL = standard not listed
5. ug/L = micrograms per liter
6. mg/kg = milligrams per kilogram
7. Only detected analytes are listed.

TABLE 6-2
Summary of Detected Analytes in Soils at the Machine Shop (Bldg 31)
Phase II Environmental Site Assessment (Altamont, July 2003)

Location or Sample Name	Sample Date	Sample Media	Total Metals					VOCs	
			Arsenic mg/kg	Barium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	all VOCs	all SVOCs
SOIL-20-J7-1.5 (Machine Shop)	6/4/2003	soil	NA	NA	NA	NA	NA	ND	ND
<i>SRG Standard</i>			<i>4.4</i>	<i>NL</i>	<i>44/24,000</i>	<i>400</i>	<i>4.6</i>		
<i>PRG Standard</i>			<i>22</i>	<i>5,400</i>	<i>210</i>	<i>400</i>	<i>23</i>		

- Notes: 1. Bold indicates an exceedance of applicable standard.
2. NA = not analyzed
3. ND = not detected
4. NL = standard not listed
5. ug/L = micrograms per liter
6. mg/kg = milligrams per kilogram
7. Only detected analytes are listed.

TABLE 6-3
Summary of Detected Analytes in Soils at the Machine Shop (Bldg 31)
Phase II Environmental Site Assessment (Shaw, July 2007)

Parameter	Units	Default SRG	PRG	MSB01 (1'-2')	MSB02 (1'-2')	MSB03 (1'-2')	MSB04 (1'-2')	MSB05 (1'-2')	MSB06 (1'-2')
Acetone	mg/kg	2,800	14,000	ND	0.0074 J	0.019	ND	0.011	0.14
Naphthalene	mg/kg	11.2	56	ND	ND	0.43 E	ND	ND	0.1
1,1,1,2-Tetrachloroethane	mg/kg	3.2	3.2	ND	ND	ND	ND	0.35 E	0.0036 J
Tetrachloroethene	mg/kg	0.48	0.48	ND	ND	ND	ND	0.35 E	0.0029 J
Trichloroethene	mg/kg	0.053	0.053	ND	ND	ND	ND	0.087	ND
cis-1,2-Dichloroethene	mg/kg	8.6	43	ND	ND	ND	ND	0.022	ND
trans-1,2-Dichloroethene	mg/kg	13.8	69	ND	ND	ND	ND	0.0043 J	ND

- Notes: 1. Bold indicates an exceedance of applicable standard.
2. ND = not detected
3. E = estimated concentration outside laboratory calibration range
4. J = estimated concentration between method detection level and reporting level
5. Only detected analytes are listed.
6. mg/kg = milligrams per kilogram

TABLE 6-4
Summary of Detected Analytes in Soils at the Print Shop (Bldg 6)
Phase II Environmental Site Assessment (Shaw, July 2007)

Parameter	Units	Default SRG	PRG	PSB01 (1'-2')	PSB02 (1'-2')	PSB03 (1'-2')	PSB04 (1'-2')	PSB05 (1'-2')
Acetone	mg/kg	2,800	14,000	ND	0.023	0.054 M	0.22 E	0.013
Naphthalene	mg/kg	11.2	56	ND	ND	ND	ND	ND
Toluene	mg/kg	132	520	0.0051	ND	ND	0.0084	ND
Methylcyclohexane	mg/kg	NL	2,600	ND	ND	0.0066 J1 M	ND	ND

- Notes: 1. Bold indicates an exceedance of applicable standard.
2. ND = not detected
3. NL = standard not listed
4. E = estimated concentration outside laboratory calibration range
5. J1 = estimated concentration due to high duplicate relative percent difference
6. M = matrix interference
7. Only detected analytes are listed.
8. mg/kg = milligrams per kilogram

TABLE 6-5
Summary of Detected Analytes in Building Sumps
Phase II Environmental Site Assessment (Shaw, July 2007)

Parameter	Units	NC 2L Standard	SUMP01 (BLDG 6)	SUMP02 (BLDG 56)	SUMP03 BLDG 48)	SUMP04 (BLDG 50)	SUMP05 (BLDG 48)
Acetone	ug/L	700	2.4 J	14	21	2.4 J	3.7 J
Carbon Disulfide	ug/L	700	ND	0.56	0.54 J	ND	ND
Methylene chloride	ug/L	4.6	1.6	1.1	1.1	0.57 J	1.3
Chloroform	ug/L	70	ND	ND	7.1	ND	ND
Ethylbenzene	ug/L	550	ND	0.41 J	0.37 J	1.3	ND
m&p-Xylene	ug/L	530	ND	0.95 J	0.78 J	2.4	ND
o-xylene	ug/L	530	ND	0.28 J	0.21 J	3.9	ND
Cyclohexane	ug/L	NL	ND	0.37 J	0.37 J	ND	ND
Tetrachloroethylene	ug/L	0.7	ND	ND	ND	ND	0.22 J
Mercury	ug/L	1.05	ND	65.4	ND	1.8 J	ND

- Notes: 1. Bold indicates an exceedance of applicable standard.
2. ND = not detected
3. NL = standard not listed
4. J = estimated concentration between method detection level and reporting level
5. Only detected analytes are listed.
6. ug/L = micrograms per liter

TABLE 6-6
FIELD SAMPLING SCHEDULE FOR BUILDING SLABS

Bldg #	Building Name	Approximate Slab Area (sf)	Action	Field Screening Samples	SW8081B Pesticides	SW8151B Herbicides	SW8290 Dioxins	SW8082A TAL/TCL PCBs	SW8260B VOCs	SW8270C SVOCs	SW6010B /7000 Metals COCs
1	Main Entrance & Gate House	1,250	None Planned								
2	Main Office Building	12,300	None Planned								
4	Garage	1,500	Remove slab, screening based on visual inspection	TBD				X	X	X	X
5	Cafeteria	13,700	None Planned								
6	Printing	40,100	Screen on 50 ft x 50 ft grid	10					1		1
7	Solvent Recovery	7,000	Remove slab, screening based on visual inspection	TBD					X		
8	Ink Drum Storage	6,600	Remove slab, screening based on visual inspection	TBD							
10	Backwash Tank		None Planned								
11	Potable Water Filter Plant	22,700	None Planned								
12	Storage Building	16,000	Remove slab, screening based on visual inspection	TBD					X	X	X
13	Solvent Storage Tank	800	Remove slab, screening based on visual inspection	TBD					X		
14	Salvage Building	5,600	Remove slab, screening based on visual inspection	TBD					X	X	X
15	Filter Plant Building	20,900	None Planned								
16	Storage Building	30,400	Remove slab, screening based on visual inspection	TBD					X	X	X
17	Converter Building	72,000	Remove slab, screening based on visual inspection	TBD					X	X	
18	Storage Building	19,000	Remove slab, screening based on visual inspection	TBD					X	X	X
19	Davidson River Pump House	2,200	None Planned								
20	Storeroom	18,500	Remove slab, screening based on visual inspection	TBD					X	X	X
21	Machinery Storage	4,300	Remove slab, screening based on visual inspection	TBD				X	X	X	
22	Propane Storage	460	None Planned								
23	Paint & Oil Storage	3,200	Remove slab, screening based on visual inspection	TBD					X	X	X
24	Finishing	71,600	Screen on 100 ft x 100 ft grid	8			X	X	X	X	
25	Winding & Calendering	20,600	Screen on 100 ft x 100 ft grid	2			X	X	X	X	
26	Storage Building	19,600	Screen on 100 ft x 100 ft grid	2			X	X	X	X	X
27	Transportation Garage	4,000	Remove slab, screening based on visual inspection	TBD					X	X	
28	Paint Shop	3,500	Remove slab, screening based on visual inspection	TBD					X		X
29	Sheet Metal & Pipe Shop	7,400	Remove slab, screening based on visual inspection	TBD					X	X	X
30	Maintenance Office Building	3,200	Remove slab, screening based on visual inspection	TBD	X	X			X		
31	Machine Shop	20,400	Screen on 50 ft x 50 ft grid	16					2		2
32	Emergency Maintenance Shop	6,500	Screen on 100 ft x 100 ft grid	1			X	X	X	X	X
33	No. 1 - 8 Paper Machine Room	56,400	Screen on 100 ft x 100 ft grid	6			X	X		X	X
34	No. 10 Paper Machine Room	36,600	Screen on 100 ft x 100 ft grid	4			X	X		X	X
35	No. 11 Paper Machine Room	24,100	Screen on 100 ft x 100 ft grid	3			X	X		X	X
36	No. 12 Paper Machine Room	47,100	Screen on 100 ft x 100 ft grid	5			X	X		X	X
37	Instrument Shop	2,500	Remove slab, screening based on visual inspection	TBD					X		
38	No. 1 Reservoir		None Planned								
39	Duke Power Substation	13,000	None Planned								
40	Cooling Tower	3,400	Remove slab, screening based on visual inspection	TBD				X			X
41	Service Water pump House		None Planned								
42	Refining Building	40,800	Screen on 100 ft x 100 ft grid	4			X	X	X	X	X
43	Turbine Room	9,000	Remove slab, screening based on visual inspection	TBD				X	X	X	
44	Telephone Equip. Building	570	None Planned								
45	Service Water Tank		None Planned								
46	Pulp & Calcium Carbonate Storage	22,500	Remove slab, screening based on visual inspection	TBD			X	X			X
47	No. 2 Reservoir	17,900	None Planned								
48	Bleach Building	22,500	Remove slab, screening based on visual inspection	TBD			X	X			X
49	Fire Pump House	480	None Planned								
50	Continuous Carbonation	18,300	Remove slab, screening based on visual inspection	TBD				X		X	X
51	Pilot Plant	2,700	Remove slab, screening based on visual inspection	TBD			X	X	X	X	X
52	Research Building	3,200	Remove slab, screening based on visual inspection	TBD			X	X	X	X	X
53	Washers	14,000	Remove slab, screening based on visual inspection	TBD			X	X		X	X
54	No. 3 Reservoir	19,200	None Planned								
55	Data Processing Building	4,600	Remove slab, screening based on visual inspection	TBD				X	X	X	X
56	Digesters	44,500	Remove slab, screening based on visual inspection	TBD			X	X		X	X
57	Storage Building	25,000	Remove slab, screening based on visual inspection	TBD				X	X	X	X
58	ElectroChem Building	18,300	Addressed under separate plan								
59	No. 9 Paper Machine Room	21,700	Remove slab, screening based on visual inspection	TBD			X	X		X	X
60	Sales & Administration Building	19,200	None Planned								
61	Black Liquor Tank		Remove slab, screening based on visual inspection	TBD					X	X	X
62	Boiler House	26,700	Remove slab, screening based on visual inspection	TBD			X	X		X	X
63	Power & Water Maintenance Shop	4,900	Remove slab, screening based on visual inspection	TBD				X	X	X	
64	Coal Conveyor		Remove slab, screening based on visual inspection	TBD				X		X	X
65	Fire Water Tank		None Planned								
66	Offices	2,000	None Planned								
67	Shipping	21,100	None Planned								
68	Flax Conveyor	6,800	None Planned								
69	Potable Water Storage Tank		None Planned								
70	Caustic Storage Building	5,100	Remove slab, screening based on visual inspection	TBD							X
71	Essential Materials	31,800	Remove slab, screening based on visual inspection	TBD					X	X	X
72	Gate House	1,100	None Planned								
73	Carbonate Plant	11,800	Remove slab, screening based on visual inspection	TBD				X			X
74	Black Liquor Storage Tanks		Remove slab, screening based on visual inspection	TBD				X			X
75	Evaporator Building	3,400	Remove slab, screening based on visual inspection	TBD				X		X	X
76	Storage Building	22,100	Remove slab, screening based on visual inspection	TBD				X	X	X	X
77	R. C. Building	17,700	Remove slab, screening based on visual inspection	TBD				X			X
78	Top Coater Building	6,500	Remove slab, screening based on visual inspection	TBD				X	X	X	X
79	Cafeteria	5,800	Remove slab, screening based on visual inspection	TBD				X	X	X	
80	Sheeting	12,100	Remove slab, screening based on visual inspection	TBD				X	X		X
81	Slitting	16,500	Remove slab, screening based on visual inspection	TBD				X	X		
82	Solvent Recovery	2,200	Remove slab, screening based on visual inspection	TBD				X	X		
83	Coating Towers	5,100	Remove slab, screening based on visual inspection	TBD				X	X		
84	Lag Storage	11,100	Remove slab, screening based on visual inspection	TBD				X	X	X	X
85	Solvent Storage	240	Remove slab, screening based on visual inspection	TBD				X	X		
86	Coal Unloading Station	1,200	Remove slab, screening based on visual inspection	TBD				X		X	X
87	Fiber Warehouses	140,000	None Planned								
88	Warehouses	117,800	None Planned								
89	Warehouses	102,000	None Planned								
90	Fuel Oil Storage Tanks		Remove slab, screening based on visual inspection	TBD				X	X	X	
91	Laboratory	4,800	Remove slab, screening based on visual inspection	TBD				X	X	X	X
92	Coating Bath Mix Plant	6,900	Remove slab, screening based on visual inspection	TBD				X	X		X
93	Empty Drum Storage	2,600	Remove slab, screening based on visual inspection	TBD				X	X	X	
94	Shops & Stores	19,300	Remove slab, screening based on visual inspection	TBD	X	X		X	X	X	
95	Casting Room	45,200	Remove slab, screening based on visual inspection	TBD				X	X	X	X
96	Coagulating Bath	5,700	Remove slab, screening based on visual inspection	TBD				X	X	X	X

TABLE 6-6
FIELD SAMPLING SCHEDULE FOR BUILDING SLABS

Bldg #	Building Name	Approximate Slab Area (sf)	Action	Field Screening Samples	SW8081B Pesticides	SW8151B Herbicides	SW8290 Dioxins	SW8082A TAL/TCL PCBs	SW8260B VOCs	SW8270C SVOCs	SW6010B /7000 Metals COCs
97	V.R. Room	14,200	Remove slab, screening based on visual inspection	TBD				X	X	X	X
98	PX Storage	4,200	Remove slab, screening based on visual inspection	TBD				X	X	X	X
99	Chemical Building	6,200	Remove slab, screening based on visual inspection	TBD	X	X		X	X	X	X
100	Film Development Building	25,200	Remove slab, screening based on visual inspection	TBD				X	X		X
101	Wood Pulp Storage	15,400	Remove slab, screening based on visual inspection	TBD				X	X	X	X
102	Sanitary Waste Treatment Plant	3,900	Remove slab, screening based on visual inspection	TBD				X	X	X	X
103	Sludge Storage Pad		Remove slab, screening based on visual inspection	TBD				X	X	X	X
104	Sludge Conveyor		Remove slab, screening based on visual inspection	TBD				X	X	X	X
105	Chemical Tank Farm	660	Remove slab, screening based on visual inspection	TBD				X	X	X	X
106	Field Shops	8,200	Remove slab, screening based on visual inspection	TBD				X	X	X	
107	Operations Building	2,600	None Planned								
108	Clarifiers	47,000	Remove slab, screening based on visual inspection	TBD				X	X	X	X
109	Storage Sheds	21,000	None Planned								
110	Booster Pump House	645	None Planned								
111	Paper Roll Wrapping	8,100	Screen on 100 ft x 100 ft grid	TBD				X	X	X	
113	Pipe Storage Shed		Remove slab, screening based on visual inspection	TBD				X			X

TABLE 7-1
Summary of Mercury Vapor in Electrochemical Building
Mountain Environmental Services (March 2004)

Location or Sample Name	Sample Date	Sample Media	OSHA PEL ug/m ³	NIOSH REL ug/m ³	ACGIH TLV ug/m ³	EPA GSL ug/m ³	Result ug/m ³
PS-01	3/3/2004	air	100	50	25	0.3	12.39
ST-01	3/3/2004	air	100	50	25	0.3	3.43
ST-02	3/3/2004	air	100	50	25	0.3	3.01
ST-03	3/3/2004	air	100	50	25	0.3	2.8
ST-04	3/3/2004	air	100	50	25	0.3	3.2

Notes: 1. PEL = Permissible Exposure Limit
2. REL = Recommended Exposure Limit
3. TLV = Threshold Limit Value
4. GSL = Generic Screening Level
5. ug/m³ = micrograms per cubic meter

TABLE 7-2
Summary of Mercury Vapor in Electrochemical Building
Mountain Environmental Services (November 2004)

Location or Sample Name	Sample Date	Sample Media	OSHA PEL ug/m ³	NIOSH REL ug/m ³	ACGIH TLV ug/m ³	EPA GSL ug/m ³	Result ug/m ³
FCR-1	11/8/2004	air	100	50	25	0.3	0.97
FCR-2	11/8/2004	air	100	50	25	0.3	0.89
FCR-3	11/8/2004	air	100	50	25	0.3	1.1
FCR-4	11/8/2004	air	100	50	25	0.3	0.92

Notes: 1. PEL = Permissible Exposure Limit
2. REL = Recommended Exposure Limit
3. TLV = Threshold Limit Value
4. GSL = Generic Screening Level
5. ug/m³ = micrograms per cubic meter

TABLE 7-3
Summary of Soil Analytical Results - Mercury
Expanded Site Inspection (NCDENR, May 2005)

Sample ID	Sample Depth (feet)	Sample Date	Results (mg/kg)
FD01	1	5/7/2003	260
FD02	1	5/7/2003	240
MCB1	1	5/9/2003	0.43
MCB2	1	5/9/2003	0.47
MCB3	1	5/9/2003	0.27
MCB4	1	5/9/2003	21
MCB4B	0-4	5/9/2003	14
MCB4B	14-16	5/9/2003	0.43
MCB5	1	5/10/2003	580
MCB6	0-4	5/10/2003	12
MCB6	4-6	5/10/2003	0.12
MCB6	15-16	5/10/2003	0.2
MCB7	1	5/10/2003	430
MCB8	0-4	5/10/2003	58
MCB8	4-5	5/10/2003	160

Notes:

1. mg/kg = milligrams per kilogram
2. Bold indicates exceedance of NCDENR Soil Remediation Goal of 4.6 mg/kg for mercury.

TABLE 7-4
Field Sampling Schedule for Electrochemical Building Demo

				Sampling Methods and Number of Samples Per Area		
Location	Action	Samples and Location	Media		7471A Mercury	Mercury TCLP
Brick Walls	Core Sample	1' AFF	Solid		3	3
		5' AFF	Solid		1	1
		1' Below Roof	Solid		1	1
		Outside Brick	Solid		3	3
		Bldg 56 1' AFF	Solid		2	2
Wood Ceiling	Core Samples from wood ceiling	50' Grid	Solid		2	2
		Composite 4 Adj. Nodes				
Paint on Stuructural Steel	Scrape Samples from Steel	Composite from Interior Columns	Solid		1	
Dust and Particulate	Wipe Samples	0' to 18'	Solid		1	
		18' to 28'	Solid		1	
Debris Piles	Confirmation Sampling	1 per 100 C.Y.	Solid		10	
		TOTAL GROUNDWATER SAMPLES				
		TOTAL SOLID SAMPLES			25	12
		TOTAL SEDIMENT SAMPLES				
		WATER-MATRIX DUPLICATES (Note 3)				
		SOIL-MATRIX DUPLICATES (Note 3)				
		SEDIMENT-MATRIX DUPLICATES (Note 3)				

Notes:

1. See Field Sampling Plan for Duplicates, MS/MSD, & blanks.

Table 8-1
Summary of Soil Analytical Results
Phase 2 Environmental Site Assessment (Altamont, July 2003)

Sample ID	SS-03-M16-0.5			
Sample Date	5/30/2003			
	Total Metals (mg/kg)		TCLP Leachate Metals (mg/L)	
Parameter	SRG Standard	Result	Characteristic Hazardous Waste Criteria	Result
Arsenic	4.4	4	5.0	0.15
Barium	1080*	25	100	0.97
Cadmium	7.4	ND	1.0	ND
Chromium	44/24,000	ND	5.0	ND
Lead	400	1900	5.0	72
Mercury	4.6	0.083	0.2	ND
Selenium	78	0.72	1.0	0.027
Silver	78	ND	5.0	ND

Notes:

1. SRG Standard from NCDENR Inactive Hazardous Sites Program, August 2007.
 2. SRG Standard for chromium is for chromium VI.
 3. ND = not detected
 4. Bold indicates exceedance of applicable standard.
 5. mg/kg = milligrams per kilogram
 6. mg/L = milligrams per liter
- * NC Default SRG is not listed in the tables and was calculated using assumptions for NC Default SRGs.

Table 8-2
Site-Specific Remediation Goals for Soils at the Rifle Range

Soil Contaminant of Concern (COC)	Remediation Goals for Surface Soils (mg/kg)			Remediation Goals for Subsurface Soils		
	Direct Contact RGs	Soil-to-Groundwater RG	Overall RG	Direct Contact RGs	Soil-to-Groundwater RG	Overall RG
Lead	400	1900*	400	750	1900*	400

Notes:

RG - site-specific remediation goal

* EPA's VLEACH Model calculations have shown that the maximum detected lead concentration in soil is protective of the groundwater quality at the Rifle Range.

TABLE 8-3
Field Sampling Schedule for the Rifle Range

				Sampling Methods and Number of Samples Per Area		
Rifle Range Area	Action	Samples and Location	Media	Field Screening Samples (XRF)	SW6010B /7000 Lead	TCLP Lead
Site Assessment	Sample at 0.5', 1', and 2' Depth	25' x 25' grid pattern	Soil	54	3	3
Confirmation Sampling	Post-Excavation Sampling	1 on each side and 2 in the base	Soil		6	
Post-Treatment Sampling	Berm Material Sampling	1 per 100 CY	Soil		1	1
T & D Sampling	Stockpile Sampling	1 per 100 CY	Soil		3	3
TOTAL GROUNDWATER SAMPLES				54	13	7
TOTAL SOIL SAMPLES						
TOTAL SEDIMENT SAMPLES						
WATER-MATRIX DUPLICATES (Note 1)						
SOIL-MATRIX DUPLICATES (Note 1)						
SEDIMENT-MATRIX DUPLICATES (Note 1)						

Notes:

1. See Field Sampling Plan for Duplicates, MS/MSD, & blanks.

Appendix A
Calculations for Direct Contact Soil Remediation Goals

Arsenic - Carcinogenic Effects										
Construction Worker										
<u>Soil to Air Volatilization Factor</u>										
	Non-volatile									
<u>Common Risk Parameters</u>										
	TR = Target excess individual lifetime cancer risk					1.0E-05	(Acceptable range per NCDENR, 2007)			
	IUR = Chronic inhalation unit risk (µg/m ³) ⁻¹					4.30E-03	(EPA, 2008)			
	SFo = Oral cancer slope factor (mg/kg-day) ⁻¹					1.5	(EPA, 2008)			
	BW = Adult body weight (kg)					70	(EPA, 2008)			
	AT = Averaging time (yr)					70	(EPA, 2008)			
	EF = Exposure frequency (days/yr)					100	(20 week construction cycle)			
	ED = Exposure Duration (yr)					1	(EPA, 2001)			
	SSA = Skin Surface Area (cm ²)					3,300	(EPA, 2008)			
	ET = Exposure time (hours/day)					8	(work hours per day)			
	IRs = Soil ingestion rate (mg/day)					330	(EPA, 2001)			
	VF _{sa} = Soil to air volatilization factor (m ³ /kg)					Non-volatile				
	PEF = Particulate emission factor (m ³ /kg)					1.40E+09	(EPA, 2008)			
	ABS = Dermal Absorption factor (unitless)					0.03	(EPA, 2008)			
	GIABS = Gastrointestinal tract absorption factor (unitless)					1.00	(EPA, 2008)			
	SAR = Soil adherence rate (mg/cm ²)					0.30	(EPA, 2004) (for construction worker)			
<u>Soil Carcinogenic Effects - Construction Worker</u>										
C = TR x BW x AT x 365 / (EF x ED x ((IRs x SFo) + (BW*ET / 24 x IUR * 1000 * (1/VF _{sa} + 1/PEF)) + (SSA x ABS x SAR x SFo/GIA)										
	C = Chemical concentration in soil (mg/kg)					331				

Benzo(a)anthracene - Carcinogenic Effects											
Construction Worker											
<u>Soil to Air Volatilization Factor</u>											
<u>Common Risk Parameters</u>											
	TR = Target excess individual lifetime cancer risk					1.0E-05 (Acceptable range per NCDENR, 2007)					
	IUR = Chronic inhalation unit risk (µg/m ³) ⁻¹					1.10E-04 (EPA, 2008)					
	SFo = Oral cancer slope factor (mg/kg-day) ⁻¹					0.73 (EPA, 2008)					
	BW = Adult body weight (kg)					70 (EPA, 2008)					
	AT = Averaging time (yr)					70 (EPA, 2008)					
	EF = Exposure frequency (days/yr)					100 (20 week construction cycle)					
	ED = Exposure Duration (yr)					1 (EPA, 2001)					
	SSA = Skin Surface Area (cm ²)					3,300 (EPA, 2008)					
	ET = Exposure time (hours/day)					8 (work hours per day)					
	IRs = Soil ingestion rate (mg/day)					330 (EPA, 2001)					
	VF _{sa} = Soil to air volatilization factor (m ³ /kg)					Non-volatile					
	PEF = Particulate emission factor (m ³ /kg)					1.40E+09 (EPA, 2008)					
	ABS = Dermal Absorption factor (unitless)					0.13 (EPA, 2008)					
	GIABS = Gastrointestinal tract absorption factor (unitless)					1.00 (EPA, 2008)					
	SAR = Soil adherence rate (mg/cm ²)					0.30 (EPA, 2004) (for construction worker)					
<u>Soil Carcinogenic Effects - Construction Worker</u>											
C = TR x BW x AT x 365 / (EF x ED x ((IRs x SFo) + (BW*ET / 24 x IUR * 1000 * (1/VF _{sa} + 1/PEF)) + (SSA x ABS x SAR x SFo/GIABS)))											
	C = Chemical concentration in soil (mg/kg)					534					

Benzo(a)pyrene - Carcinogenic Effects									
Construction Worker									
Soil to Air Volatilization Factor									
	Non-volatile								
Risk Parameters									
	TR = Target excess individual lifetime cancer risk					1.0E-05 (Acceptable range per NCDENR, 2007)			
	IUR = Chronic inhalation unit risk ($\mu\text{g}/\text{m}^3$) ⁻¹					1.10E-03 (EPA, 2008)			
	SFo = Oral cancer slope factor ($\text{mg}/\text{kg}\cdot\text{day}$) ⁻¹					7.3 (EPA, 2008)			
	BW = Adult body weight (kg)					70 (EPA, 2008)			
	AT = Averaging time (yr)					70 (EPA, 2008)			
	EF = Exposure frequency (days/yr)					100 (20 week construction cycle)			
	ED = Exposure Duration (yr)					1 (EPA, 2001)			
	SSA = Skin Surface Area (cm^2)					3,300 (EPA, 2008)			
	ET = Exposure time (hours/day)					8 (work hours per day)			
	IRs = Soil ingestion rate (mg/day)					330 (EPA, 2001)			
	VF _{sa} = Soil to air volatilization factor (m^3/kg)					Non-volatile			
	PEF = Particulate emission factor (m^3/kg)					1.40E+09 (EPA, 2008)			
	ABS = Dermal Absorption factor (unitless)					0.13 (EPA, 2008)			
	GIABS = Gastrointestinal tract absorption factor (unitless)					1.00 (EPA, 2008)			
	SAR = Soil adherence rate (mg/cm^2)					0.30 (EPA, 2004) (for construction worker)			
Soil Carcinogenic Effects - Construction Worker									
C = TR x BW x AT x 365 / (EF x ED x ((IRs x SFo) + (BW*ET / 24 x IUR * 1000 * (1/VF _{sa} + 1/PEF)) + (SSA x ABS x SAR x SFo/GIABS)))									
	C = Chemical concentration in soil (mg/kg)					53			

Benzo(b)fluoranthene - Carcinogenic Effects									
Construction Worker									
Soil to Air Volatilization Factor									
	Non-volatile								
Common Risk Parameters									
	TR = Target excess individual lifetime cancer risk					1.0E-05	(Acceptable range per NCDENR, 2007)		
	IUR = Chronic inhalation unit risk ($\mu\text{g}/\text{m}^3$) ⁻¹					1.10E-04	(EPA, 2008)		
	SFo = Oral cancer slope factor ($\text{mg}/\text{kg}\cdot\text{day}$) ⁻¹					0.73	(EPA, 2008)		
	BW = Adult body weight (kg)					70	(EPA, 2008)		
	AT = Averaging time (yr)					70	(EPA, 2008)		
	EF = Exposure frequency (days/yr)					100	(20 week construction cycle)		
	ED = Exposure Duration (yr)					1	(EPA, 2001)		
	SSA = Skin Surface Area (cm^2)					3,300	(EPA, 2008)		
	ET = Exposure time (hours/day)					8	(work hours per day)		
	IRs = Soil ingestion rate (mg/day)					330	(EPA, 2001)		
	VF _{sa} = Soil to air volatilization factor (m^3/kg)					Non-volatile			
	PEF = Particulate emission factor (m^3/kg)					1.40E+09	(EPA, 2008)		
	ABS = Dermal Absorption factor (unitless)					0.13	(EPA, 2008)		
	GIABS = Gastrointestinal tract absorption factor (unitless)					1.00	(EPA, 2008)		
	SAR = Soil adherence rate (mg/cm^2)					0.30	(EPA, 2004) (for construction worker)		
Soil Carcinogenic Effects - Construction Worker									
$C = \text{TR} \times \text{BW} \times \text{AT} \times 365 / (\text{EF} \times \text{ED} \times ((\text{IRs} \times \text{SFo}) + (\text{BW} \times \text{ET} / 24 \times \text{IUR} \times 1000 \times (1/\text{VF}_{\text{sa}} + 1/\text{PEF})) + (\text{SSA} \times \text{ABS} \times \text{SAR} \times \text{SFo}/\text{GIABS})))$									
	C = Chemical concentration in soil (mg/kg)					534			

Benzo(k)fluoranthene - Carcinogenic Effects										
Construction Worker										
Soil to Air Volatilization Factor										
	Non-volatile									
Common Risk Parameters										
	TR = Target excess individual lifetime cancer risk					1.0E-05	(Acceptable range per NCDENR, 2007)			
	IUR = Chronic inhalation unit risk ($\mu\text{g}/\text{m}^3$) ⁻¹					1.10E-04	(EPA, 2008)			
	SFo = Oral cancer slope factor (mg/kg-day) ⁻¹					0.073	(EPA, 2008)			
	BW = Adult body weight (kg)					70	(EPA, 2008)			
	AT = Averaging time (yr)					70	(EPA, 2008)			
	EF = Exposure frequency (days/yr)					100	(20 week construction cycle)			
	ED = Exposure Duration (yr)					1	(EPA, 2001)			
	SSA = Skin Surface Area (cm ²)					3,300	(EPA, 2008)			
	ET = Exposure time (hours/day)					8	(work hours per day)			
	IRs = Soil ingestion rate (mg/day)					330	(EPA, 2001)			
	VF _{sa} = Soil to air volatilization factor (m ³ /kg)					Non-volatile				
	PEF = Particulate emission factor (m ³ /kg)					1.40E+09	(EPA, 2008)			
	ABS = Dermal Absorption factor (unitless)					0.13	(EPA, 2008)			
	GIABS = Gastrointestinal tract absorption factor (unitless)					1.00	(EPA, 2008)			
	SAR = Soil adherence rate (mg/cm ²)					0.30	(EPA, 2004) (for construction worker)			
Soil Carcinogenic Effects - Construction Worker										
C = TR x BW x AT x 365 / (EF x ED x ((IRs x SFo) + (BW*ET / 24 x IUR * 1000 * (1/VF _{sa} + 1/PEF)) + (SSA x ABS x SAR x SFo/GIABS)))										
	C = Chemical concentration in soil (mg/kg)					5,341				

Chromium VI - Carcinogenic Effects									
Construction Worker									
Soil to Air Volatilization Factor									
	Non-volatile								
Common Risk Parameters									
	TR = Target excess individual lifetime cancer risk					1.0E-05 (Acceptable range per NCDENR, 2007)			
	IUR = Chronic inhalation unit risk ($\mu\text{g}/\text{m}^3$) ⁻¹					1.20E-02 (EPA, 2008)			
	SFo = Oral cancer slope factor ($\text{mg}/\text{kg}\cdot\text{day}$) ⁻¹					na	(EPA, 2008)		
	BW = Adult body weight (kg)					70	(EPA, 2008)		
	AT = Averaging time (yr)					70	(EPA, 2008)		
	EF = Exposure frequency (days/yr)					100	(20 week construction cycle)		
	ED = Exposure Duration (yr)					1	(EPA, 2001)		
	SSA = Skin Surface Area (cm^2)					3,300	(EPA, 2008)		
	ET = Exposure time (hours/day)					8	(work hours per day)		
	IRs = Soil ingestion rate (mg/day)					330	(EPA, 2001)		
	VF _{sa} = Soil to air volatilization factor (m^3/kg)					Non-volatile			
	PEF = Particulate emission factor (m^3/kg)					1.40E+09	(EPA, 2008)		
	ABS = Dermal Absorption factor (unitless)					0.100	(EPA, 2008)		
	GIABS = Gastrointestinal tract absorption factor (unitless)					0.025	(EPA, 2008)		
	SAR = Soil adherence rate (mg/cm^2)					0.30	(EPA, 2004) (for construction worker)		
Soil Carcinogenic Effects - Construction Worker									
$C = \text{TR} \times \text{BW} \times \text{AT} \times 365 / (\text{EF} \times \text{ED} \times ((\text{IRs} \times \text{SFo}) + (\text{BW} \times \text{ET} / 24 \times \text{IUR} \times 1000 \times (1/\text{VF}_{\text{sa}} + 1/\text{PEF})) + (\text{SSA} \times \text{ABS} \times \text{SAR} \times \text{SFo}/\text{GIABS})))$									
	C = Chemical concentration in soil (mg/kg)					894,250			

Trichloroethene (TCE) - Carcinogenic Effects									
Construction Worker									
Soil to Air Volatilization Factor									
VF _{sa} (m ³ /kg) = 1e-4 x Q/C x (pi x Da x T) ^{0.5} /(2 x pb x Da)									
Da = (n _a ^{10/3} D _i H' + n _w ^{10/3} D _w)/n ² /(p _b K _d + n _w + n _a H')									
	Q/C = Inverse of the mean conc at the center of 0.5 acre square source					68.81	(EPA, 2008)		
	pi					3.14	(constant)		
	T = Exposure interval (s) (= 25 yrs)					950,000,000	(EPA, 2008)		
	p = Density of solids (g/cm ³)					2.65	(EPA, 2008)		
	p _b = Dry bulk soil density (g/cm ³)					1.5	(EPA, 2008)		
	D _i = Molecular diffusivity in air (cm ² /s)					6.90E-02	(EPA, 2008)		
	D _w = Diffusivity in water (cm ² /s)					1.00E-05	(EPA, 2008)		
	n = Total soil porosity (fraction)					0.43	(EPA, 2008)		
	n _w = water filled soil porosity					0.15	(EPA, 2008)		
	n _a = air filled porosity					0.28	(EPA, 2008)		
	H' = Dimensionless Henry's law constant					4.00E-01	(EPA, 2008)		
	TOC = Soil organic carbon content fraction (unitless)					0.006	(EPA, 2008)		
	Koc = Organic carbon partition coefficient (cm ³ /g)					67.7	(EPA, 2008)		
	K _d = Soil-water partition coefficient (cm ³ /g)					0.4062	(calculation, = Toc * Koc)		
	Da = Apparent diffusivity (cm ² /s)					2.46E-03	(Calculation)		
Risk Parameters									
	TR = Target excess individual lifetime cancer risk					1.0E-05	(Acceptable range per NCDENR, 2007)		
	IUR = Chronic inhalation unit risk (µg/m ³) ⁻¹					2.00E-06	(EPA, 2008)		
	SFo = Oral cancer slope factor (mg/kg-day) ⁻¹					1.30E-02	(EPA, 2008)		
	BW = Adult body weight (kg)					70	(EPA, 2008)		
	AT = Averaging time (yr)					70	(EPA, 2008)		
	EF = Exposure frequency (days/yr)					100	(20 week construction cycle)		
	ED = Exposure Duration (yr)					1	(EPA, 2001)		
	SSA = Skin Surface Area (cm ²)					3,300	(EPA, 2008)		
	ET = Exposure time (hours/day)					8	(work hours per day)		
	IRs = Soil ingestion rate (mg/day)					330	(EPA, 2001)		
	VF _{sa} = Soil to air volatilization factor (m ³ /kg)					2,526			
	PEF = Particulate emission factor (m ³ /kg)					1.40E+09	(EPA, 2008)		
	ABS = Dermal Absorption factor (unitless)					0.10	(EPA, 2008)		
	GIABS = Gastrointestinal tract absorption factor (unitless)					1.00	(EPA, 2008)		
	SAR = Soil adherence rate (mg/cm ²)					0.30	(EPA, 2004) (for construction worker)		
Soil Carcinogenic Effects - Construction Worker									
C = TR x BW x AT x 365 / (EF x ED x ((IRs x SFo) + (BW*ET / 24 x IUR * 1000 * (1/VF _{sa} + 1/PEF))) + (SSA x ABS x SAR x SFo/GIABS)))									
	C = Chemical concentration in soil (mg/kg)					7,435			

Arsenic - Non-Carcinogenic Effects										
Construction Worker										
Soil to Air Volatilization Factor										
Not applicable										
Risk Parameters										
THI	= Target hazard index					1.00E+00	(NCDENR,2007)			
RFCi	= Inhalation chronic reference concentration (mg/m ³)					3.0E-05	(EPA, 2008)			
RFD0	= Oral chronic reference dose (mg/kg-day)					3.0E-04	(EPA, 2008)			
BW	= Adult body weight (kg)					70	(EPA, 2008)			
AT	= Averaging time (yr)					1	(EPA, 2008)			
EF	= Exposure frequency (days/yr)					100	(20 weeks construction)			
ED	= Exposure Duration (yr)					1	(EPA, 2001)			
SSA	= Skin Surface Area (cm ²)					3,300	(EPA, 2008)			
ET	= Exposure time (hours/day)					8	(work hours per day)			
IRs	= Soil ingestion rate (mg/day)					330	(EPA, 2001)			
VF _{sa}	= Soil to air volatilization factor (m ³ /kg)					Non-volatile				
PEF	= Particulate emission factor (m ³ /kg)					1.40E+09	(EPA, 2008)			
ABS	= Dermal Absorption factor (unitless)					0.03	(EPA, 2008)			
GIABS	= Gastrointestinal tract absorption factor (unitless)					1.00	(EPA, 2008)			
SAR	= Soil adherence rate (mg/cm ²)					0.30	(EPA, 2004) (for construction worker)			
Soil Non-Carcinogenic Effects - Construction Worker										
C = THI x BW x AT x 365 / (EF x ED x ((IRs / RFD0) + (BW x ET / 24 x (1/VF _{sa} + 1/PEF) / RFCi) + (SSA x ABS x SAR / (RFD0										
C	= Chemical concentration in soil (mg/kg)					213				

Chromium III

Chromium III - Non-Carcinogenic Effects										
Construction Worker										
Soil to Air Volatilization Factor										
Not applicable										
Risk Parameters										
THI	= Target hazard index				1.00E+00	(NCDENR,2007)				
RFCi	= Inhalation chronic reference concentration (mg/m ³)				NA	(EPA, 2008)				
RFD _o	= Oral chronic reference dose (mg/kg-day)				1.5	(EPA, 2008)				
BW	= Adult body weight (kg)				70	(EPA, 2008)				
AT	= Averaging time (yr)				1	(EPA, 2008)				
EF	= Exposure frequency (days/yr)				100	(20 weeks construction)				
ED	= Exposure Duration (yr)				1	(EPA, 2001)				
SSA	= Skin Surface Area (cm ²)				3,300	(EPA, 2008)				
ET	= Exposure time (hours/day)				8	(work hours per day)				
IR _s	= Soil ingestion rate (mg/day)				330	(EPA, 2001)				
VF _{sa}	= Soil to air volatilization factor (m ³ /kg)				Non-volatile					
PEF	= Particulate emission factor (m ³ /kg)				1.40E+09	(EPA, 2008)				
ABS	= Dermal Absorption factor (unitless)				-	(EPA, 2008)				
GIABS	= Gastrointestinal tract absorption factor (unitless)				0.010	(EPA, 2008)				
SAR	= Soil adherence rate (mg/cm ²)				0.30	(EPA, 2004) (for construction worker)				
Soil Non-Carcinogenic Effects - Construction Worker										
$C = \text{THI} \times \text{BW} \times \text{AT} \times 365 / (\text{EF} \times \text{ED} \times ((\text{IR}_s / \text{RFD}_o) + (\text{BW} \times \text{ET} / 24 \times (1/\text{VF}_{sa} + 1/\text{PEF}) / \text{RFCi}) + (\text{SSA} \times \text{ABS} \times \text{SAR} / (\text{RFD}_o)))$										
C	= Chemical concentration in soil (mg/kg)				1,000,000					

Chromium VI - Non-Carcinogenic Effects									
Construction Worker									
Soil to Air Volatilization Factor									
Not applicable									
Risk Parameters									
THI = Target hazard index				1.00E+00		(NCDENR,2007)			
RFCi = Inhalation chronic reference concentration (mg/m ³)				1.0E-04		(EPA, 2008)			
RFD _o = Oral chronic reference dose (mg/kg-day)				3.0E-03		(EPA, 2008)			
BW = Adult body weight (kg)				70		(EPA, 2008)			
AT = Averaging time (yr)				1		(EPA, 2008)			
EF = Exposure frequency (days/yr)				100		(20 weeks construction)			
ED = Exposure Duration (yr)				1		(EPA, 2001)			
SSA = Skin Surface Area (cm ²)				3,300		(EPA, 2008)			
ET = Exposure time (hours/day)				8		(work hours per day)			
IRs = Soil ingestion rate (mg/day)				330		(EPA, 2001)			
VF _{sa} = Soil to air volatilization factor (m ³ /kg)				Non-volatile					
PEF = Particulate emission factor (m ³ /kg)				1.40E+09		(EPA, 2008)			
ABS = Dermal Absorption factor (unitless)				-		(EPA, 2008)			
GIABS = Gastrointestinal tract absorption factor (unitless)				0.025		(EPA, 2008)			
SAR = Soil adherence rate (mg/cm ²)				0.30		(EPA, 2004) (for construction worker)			
Soil Non-Carcinogenic Effects - Construction Worker									
C = THI x BW x AT x 365 / (EF x ED x ((IRs / RFD _o) + (BW x ET / 24 x (1/VF _{sa} + 1/PEF) / RFCi) + (SSA x ABS x SAR / (RFD _o x GIABS)))									
C = Chemical concentration in soil (mg/kg)				2,319					

Mercury and Compounds - Non-Carcinogenic Effects									
Construction Worker									
Soil to Air Volatilization Factor									
$VF_{sa} (m^3/kg) = 1e-4 \times Q/C \times (\pi \times Da \times T)^{0.5} / (2 \times \pi b \times Da)$									
$Da = (n_a^{10/3} D_i H' + n_w^{10/3} D_w) / n^2 / (\pi b K_d + n_w + n_a H')$									
Q/C = Inverse of the mean conc at the center of 0.5 acre square source					68.81	(EPA, 2008)			
pi					3.14	(constant)			
T = Exposure interval (s) (= 25 yrs)					950,000,000	(EPA, 2008)			
p = Density of solids (g/cm ³)					2.65	(EPA, 2008)			
p _b = Dry bulk soil density (g/cm ³)					1.5	(EPA, 2008)			
D _i = Molecular diffusivity (cm ² /s)					7.10E-02	(EPA, 2008)			
D _w = Diffusivity in water (cm ² /s)					3.00E-05	(EPA, 2008)			
n = Total soil porosity (fraction)					0.43	(EPA, 2008)			
n _w = water filled soil porosity					0.15	(EPA, 2008)			
n _a = air filled porosity					0.28	(EPA, 2008)			
H' = Dimensionless Henry's law constant					4.70E-01	(EPA, 2008)			
K _d = Soil-water partition coefficient (cm ³ /g)					322	(Battelle, 1989)			
Da = Apparent diffusivity (cm ² /s)					5.36E-06	(Calculation)			
VF _{sa} =					5.41E+04	m ³ /kg			
Risk Parameters									
THI = Target hazard index					1.00E+00	(NCDENR,2007)			
RFCi = Inhalation chronic reference concentration (mg/m ³)					NA	(EPA, 2008)			
RFD _o = Oral chronic reference dose (mg/kg-day)					3.0E-04	(EPA, 2008)			
BW = Adult body weight (kg)					70	(EPA, 2008)			
AT = Averaging time (yr)					1	(EPA, 2008)			
EF = Exposure frequency (days/yr)					100	(20 week construction cycle)			
ED = Exposure Duration (yr)					1	(EPA, 2001)			
SSA = Skin Surface Area (cm ²)					3,300	(EPA, 2008)			
ET = Exposure time (hours/day)					8	(work hours per day)			
IR _s = Soil ingestion rate (mg/day)					330	(EPA, 2001)			
VF _{sa} = Soil to air volatilization factor (m ³ /kg)					54,091				
PEF = Particulate emission factor (m ³ /kg)					1.40E+09	(EPA, 2008)			
ABS = Dermal Absorption factor (unitless)					-	(EPA, 2008)			
GIABS = Gastrointestinal tract absorption factor (unitless)					1.00	(EPA, 2008)			
SAR = Soil adherence rate (mg/cm ²)					0.30	(EPA, 2004) (for construction worker)			
Soil Non-Carcinogenic Effects - Construction Worker									
$C = THI \times BW \times AT \times 365 / (EF \times ED \times ((IR_s / RFD_o) + (BW \times ET / 24 \times (1/VF_{sa} + 1/PEF) / RFCi) + (SSA \times ABS \times SAR / (RFD_o \times GIABS))))$									
C = Chemical concentration in soil (mg/kg)					232				

Arsenic - Carcinogenic Effects									
Resident									
Soil to Air Volatilization Factor									
	Non-volatile								
Common Risk Parameters									
	TR = Target excess individual lifetime cancer risk				1.0E-05	(Acceptable range per NCDENR, 2007)			
	IUR = Chronic inhalation unit risk (µg/m ³) ⁻¹				4.30E-03	(EPA, 2008)			
	SFo = Oral cancer slope factor (mg/kg-day) ⁻¹				1.5	(EPA, 2008)			
	AT = Averaging time (yr)				70	(EPA, 2008)			
	EF = Exposure frequency (days/yr)				350	(EPA, 2008)			
	SFS adj = Age-adjusted dermal factor, soils (mg-yr/[kg-d])				361	(EPA, 2008)			
	IFSadj = Age-adjusted ingestion factor, soils (mg-yr/[kg-d])				114	(EPA, 2008)			
	ED = Exposure Duration (yr)				30	(EPA, 2008)			
	ET = Exposure Time (hrs/day)				24	(EPA, 2008)			
	VF _{sa} = Soil to air volatilization factor (m ³ /kg)				Non-volatile				
	PEF = Particulate emission factor (m ³ /kg)				1.40E+09	(EPA, 2008)			
	ABS = Dermal Absorption factor (unitless)				0.03	(EPA, 2008)			
	GIABS = Gastrointestinal tract absorption factor (unitless)				1.00	(EPA, 2008)			
Soil Carcinogenic Effects - Resident									
C = TR x AT x 365 / (EF x ((IFSadj x SFo) + (ED x (ET / 24) * (1/VF _{sa} + 1/PEF) x IUR x 1000) + (DFSadj x ABS x Sfo/GIABS)))									
	C = Chemical concentration in soil (mg/kg)				3.9				

Benzo(a)pyrene - Carcinogenic Effects									
Resident									
<u>Soil to Air Volatilization Factor</u>									
	Non-volatile								
<u>Common Risk Parameters</u>									
	TR = Target excess individual lifetime cancer risk					1.0E-05 (Acceptable range per NCDENR, 2007)			
	IUR = Chronic inhalation unit risk (µg/m ³) ⁻¹					1.10E-04 (EPA, 2008)			
	SFo = Oral cancer slope factor (mg/kg-day) ⁻¹					7.3 (EPA, 2008)			
	AT = Averaging time (yr)					70 (EPA, 2008)			
	EF = Exposure frequency (days/yr)					350 (EPA, 2008)			
	SFS adj = Age-adjusted dermal factor, soils (mg-yr/[kg-d])					361 (EPA, 2008)			
	IFSadj = Age-adjusted ingestion factor, soils (mg-yr/[kg-d])					114 (EPA, 2008)			
	ED = Exposure Duration (yr)					30 (EPA, 2008)			
	ET = Exposure Time (hrs/day)					24 (EPA, 2008)			
	VF _{sa} = Soil to air volatilization factor (m ³ /kg)					Non-volatile			
	PEF = Particulate emission factor (m ³ /kg)					1.40E+09 (EPA, 2008)			
	ABS = Dermal Absorption factor (unitless)					0.13 (EPA, 2008)			
	GIABS = Gastrointestinal tract absorption factor (unitless)					1.00 (EPA, 2008)			
<u>Soil Carcinogenic Effects - Resident</u>									
C = TR x AT x 365 / (EF x ((IFSadj x SFo) + (ED x (ET / 24) * (1/VF _{sa} + 1/PEF) x IUR x 1000) + (DFSadj x ABS x Sfo/GIABS)))									
	C = Chemical concentration in soil (mg/kg)					0.62			

Benzo(k)fluoranthene - Carcinogenic Effects									
Resident									
<u>Soil to Air Volatilization Factor</u>									
	Non-volatile								
<u>Common Risk Parameters</u>									
	TR = Target excess individual lifetime cancer risk				1.0E-05		(Acceptable range per NCDENR, 2007)		
	IUR = Chronic inhalation unit risk ($\mu\text{g}/\text{m}^3$) ⁻¹				1.10E-04		(EPA, 2008)		
	SFo = Oral cancer slope factor ($\text{mg}/\text{kg}\cdot\text{day}$) ⁻¹				0.073		(EPA, 2008)		
	AT = Averaging time (yr)				70		(EPA, 2008)		
	EF = Exposure frequency (days/yr)				350		(EPA, 2008)		
	SFS adj = Age-adjusted dermal factor, soils ($\text{mg}\cdot\text{yr}/[\text{kg}\cdot\text{d}]$)				361		(EPA, 2008)		
	IFSadj = Age-adjusted ingestion factor, soils ($\text{mg}\cdot\text{yr}/[\text{kg}\cdot\text{d}]$)				114		(EPA, 2008)		
	ED = Exposure Duration (yr)				30		(EPA, 2008)		
	ET = Exposure Time (hrs/day)				24		(EPA, 2008)		
	VF _{sa} = Soil to air volatilization factor (m^3/kg)				Non-volatile				
	PEF = Particulate emission factor (m^3/kg)				1.40E+09		(EPA, 2008)		
	ABS = Dermal Absorption factor (unitless)				0.13		(EPA, 2008)		
	GIABS = Gastrointestinal tract absorption factor (unitless)				1.00		(EPA, 2008)		
<u>Soil Carcinogenic Effects - Resident</u>									
$C = \text{TR} \times \text{AT} \times 365 / ((\text{EF} \times ((\text{IFSadj} \times \text{SFo}) + (\text{ED} \times (\text{ET} / 24) * (1/\text{VF}_{\text{sa}} + 1/\text{PEF}) \times \text{IUR} \times 1000) + (\text{DFSadj} \times \text{ABS} \times \text{Sfo}/\text{GIABS}))))$									
	C = Chemical concentration in soil (mg/kg)				62.1				

Chromium VI - Carcinogenic Effects									
Resident									
<u>Soil to Air Volatilization Factor</u>									
	Non-volatile								
<u>Common Risk Parameters</u>									
	TR = Target excess individual lifetime cancer risk				1.0E-05	(Acceptable range per NCDENR, 2007)			
	IUR = Chronic inhalation unit risk (µg/m ³) ⁻¹				1.20E-02	(EPA, 2008)			
	SFo = Oral cancer slope factor (mg/kg-day) ⁻¹				NA	(EPA, 2008)			
	AT = Averaging time (yr)				70	(EPA, 2008)			
	EF = Exposure frequency (days/yr)				350	(EPA, 2008)			
	SFS adj = Age-adjusted dermal factor, soils (mg-yr/[kg-d])				361	(EPA, 2008)			
	IFSadj = Age-adjusted ingestion factor, soils (mg-yr/[kg-d])				114	(EPA, 2008)			
	ED = Exposure Duration (yr)				30	(EPA, 2008)			
	ET = Exposure Time (hrs/day)				24	(EPA, 2008)			
	VF _{sa} = Soil to air volatilization factor (m ³ /kg)				Non-volatile				
	PEF = Particulate emission factor (m ³ /kg)				1.40E+09	(EPA, 2008)			
	ABS = Dermal Absorption factor (unitless)				-	(EPA, 2008)			
	GIABS = Gastrointestinal tract absorption factor (unitless)				0.03	(EPA, 2008)			
<u>Soil Carcinogenic Effects - Resident</u>									
C = TR x AT x 365 / (EF x ((IFSadj x SFo) + (ED x (ET / 24) * (1/VF _{sa} + 1/PEF) x IUR x 1000) + (DFSadj x ABS x Sfo/GIABS)))									
	C = Chemical concentration in soil (mg/kg)				2839				

Trichloroethene (TCE) - Carcinogenic Effects									
Resident									
Soil to Air Volatilization Factor									
VF _{sa} (m ³ /kg) = 1e-4 x Q/C x (pi x Da x T) ^{0.5} /(2 x pb x Da)									
Da = (n _a ^{10/3} D _i H' + n _w ^{10/3} D _w)/n ² /(p _b K _d + n _w + n _a H')									
	Q/C = Inverse of the mean conc at the center of 0.5 acre square source				68.81	(EPA, 2008)			
	pi				3.14	(constant)			
	T = Exposure interval (s) (= 25 yrs)				950,000,000	(EPA, 2008)			
	p = Density of solids (g/cm ³)				2.65	(EPA, 2008)			
	p _b = Dry bulk soil density (g/cm ³)				1.5	(EPA, 2008)			
	D _i = Molecular diffusivity in air (cm ² /s)				6.90E-02	(EPA, 2008)			
	D _w = Diffusivity in water (cm ² /s)				1.00E-05	(EPA, 2008)			
	n = Total soil porosity (fraction)				0.43	(EPA, 2008)			
	n _w = water filled soil porosity				0.15	(EPA, 2008)			
	n _a = air filled porosity				0.28	(EPA, 2008)			
	H' = Dimensionless Henry's law constant				4.00E-01	(EPA, 2008)			
	TOC = Soil organic carbon content fraction (unitless)				0.006	(EPA, 2008)			
	Koc = Organic carbon partition coefficient (cm ³ /g)				67.7	(EPA, 2008)			
	K _d = Soil-water partition coefficient (cm ³ /g)				0.4062	(calculation, = Toc * Koc)			
	Da = Apparent diffusivity (cm ² /s)				2.46E-03	(Calculation)			
	VF _{sa} =	2.53E+03	m ³ /kg						
Common Risk Parameters									
	TR = Target excess individual lifetime cancer risk				1.0E-05	(Acceptable range per NCDENR, 2007)			
	IUR = Chronic inhalation unit risk (µg/m ³) ⁻¹				2.00E-06	(EPA, 2008)			
	SFO = Oral cancer slope factor (mg/kg-day) ⁻¹				1.30E-02	(EPA, 2008)			
	AT = Averaging time (yr)				70	(EPA, 2008)			
	EF = Exposure frequency (days/yr)				350	(EPA, 2008)			
	SFS adj = Age-adjusted dermal factor, soils (mg-yr/[kg-d])				361	(EPA, 2008)			
	IFSadj = Age-adjusted ingestion factor, soils (mg-yr/[kg-d])				114	(EPA, 2008)			
	ED = Exposure Duration (yr)				30	(EPA, 2008)			
	ET = Exposure Time (hrs/day)				24	(EPA, 2008)			
	VF _{sa} = Soil to air volatilization factor (m ³ /kg)				2.53E+03				
	PEF = Particulate emission factor (m ³ /kg)				1.40E+09	(EPA, 2008)			
	ABS = Dermal Absorption factor (unitless)				0.10	(EPA, 2008)			
	GIABS = Gastrointestinal tract absorption factor (unitless)				1.00	(EPA, 2008)			
Soil Carcinogenic Effects - Resident									
C = TR x AT x 365 / (EF x ((IFSadj x SFO) + (ED x (ET / 24) * (1/VF _{sa} + 1/PEF) x IUR x 1000) + (DFSadj x ABS x Sfo/GIABS)))									
	C	= Chemical concentration in soil (mg/kg)			28				

Arsenic - Non-Carcinogenic Effects									
Resident									
Soil to Air Volatilization Factor									
	Not applicable								
Risk Parameters									
	THI = Target hazard index					1.00E+00	(NCDENR,2007)		
	RFCi = Inhalation chronic reference concentration (mg/m ³)					3.0E-05	(EPA, 2008)		
	RFD0 = Oral chronic reference dose (mg/kg-day)					3.0E-04	(EPA, 2008)		
	BWc = Child body weight (kg)					15	(EPA, 2008)		
	AT = Averaging time (yr)					6	(EPA, 2008)		
	EF = Exposure frequency (days/yr)					350	(EPA, 2008)		
	EDc = Exposure Duration, Child (yr)					6	(EPA, 2008)		
	ETc = Exposure Time, child (hrs/day)					24	(EPA, 2008)		
	SSAc = Exposed Skin Surface Area, child (cm ²)					2,800	(EPA, 2008)		
	IRAc = Inhalation rate, child (m ³ /day)					10	(EPA, 2008)		
	IRSc = Soil ingestion rate,child (mg/day)					200	(EPA, 2008)		
	VF _{sa} = Soil to air volatilization factor (m ³ /kg)					Non-volatile			
	PEF = Particulate emission factor (m ³ /kg)					1.40E+09	(EPA, 2008)		
	ABS = Dermal Absorption factor (unitless)					0.03	(EPA, 2008)		
	GIABS = Gastrointestinal tract absorption factor (unitless)					1.00	(EPA, 2008)		
	AFc = Soil adherence rate, child (mg/cm ²)					0.20	(EPA, 2008)		
Soil Non-Carcinogenic Effects - Residents									
C = THI x BW x AT x 365 / (EF x EDc x ((IRSc / RFD0) + (BWc x ETc / 24 x (1/VF _{sa} + 1/PEF) / RFCi) + (SSAc x ABS x AFc / (RFD0 x GIABS))))									
	C = Chemical concentration in soil (mg/kg)					21.6			

Chromium III

Chromium III - Non-Carcinogenic Effects												
Resident												
<u>Soil to Air Volatilization Factor</u>												
	Not applicable											
<u>Risk Parameters</u>												
	THI = Target hazard index					1.00E+00	(NCDENR,2007)					
	RFCi = Inhalation chronic reference concentration (mg/m ³)					NA	(EPA, 2008)					
	RFD0 = Oral chronic reference dose (mg/kg-day)					1.5E+00	(EPA, 2008)					
	BWc = Child body weight (kg)					15	(EPA, 2008)					
	AT = Averaging time (yr)					6	(EPA, 2008)					
	EF = Exposure frequency (days/yr)					350	(EPA, 2008)					
	EDc = Exposure Duration, Child (yr)					6	(EPA, 2008)					
	Etc = Exposure Time, child (hrs/day)					24	(EPA, 2008)					
	SSAc = Exposed Skin Surface Area, child (cm ²)					2,800	(EPA, 2008)					
	IRAc = Inhalation rate, child (m ³ /day)					10	(EPA, 2008)					
	IRSc = Soil ingestion rate,child (mg/day)					200	(EPA, 2008)					
	VF _{sa} = Soil to air volatilization factor (m ³ /kg)					Non-volatile						
	PEF = Particulate emission factor (m ³ /kg)					1.40E+09	(EPA, 2008)					
	ABS = Dermal Absorption factor (unitless)					-	(EPA, 2008)					
	GIABS = Gastrointestinal tract absorption factor (unitless)					0.013	(EPA, 2008)					
	AFc = Soil adherence rate, child (mg/cm ²)					0.20	(EPA, 2008)					
<u>Soil Non-Carcinogenic Effects - Residents</u>												
C = THI x BW x AT x 365 / (EF x EDc x ((IRSc / RFD0) + (BWc x ETc / 24 x (1/VF _{sa} + 1/PEF) / RFCi) + (SSAc x ABS x AFc / (RFD0 x GIABS))))												
	C = Chemical concentration in soil (mg/kg)					117,321						

Chromium VI - Non-Carcinogenic Effects												
Resident												
Soil to Air Volatilization Factor												
	Not applicable											
Risk Parameters												
	THI = Target hazard index					1.00E+00 (NCDENR,2007)						
	RFCi = Inhalation chronic reference concentration (mg/m ³)					1.0E-04 (EPA, 2008)						
	RFD0 = Oral chronic reference dose (mg/kg-day)					3.0E-03 (EPA, 2008)						
	BWc = Child body weight (kg)					15 (EPA, 2008)						
	AT = Averaging time (yr)					6 (EPA, 2008)						
	EF = Exposure frequency (days/yr)					350 (EPA, 2008)						
	EDc = Exposure Duration, Child (yr)					6 (EPA, 2008)						
	Etc = Exposure Time, child (hrs/day)					24 (EPA, 2008)						
	SSAc = Exposed Skin Surface Area, child (cm ²)					2,800 (EPA, 2008)						
	IRAc = Inhalation rate, child (m ³ /day)					10 (EPA, 2008)						
	IRSc = Soil ingestion rate,child (mg/day)					200 (EPA, 2008)						
	VF _{sa} = Soil to air volatilization factor (m ³ /kg)					Non-volatile						
	PEF = Particulate emission factor (m ³ /kg)					1.40E+09 (EPA, 2008)						
	ABS = Dermal Absorption factor (unitless)					- (EPA, 2008)						
	GIABS = Gastrointestinal tract absorption factor (unitless)					0.025 (EPA, 2008)						
	AFc = Soil adherence rate, child (mg/cm ²)					0.20 (EPA, 2008)						
Soil Non-Carcinogenic Effects - Residents												
C = THI x BW x AT x 365 / (EF x EDc x ((IRSc / RFD0) + (BWc x ETc / 24 x (1/VF _{sa} + 1/PEF) / RFCi) + (SSAc x ABS x AFc / (RFD0 x GIABS))))												
	C = Chemical concentration in soil (mg/kg)					234						

Mercury and Compounds - Non-Carcinogenic Effects									
Resident									
Soil to Air Volatilization Factor									
$VF_{sa} (m^3/kg) = 1e-4 \times Q/C \times (pi \times Da \times T)^{0.5} / (2 \times pb \times Da)$									
$Da = (n_a^{10/3} D_i H' + n_w^{10/3} D_w) / n^2 / (p_b K_d + n_w + n_a H')$									
Q/C = Inverse of the mean conc at the center of 0.5 acre square source						68.81	(EPA, 2008)		
pi						3.14	(constant)		
T = Exposure interval (s) (= 25 yrs)						950,000,000	(EPA, 2008)		
p = Density of solids (g/cm ³)						2.65	(EPA, 2008)		
p _b = Dry bulk soil density (g/cm ³)						1.5	(EPA, 2008)		
D _i = Molecular diffusivity (cm ² /s)						7.10E-02	(EPA, 2008)		
D _w = Diffusivity in water (cm ² /s)						3.00E-05	(EPA, 2008)		
n = Total soil porosity (fraction)						0.43	(EPA, 2008)		
n _w = water filled soil porosity						0.15	(EPA, 2008)		
n _a = air filled porosity						0.28	(EPA, 2008)		
H' = Dimensionless Henry's law constant						4.70E-01	(EPA, 2008)		
K _d = Soil-water partition coefficient (cm ³ /g)						322	(Battelle, 1989)		
Da = Apparent diffusivity (cm ² /s)						5.36E-06	(Calculation)		
VF _{sa} =						5.41E+04	m ³ /kg		
Risk Parameters									
THI = Target hazard index						1.00E+00	(NCDENR,2007)		
RFCi = Inhalation chronic reference concentration (mg/m ³)						NA	(EPA, 2008)		
RFD _o = Oral chronic reference dose (mg/kg-day)						3.0E-04	(EPA, 2008)		
BW _c = Child body weight (kg)						15	(EPA, 2008)		
AT = Averaging time (yr)						6	(EPA, 2008)		
EF = Exposure frequency (days/yr)						350	(EPA, 2008)		
ED _c = Exposure Duration, Child (yr)						6	(EPA, 2008)		
E _t = Exposure Time, child (hrs/day)						24	(EPA, 2008)		
SSA _c = Exposed Skin Surface Area, child (cm ²)						2,800	(EPA, 2008)		
IRA _c = Inhalation rate, child (m ³ /day)						10	(EPA, 2008)		
IRSc = Soil ingestion rate, child (mg/day)						200	(EPA, 2008)		
VF _{sa} = Soil to air volatilization factor (m ³ /kg)						54,091			
PEF = Particulate emission factor (m ³ /kg)						1.40E+09	(EPA, 2008)		
ABS = Dermal Absorption factor (unitless)						-	(EPA, 2008)		
GIABS = Gastrointestinal tract absorption factor (unitless)						1.00	(EPA, 2008)		
AF _c = Soil adherence rate, child (mg/cm ²)						0.20	(EPA, 2008)		
Soil Non-Carcinogenic Effects - Residents									
$C = THI \times BW \times AT \times 365 / (EF \times ED_c \times ((IRSc / RFD_o) + (BW_c \times E_{t_c} / 24 \times (1/VF_{sa} + 1/PEF) / RFC_i) + (SSA_c \times ABS \times AF_c / (RFD_o \times GIABS))))$									
C = Chemical concentration in soil (mg/kg)						23.5			

Appendix B
Olin Disposal Area Photos



TRENCH 11



CONCRETE DEBRIS IN TRENCH 3



DEBRIS FOUND A THE END OF TRENCH 2



NEAR DAVIDSON RIVER



OBJECT LOCATION IN TRENCH 3



TRENCH 1 PROFILE





TRENCH 2



TRENCH 3 LAYOUT



TRENCH 3 LOCATION



TRENCH 3 - POSSIBLE SORENSEN CELL



TRENCH 3



TRENCH 11 DEBRIS



TRENCH 11 SPOILS PILE



TRENCH 11 - COAL CLINKERS



TRENCH 11 - PLASTIC DEBRIS

Appendix C
Soil Boring Logs and Well Completion Data,
MW-03 and MW-13

WELL CONSTRUCTION RECORD

North Carolina – Department of Environmental and Natural Resources – Division of Water Quality – Groundwater Section

WELL CONTRACTOR (INDIVIDUAL) NAME (print) BILL LAMBERT CERTIFICATION # 2437

WELL CONTRACTOR COMPANY NAME GEOLOGIC EXPLORATION, INC. PHONE # (704) 872-7686

STATE WELL CONSTRUCTION PERMIT# _____ ASSOCIATED WQ PERMIT# _____
(if applicable) (if applicable)

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐
Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, list Use _____

2. WELL LOCATION:

Nearest Town: PISGAH FOREST County TRANSYLVANIA

1 ECUSTA ROAD

(Street Name, Numbers, Community, Subdivision, Lot No., Zip Code)

Topographic/Land setting
☐ Ridge ☐ Slope ☐ Valley ☒ Flat
(check appropriate box)
Latitude/longitude of well location _____

3. OWNER: RFS ECUSTA

Address 1 ECUSTA ROAD

(Street or Route No.)

PISGAH FOREST NC 28768

City or Town State Zip Code

()

Area Code - Phone Number

(degrees/minutes/seconds)
Latitude/longitude source: ☐ GPS ☐ Topographic map
(check box)

DEPTH

From	To
0.0	25.0
25.0	103.0

DRILLING LOG

Formation Description

Gray/black silty clay/gravel

Brown saprilite

4. DATE DRILLED 05/28-06/03/03

5. TOTAL DEPTH: 103.0 FEET

6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒

7. STATIC WATER LEVEL Below Top of Casing: 20.0 FT.
(Use "+" if Above Top of Casing)

8. TOP OF CASING IS 2.5 FT. Above Land Surface*

*Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118.

9. YIELD (gpm): N/A METHOD OF TEST N/A

10. WATER ZONES (depth): N/A

11. DISINFECTION: Type N/A Amount _____

12. CASING: Wall Thickness

From	To	Depth	Diameter	or Weight/Ft.	Material
From	0.0	To	98.0	Ft.	2 INCH SCH 40 PVC
From		To		Ft.	
From		To		Ft.	

13. Grout: Depth Material Method

From	To	Depth	Material	Method	
From	0.0	To	80.0	Ft.	Portland Bentonite Slurry
From		To		Ft.	

14. SCREEN: Depth Diameter Slot Size Material

From	To	Depth	Diameter	Slot Size	Material
From	98.0	To	103.0	Ft.	2.0 in. .010 in PVC
From		To		Ft.	

15. SAND/GRAVEL PACK: Depth Size Material

From	To	Depth	Size	Material	
From	90.0	To	103.0	Ft.	20-40 FINE SILICA SAND
From		To		Ft.	

16. REMARKS: MW-03-K9 BENTONITE SEAL FROM 80.0 TO 90.0 FEET

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER

Bill Lambert

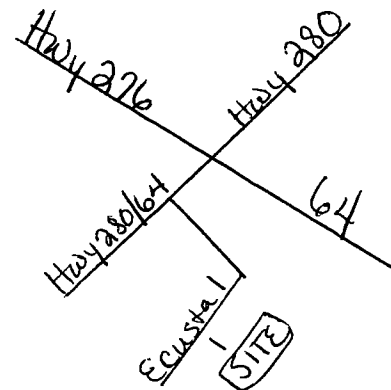
SIGNATURE OF PERSON CONSTRUCTING THE WELL

6/4/03

DATE

Submit the original to the Division of Water Quality, Groundwater Section, 1636 Mail Service Center – Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

GW-1 REV. 07/2001





Ecusta Paper Mill
Ecusta Road
Pisgah Forest, North Carolina

WELL CONSTRUCTION LOG

Project Name: **Ecusta Paper Mill**
 Client: **Transylvania County**
 Location: **Pisgah Forest, North Carolina**
 Drilling Company: **American Environmental Drilling**
 Drill Rig: **Hollow-stem Auger**

Project No.: **123445**
 Boring No.: **MW13**
 Date: **20-Feb-07**

Well Construct	USCS	Depth (feet)	Description
	SM	0.0	0-5' Silty sand - dark brown to black, some fill material gravel
		5.0	
	OL	5.0	5'-14' Silty clay - black, moderately plastic, some large qtz. pebbles, subrounded; piece of rebar, and brick chips come up.
		10.0	
		10.0	
	GC	15.0	14' - 18' Silt, sand, and gravel - moist (wet at 16'), green, with pebble-to-cobble sized gravel, gneiss and qtz.
		20.0	
		25.0	
		30.0	
		35.0	
		40.0	
		45.0	
		50.0	
<div style="text-align: center;">LEGEND</div> <div style="display: flex; justify-content: space-between;"> <div style="width: 20px; height: 10px; background-color: yellow; border: 1px solid black;"></div> Sand Pack <div style="width: 20px; height: 10px; background-color: lightgray; border: 1px solid black;"></div> Well Screen <div style="width: 20px; height: 10px; background-color: teal; border: 1px solid black;"></div> Bentonite Seal <div style="width: 20px; height: 10px; background-color: gray; border: 1px solid black;"></div> Concrete Seal </div>			

Appendix D
Olin Disposal Area Investigation Report and Addendum



**OLIN AREAS
INVESTIGATION REPORT
PISGAH FOREST, NC**

**Prepared By:
Shaw Environmental, Inc.
Greenville, SC**

**January 2008
Revision 0**

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TABLES

- 1 Detected analytes for soil samples from the Sorensen Cell Area**
- 2 Detected metal analytes for soil samples from the Film Waste Area**
- 3 Detected SVOC analytes for soil samples from the Film Waste Area**

EXHIBITS

- 1 FIGURES AND TRENCH CROSS-SECTIONS**
- 2 LABORATORY ANALYTICAL DATA**

BACKGROUND/PURPOSE

This report presents the results of the investigation performed during December 2007 in response to anecdotal information concerning possible contaminants deposited within the Ecusta Paper Mill property boundary, Brevard, NC. Material was allegedly deposited in this area from the late 1940's to 1956. According to a former plant employee, cracked concrete from the Sorensen cells was buried on the western mill property between the clarifiers and carbonate plant. The Sorensen cells utilized mercury to provide caustic and chlorine for the production of paper. This fill was described as being located north of an old road. The employee also described a fill area south of the old road that contained buried film material. This film material was waste from the manufacture of cellulose film at another part of the Ecusta plant. According to the employee, the area of film deposit was south of road to the Waste Treatment facility, Clarifier #1.

The scope of the investigation of this area was two-fold. The first objective was to ascertain boundaries of the waste fill(s), if any. This was done by exploratory trenching along a grid pattern and offsetting the trenches to detail the extent of the waste boundary, laterally and vertically. The second objective was to determine the compounds of concern by sampling native clean soil/fill, non-native fill, concrete, and film waste. The results of the investigation are detailed within this report.

METHODS

Both test pits and trenches were used to make observations in selected areas described above. Locations of test pits and trenches were determined by Mr. Terry Everley of Renova. The excavations were made using a rubber-tired backhoe. The width of the trenching averaged about 2.5 feet. The depth of the test pits and trenching excavations was from six (6) to twelve (12) feet below ground surface (bgs).

The following excavations were performed:

- On December 18, 2007, trenches 1, 1A, 1B, and 2, were excavated to investigate the Sorensen Cell Area. These trenches were observed for characteristic debris and extent. Soil samples were taken along the length of each trench. Trench 1 was started in an area that was thought to be the center of the debris fill.
- On December 19, 2007, the grid was continued for characterization of the Sorensen cell debris, located north of the old road. Trenches 2A, 3, 4, 5, 6, and 7 were excavated. Trench 3 extended 76 feet from a fuel oil berm to a current dirt road. Soil samples were taken along the length of each trench.
- On December 20, 2007, investigation focused on the Film Waste Area, south of the old road. Trenches 11, 11A, 12, 13, and Test Pits 14, 15, and 16 were excavated. Trench 11 was started along a fenced area (east), which was assumed to be clean fill. This trench was extended to the suspected Film Waste Area to get

an idea of film waste boundary. Soil samples were taken along the length of each trench and each test pit.

After recording the field observations, each test pit and trench was backfilled with the excavated material. Topsoil was replaced with the excavated topsoil.

Field soil samples from the Sorensen Cell area were field screened for mercury using the Jerome 431 and Ohio Lumex. Field soil samples from the Film waste area were screened for organic compounds using a PID calibrated to 100 ppm Isobutylene. All excavation was done in Level C PPE.

Soil samples were collected and labeled sampling locations. For example, T104B20L was taken from Trench 1, 4 feet bgs and 20 feet from the starting point of the trench excavations. Excavations and sampling locations are shown in Exhibit 1.

FIELD OBSERVATIONS

- Trench 1 was excavated from north to south. This trench contained very light construction debris which consisted of some brick, 2 soda bottles, metal and concrete. The Jerome 431 and Lumex mercury analyzer showed no response along the trench length. A dark discolored soil with high moisture content was found at 3 feet bgs and 15 feet from the starting point of trench. The PID screening of this soil registered 0.0 ppm. The likelihood of this being septic spillover from a nearby old septic tank is very high. Sample T104B20L for RCRA 8 metals was taken in this area. A profile of Trench 1 is included with this report. Trench 1 was dug 35 feet in length to intersect with Trench 2. The depth of Trench 1 was 10 ft. The construction debris in this area was not characteristic of Sorensen cell debris, as described by the employee.
- Trenches 1A and 1B were excavated from north to south. Trench 1A was dug 5 feet long at a depth of 6 feet. Clean native soil was found throughout the length of this trench. Sample T1A03B03L was taken in this trench and analyzed for RCRA metals. Trench 1B was 3 feet in length by 6 feet in depth. Concerns over the nearby fuel oil berm collapsing into trench was expressed in the field; so additional excavation on Trench 1B was discontinued. Clean native soil was found throughout the length of this trench. Sample T1B03B03L was taken in this trench and analyzed for RCRA metals. These trenches were used to provide a boundary for the northern portion of the excavation for Sorensen Cell debris.
- Trench 2 was excavated from east to west for 36 feet and was 10 feet deep. This trench contained very light construction debris. Part of an asphalt slab was noted at 3 feet bgs within the first foot of trenching. The slab was laid horizontal, indicative of a previous road at this depth. The light construction debris gave way to cleaner fill around the 20 foot length mark. A 6 inch PVC septic line was found at the 24 foot length mark, about 2 feet bgs. All mercury field screens for this trench were non-detect. Sample T206B30L was a representative sample taken of this trench. Trench 1 and 2 have similar makeup: the construction debris was

not characteristic of the expected Sorensen cell debris described by the employee. A profile of Trench 2 is included with this report.

- Trench 2A was excavated from east to west for 5 feet to a depth of 6 feet. No construction debris was located in this area. Clean native soil was found throughout the length of this trench. Trench 2A was used to provide a boundary point for the eastern portion of the excavation for Sorensen Cell debris. Sample T2A06B00L was analyzed for RCRA metals and was taken to provide analytical support for the boundary.
- Trench 3 was excavated from north to south. Trench 3 was 76 feet in length by 7 feet in depth. Refusal was encountered at 7 feet bgs which was initially assumed to be rock. Further investigation revealed that refusal was caused by hardpan clay. The excavation of this trench revealed debris similar to that described by the former plant employee. Concrete with formed (smooth) sides and 2 inches in thickness were found within the first 2 feet length of the trench and about 1.5 feet bgs. The debris pieces, concrete and brick, were larger in nature and more frequent than Trench 1 and Trench 2. Some pieces appeared to be painted a dull gray. At 6 feet and 2 feet from the initial start of trench, a $\frac{3}{4}$ " wide carbon piece was found. This was assumed to be a carbon anode used in the Sorensen process. The Jerome 431 and Lumex analyzers were used to screen for mercury. The carbon piece showed a slight increase for mercury verses the background levels for the Lumex. The Lumex reads parts per billion and is very finite. A sample of this material and concrete chips of suspected Sorensen Cell body was placed on hold with Pace Analytical Services. Based on the analytical results of the soil samples collected in the trench, these samples are being analyzed for content. The Jerome 431, which reads in parts per million (ppm) registered 0.0 ppm for the remaining parts of this trench. A 6" PVC pipe was located at the 40 feet length mark at a depth of 2 feet. This pipe was not left intact. No visible leakage was noticed. Soil samples were taken along this trench at the 0, 20, 69, and 75 feet length marks. Clean native fill was found starting at the 70 feet length mark and continued for the remaining length (76 feet) of the trench. This trench extended into the current dirt road area about 7 feet. The last 6 feet of the trench was used to mark the southern boundary of Sorensen cell fill. Sample T306B75L for metals was taken to provide analytical support for this boundary. A profile of Trench 3 is included with this report.
- Trench 6 was excavated from east to west for 8 feet length to a depth of 6 feet. No construction debris was located in this area. Clean native soil was found throughout the length of this trench. Trench 6 was used to provide a boundary point for the eastern portion of the excavation for Sorensen Cell debris. Sample T606B00L was taken to provide analytical support for the boundary and analyzed for RCRA metals.
- Trenches 4, 5, and 7 were excavated to the west of Trench 3 to verify the western boundary of the Sorensen Cell fill. Clean native soil was found in these trenches. All three trenches averaged 5 feet in length and 6 feet in depth. A utility line separated Trench 5 and Trench 7, disallowing a more congruent grid.
- Trench 11. This trench began the search for the suspected film waste, located south of the old road. Trench 11 started in clean native soil in north east corner of

Film Waste Area. The total length of Trench 11 was 102 feet with a depth of 12 feet. At the 14 foot length mark, light construction debris, brick and native rock was found. At 56-foot length marker, the soil makeup became darker in color and contained small iron deposits, 1" in diameter to 3" in diameter. Bernie Kelly of Ecusta Business Development, ascertained these to be iron clinkers from the plants boiler operation. This soil had a hydrocarbon smell, yet registered 0.0 ppm on the PID screen. At the 58-foot length mark, about 3 feet below surface, a 1.5 ft thick, non-native gray clay layer was noticed. This was assumed to be a possible area for a road or levy. Beneath this layer was native backfill. At the 75-foot length mark, the film waste was encountered. This film appeared to be cellulose in nature and was clumped together similar to grocery bags about 3 inches in width and 8 inches in length. The film waste was not uniform and incineration marks were not noticeable. The film did not appear to be degrading. The volume for the film waste was approximately 25 feet in length by 2 feet in width. The film was found about 2.5 feet bgs. The film waste gave way abruptly to clean native soil/fill at the 95-foot length mark. The trench was excavated for 7 feet past this point to provide a northwest boundary for the film waste. Soil samples for RCRA metals and semi-volatile organic compounds (SVOCs) were taken along the length of this trench. All PID screens along this length were 0.0 ppm. A profile of Trench 11 is included with this report.

- Trench 11A was excavated diagonal to Trench 11. At the 85-foot length mark for Trench 11, which was the center point of the film waste, Trench 11A was excavated at a 90 degree angle to Trench 11. This assured a southeastern boundary for locating the film waste. The film waste was encountered along Trench 11A at the same depth and similar volume, to a point 12 feet from the center of the film waste of Trench 11, going southeast. Trench 11A was continued for 12 more feet to assure clean fill and denote the extent of film waste. Soil samples for RCRA metals and SVOCs were taken at the 10-foot and 23-foot length marks, both at 3 feet bgs. A profile of Trench 11A is included with this report.
- Trench 12 was located to the east of the Sanitary Plant between the Davidson River and the plant structure. It was excavated 6 feet in depth and 6 feet in length. Clean native soil was encountered along the length of this trench. Soil sample T1203B00L was taken and analyzed for RCRA metals and SVOCs.
- Trench 13 was located to the south of the Sanitary Plant. The trench was excavated to a depth of 6 feet and for a length of 75 feet. Clean native fill was encountered along the length of this trench. Soil sample T1303B24L was taken and analyzed for RCRA metals and SVOCs.
- Test Pits 14, 15, and 16 were excavated to a depth of 6 feet. These were located around the center point of the film waste in Trench 11. Each was located 25 feet from the center point of waste. Since the waste only found till 12 feet into Trench 11A, it was assumed that the fill was a circular pit in nature and would only run 12 feet from the center point, thus giving us a boundary for the film lateral extent to the north, south and west. Test Pits 14, 15, and 16 contained clean native fill. These pits were sampled and analyzed for RCRA metals and SVOCs.

ANALYTICAL RESULTS AND DISCUSSION

Sorensen Cell Area

Soil samples from the Sorensen Cell area were analyzed for RCRA metals. One sample, T603B00L was also analyzed for PCBs. Complete analytical results are included in Exhibit 2. The analytical results for all detected analytes for soil samples from the Sorensen Cell Area are summarized in Table 1. Cadmium and silver was not detected in any site soil samples. Only PCB-1254 was detected in soil sample T603B00L.

Analyte concentrations were compared with the North Carolina (NC) Default Soil Remediation Goals (SRGs) developed under Inactive Hazardous Sites Response Act of 1987 (N.C.G.S. 130A-310 et seq.) and reported on the web at <http://wastenot.enr.state.nc.us/sfhome/stateleadguidance.pdf> and last updated in August 2007. Analyte concentrations were compared with the United States Environmental Protection Agency (EPA) Residential Preliminary Remediation Goals (PRGs), last updated October 2004. Table 1 shows that only arsenic and mercury concentrations exceeded the NC Default SRGs. These Default SRGs are based on unrestricted site use and assumes 5 non-carcinogens are present. NC guidelines allow for adjusting SRGs if less than 5 non-carcinogens are present at the site. Since only two non-carcinogens are present above the screening levels, Default SRGs were adjusted as per the guidelines. The Adjusted SRGs for arsenic and mercury at the site are:

- Arsenic – 11.0 mg/kg
- Mercury – 11.5 mg/kg

None of the analytes in soil samples collected at the Sorensen Cell Area exceeded NC Adjusted SRGs or EPA PRGs for unrestricted site use.

Film Waste Area

Soil samples from the Film Waste Area were analyzed for RCRA metals and SVOCs. Complete analytical results are included in Exhibit 2. The analytical results for all detected analytes for soil samples from the Film Waste Area are summarized in Table 2 for metals and in Table 3 for SVOCs.

Cadmium and silver was not detected in any site soil samples. Table 2 shows that only arsenic concentration at T11A03B10L exceeded the NC Default SRGs. These Default SRGs are based on unrestricted site use and assumes 5 non-carcinogens are present. NC guidelines allow for adjusting SRGs if less than 5 non-carcinogens are present at the site. Since only two non-carcinogens are present above the screening levels at both the Sorensen Cell Area and the Film Waste Area, Default SRGs were adjusted as per the guidelines. The Adjusted SRGs for arsenic at the site is 11.0 mg/kg. Arsenic concentration at T11A03B10L is greater than the NC Adjusted SRG and needs to be addressed.

Table 3 shows that nine (9) polynuclear aromatic hydrocarbons (PAHs) and di-n-butylphthalate were detected at the site. Only three (3) PAHs [benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene] were detected above the NC Default SRGs or

EPA Residential PRGs in soil samples T1110B10L and T1110B50L. Both of these soil samples were collected from 10 feet bgs where residential exposure, the basis of NC Default SRGs and EPA Residential PRGs, is not applicable. NC or EPA has not published SRGs for construction worker, a likely exposure pathway. Construction worker exposure pathway in conjunction with soil-to-groundwater screening levels could be evaluated to determine the need for remediation.

Table 1
Detected Analytes for Soil Samples from the Sorensen Cell Area

Sample ID	Arsenic mg/kg	Barium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Selenium mg/kg	PCB-1254 mg/kg
NC Default SRG ¹	4.4 (nc)	1,080* (nc)	44 (nc)	400**	4.6 (nc)	78 (nc)	1.0 (c)
EPA Residential PRGs ²	22 (nc)	5,400 (nc)	210 (C)	400**	23 (nc)	390 (nc)	0.220 (c)
T104B20L	2.8	58.4	12.8	15.7	2.3	3.4	NA
T1A03B03L	2.4	98.8	15.4	8.4	0.059	7.0	NA
T1B03B03L	3.5	99.3	13.1	135	7.9	6.0	NA
T206B30L	0.61	52.1	5.5	5.2	0.017	1.8	NA
T2A06B00L	2.5	84.3	17.5	10.2	0.12	5.9	NA
T306B00L	0.65	20.4	3.0	4.7	2.5	2.3	0.217
T303B20L	2.4	85.3	11.0	18.9	2.1	6.4	NA
T305B69L	3.5	53.2	6.0	17.3	5.4	4.3	NA
T306B75L	9.2	69.5	16.7	48.7	10.1	4.8	NA
T406B00L	2.8	66.6	12.1	9.7	0.39	5.7	NA
T506B00L	5.4	59.1	13.0	29.2	0.15	9.7	NA
T606B00L	1.8	70.0	7.1	4.9	0.058	3.3	NA
T706B00L	3.4	63.8	15.2	56.5	1.8	6.6	NA

1 - North Carolina default Soil Remediation Goals (SRGs) for Inactive Hazardous sites (August 2007) for non-carcinogens are based on Hazard Index of 1.0 and assumes five non-carcinogens are present, i.e., Hazard Quotient=0.2.

2 - US EPA Preliminary Remediation Goals (PRGs) for non-carcinogens are based on Hazard Index of 1.0 and assumes one non-carcinogen is present, i.e., Hazard quotient=1.0.

c - SRGs and PRGs are based on carcinogenic effects. For arsenic, carcinogenic value is less than the method detection limit (MDL).

nc - SRGs and PRGs are for non-carcinogenic effects.

NA - Not analyzed.

* NC Default PRG is not listed in the tables and was calculated using assumptions for NC Default SRGs.

** US EPA Guidance on lead cleanup levels. This value cannot be adjusted.

Note - Bolded values exceed either NC Default SRG and/or EPA Residential PRG value.

Table 2
Detected Metal Analytes for Soil Samples from the Film Waste Area

Sample ID	Arsenic mg/kg	Barium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Selenium mg/kg
NC Default SRG ¹	4.4 (nc)	1,080* (nc)	44 (nc)	400**	4.6 (nc)	78 (nc)
EPA Residential PRGs ²	22 (nc) (0.39 c)	5,400 (nc)	210 (c)	400**	23 (nc)	390 (nc)
T1106B00L	1.8	55.1	5.0	11.4	0.75	3.7
T1110B10L	1.5	90.5	13.8	15.1	0.2	6
T1103B24L	1.8	77.8	13.6	17.2	0.11	5.5
T1110B50L	2.3	48.3	4.9	5.8	0.041	3.2
T1103B75L	3	74.9	11.4	18.5	0.96	3.9
T1103B85LF	ND	2	0.7	11.7	0.0055	ND
T1103B90L	2.1	70.6	22.1	19	0.23	5.0
T1103B100L	2	80.8	11.9	12.8	0.04	4.9
T1103B102L	1.8	72.2	11.3	9.7	0.034	5.6
T11A03B10L	159	68.4	6.6	15.3	0.27	6.5
T11A03B23L	1.8	77.6	15.4	16.4	0.11	5.5
T1403B25L	2	79.2	9.7	18.9	0.32	5.6
T1503B25L	2.6	71	9.6	17	0.12	5.6
T1603B25L	2	59.7	10.8	10.8	0.05	4.5

1 - North Carolina default Soil Remediation Goals (SRGs) for Inactive Hazardous sites (August 2007) for non-carcinogens are based on Hazard Index of 1.0 and assumes five non-carcinogens are present, i.e., Hazard Quotient=0.2.

2 - US EPA Preliminary Remediation Goals (PRGs) for non-carcinogens are based on Hazard Index of 1.0 and assumes one non-carcinogen is present, i.e., Hazard quotient=1.0.

c - SRGs and PRGs are based on carcinogenic effects. For arsenic, carcinogenic value is less than the method detection limit (MDL).

nc - SRGs and PRGs are for non-carcinogenic effects.

ND - Not detected.

* NC Default PRG is not listed in the tables and was calculated using assumptions for NC Default SRGs.

** US EPA Guidance on lead cleanup levels. This value cannot be adjusted.

Note - Bolded values exceed either NC Default SRG and/or EPA Residential PRG value.

Table 3
Detected SVOC Analytes for Soil Samples from Film Waste Area

Sample ID	Anthracene ug/kg	Benzo(a)anthracene ug/kg	Benzo(a)pyrene ug/kg	Benzo(b)fluoranthene ug/kg	Benzo(k)fluoranthene ug/kg	Chrysene ug/kg	Di-n-butylphthalate ug/kg	Fluoranthene ug/kg	Phenanthrene ug/kg	Pyrene ug/kg
NC Default SRG ¹	4,400 (nc)	22 (c)	22 (c)	220 (c)	2,200 (c)	22,000 (c)	1,220,000 (nc)	480,000 (nc)	NE	480,000 (nc)
EPA Residential PRGs ²	22,000 (nc)	620 (c)	62 (c)	620 (c)	6,200 (c)	62,000 (c)	6,100,000 (nc)	2,300,000 (nc)	NE	2,300,000 (nc)
T110B10L	ND	1,260	839	689	806	1,190	ND	2,170	1,040	1,980
T110B24L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T110B50L	700	1,780	1,230	1,210	1,110	1,710	ND	3,750	2,770	3,580
T110B75L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T110B90L	ND	ND	ND	ND	ND	ND	2,430	ND	ND	ND
T110B100L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T110B102L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T11A03B23L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1503B25L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1603B25L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

1 - North Carolina default Soil Remediation Goals (SRGs) for Inactive Hazardous sites (August 2007) for non-carcinogens are based on Hazard Index of 1.0 and assumes five non-carcinogens are present, i.e., Hazard Quotient=0.2.

2 - US EPA Preliminary Remediation Goals (PRGs) for non-carcinogens are based on Hazard Index of 1.0 and assumes one non-carcinogen is present, i.e., Hazard quotient=1.0.

c - SRGs and PRGs are for carcinogenic effects.

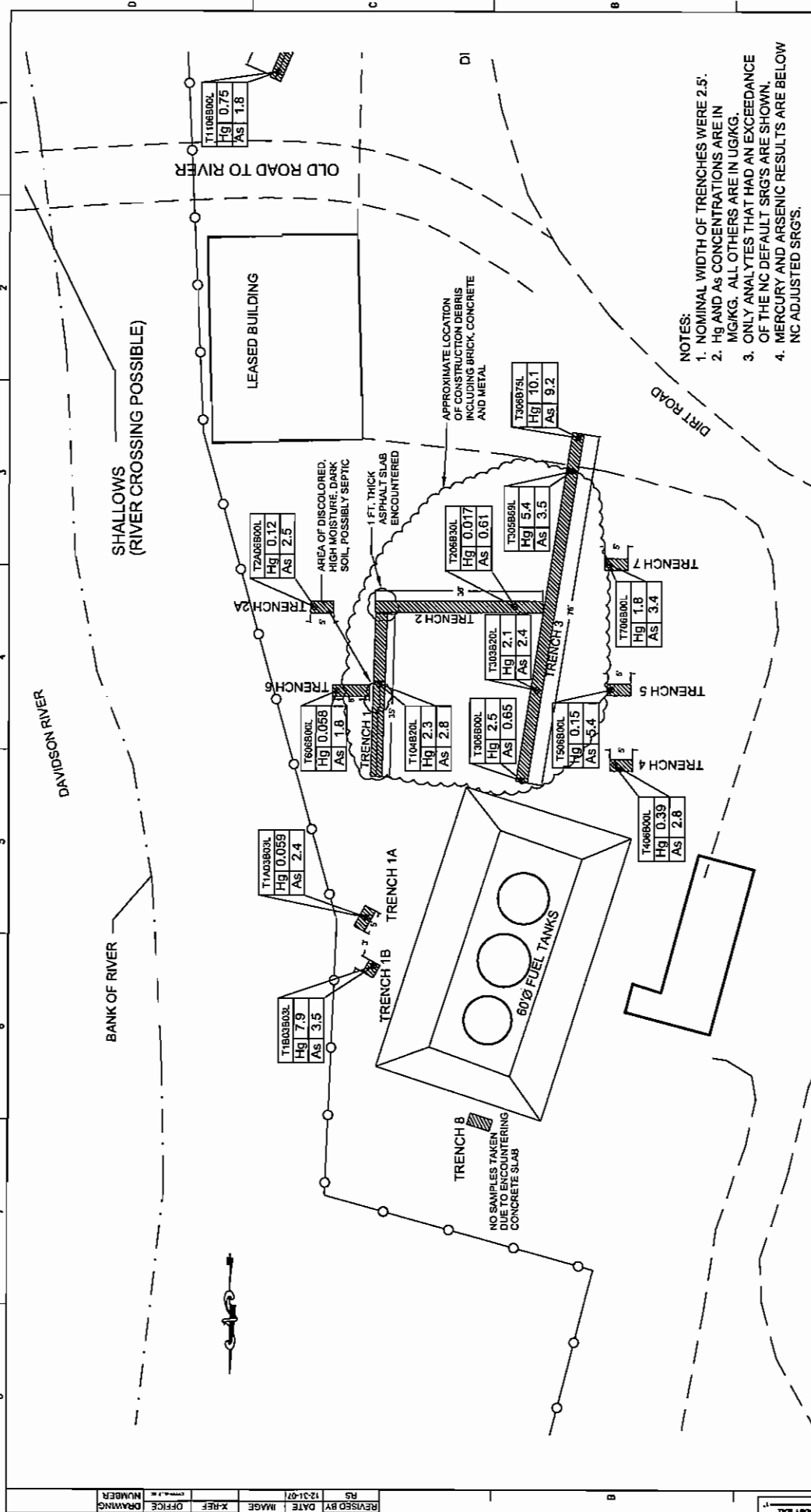
nc - SRGs and PRGs are for non-carcinogenic effects.

ND - Not detected

NE - SRG or PRG is not established for phenanthrene. However, pyrene is typically taken as a surrogate for phenanthrene. Note - Bolded values exceed either NC Default SRG and/or EPA Residential PRG value.

EXHIBIT 1

FIGURES AND CROSS-SECTIONS



- NOTES:**
1. NOMINAL WIDTH OF TRENCHES WERE 2.5'.
 2. Hg AND AS CONCENTRATIONS ARE IN MG/KG. ALL OTHERS ARE IN UG/KG.
 3. ONLY ANALYTES THAT HAD AN EXCEEDANCE OF THE NC DEFAULT SRG'S ARE SHOWN.
 4. MERCURY AND ARSENIC RESULTS ARE BELOW NC ADJUSTED SRG'S.

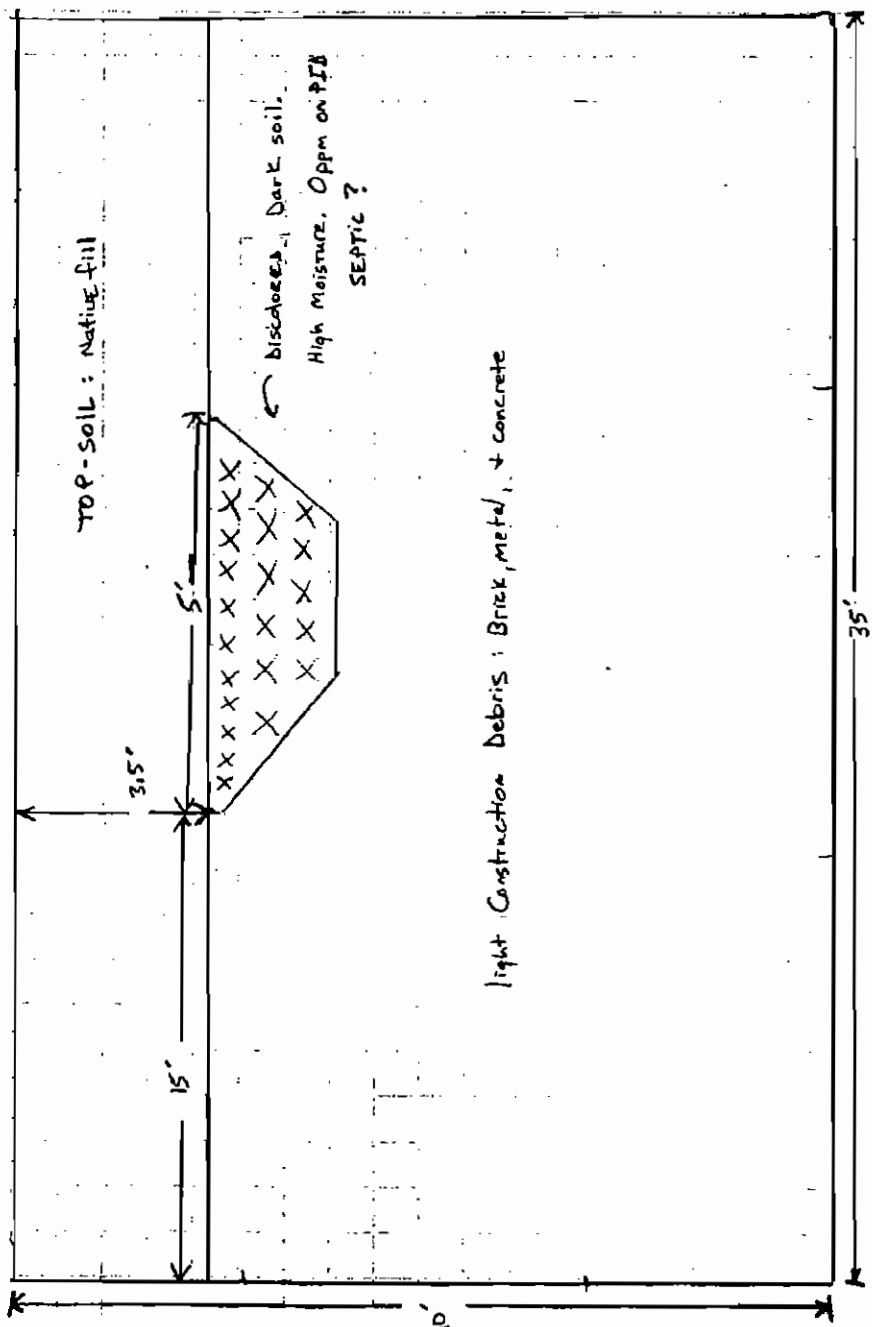
DAVIDSON RIVER VILLAGE LLC		PISCATAWAY FOREST, NC	
REMEDIAL ACTION PROJECT AREAS FOR SUSPECTED OIL DISPOSAL AREAS		SORENSEN CELL AREA	
DESIGNED BY: RS	CHECKED BY: RS	DATE: 12-31-07	PROJECT NO. 113443-01
DRAWN BY: D	SCALE: 1" = 10'	DRAWING NO. 113443-01	SHEET NO. 1 OF 2
REVISIONS		APPROVED BY: [Signature]	
REV	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			
6			
7			
8			

THIS DRAWING IS A VISUAL REPRESENTATION OF THE EQUIPMENT AND/OR SYSTEM PROPOSED. IT IS NOT INTENDED FOR CONSTRUCTION PURPOSES.

Shaw Shaw Environmental, Inc.

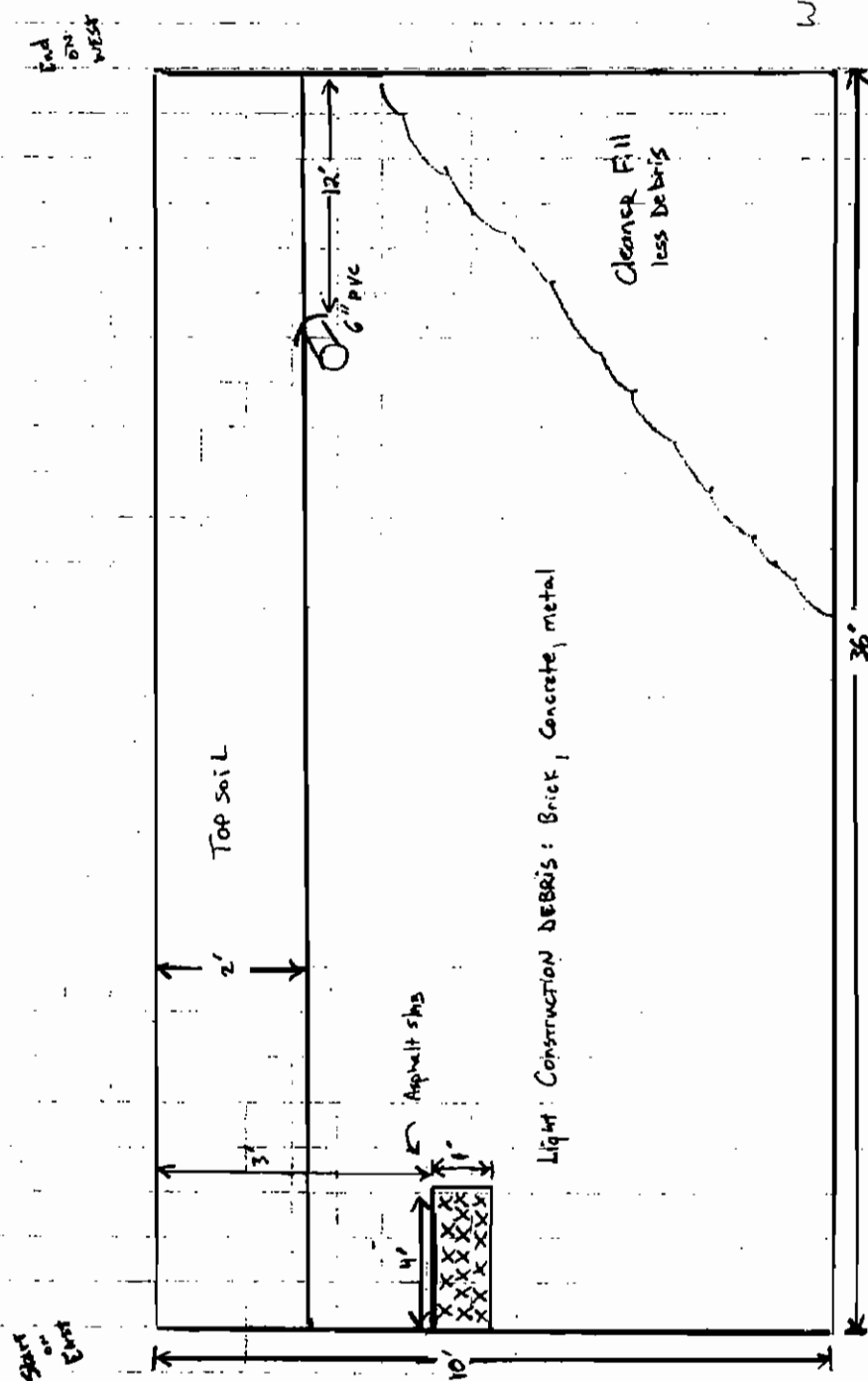
End
on side
South

Start
on
North end



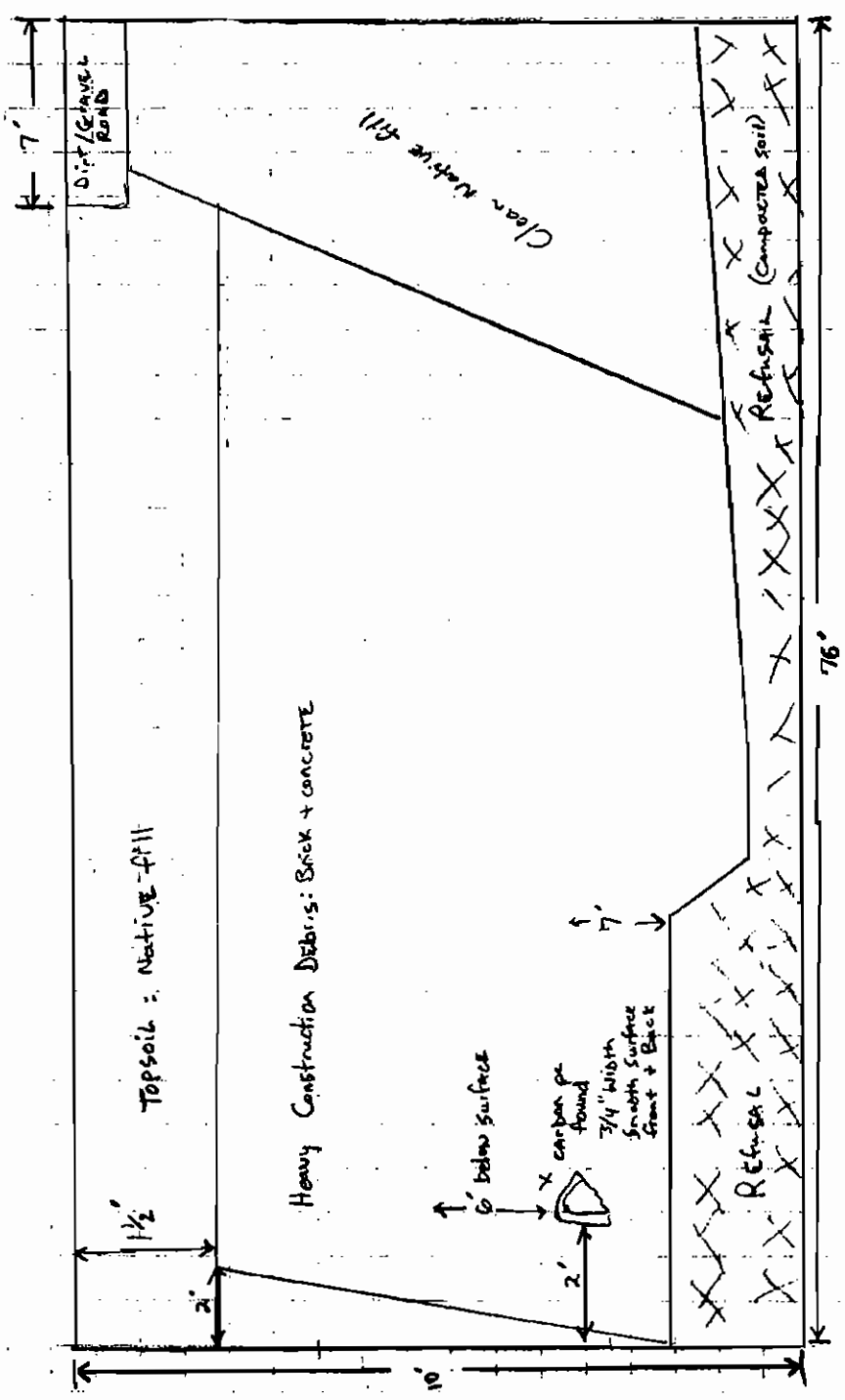
light Construction Debris: Brick, metal, + concrete

TRENCH 1



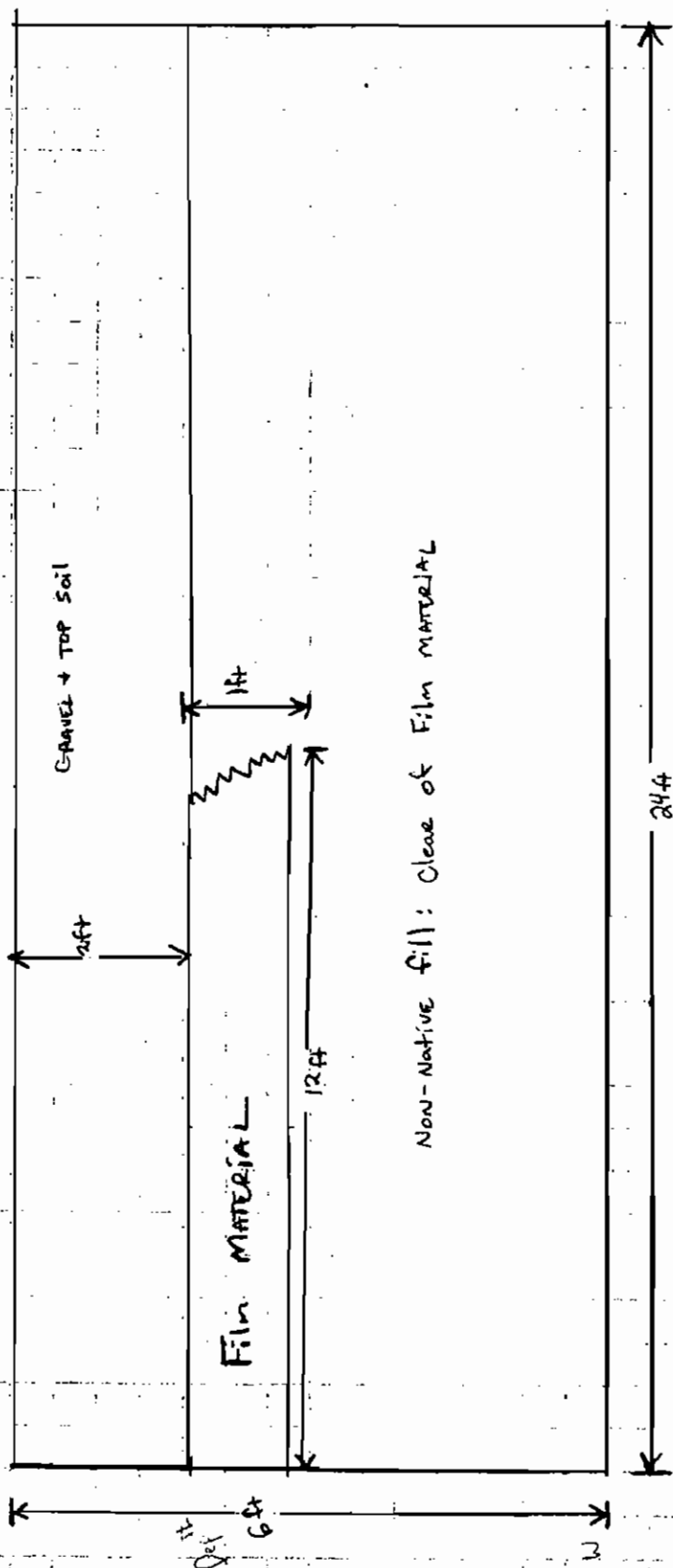
Southern
end
middle of
Dist. Rd.

2
N
Trench
starts
here



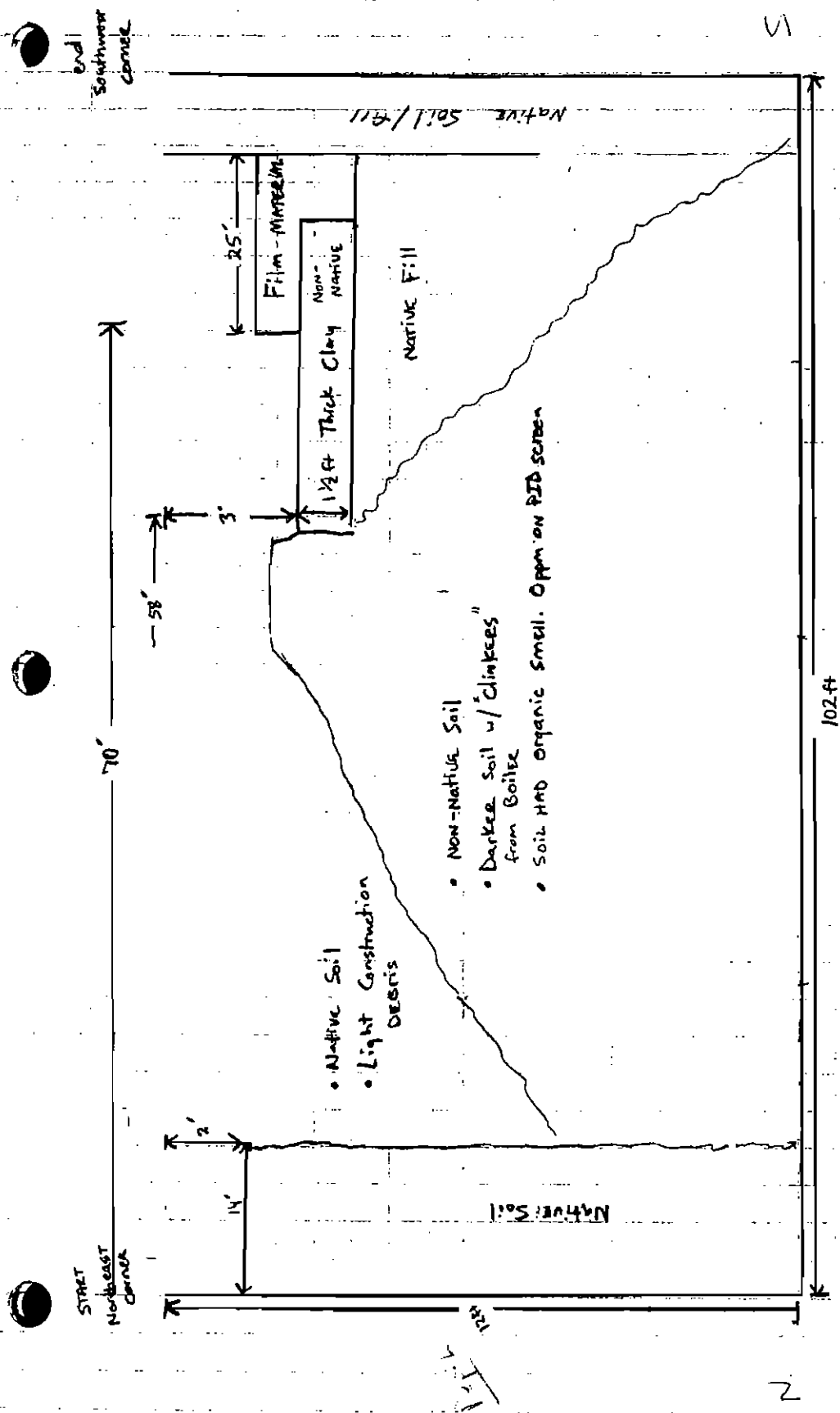
TRENCH 3

Southeastern
end



Non-Native fill: Clean of Film MATERIAL

TRENCH 11A



TRENCH 11

EXHIBIT 2

FRED FENDLEY DECLARATION

DECLARATION OF FRED FENDLEY

1. My name is Fred Fendley. I am over the age of twenty-one and am competent to make this Declaration. The facts set forth in this Declaration are based on my own personal knowledge.

2. I worked at the Ecusta Paper Mill in Transylvania County for approximately forty years, beginning in 1942. I retired from the Mill in 1985.

3. Between 1943 and 1946, during World War II, I served overseas in the United States Army. I resumed working at the Mill upon my return from the War.

4. During my forty years with the Mill, I held several jobs. I worked for a short period of time in research and spent most of my career at the Mill working in building and grounds maintenance.

5. When I first returned from the War, I worked in research. I worked on a project examining the growth rates of flax after watering the flax with different mixtures of water and black liquor.

6. In or around 1952, I began working in building and grounds maintenance. I was the landscape foreman for the Mill for a number of years.

7. I also worked in general maintenance, eventually becoming the Maintenance Services Superintendent. Some of my responsibilities at the Mill included maintaining the Mill's grounds, painting, and supervising projects which used concrete.

8. I worked on many projects in the Electro-Chemical Building at the Mill.

9. I remember when the Sorensen cells were installed at the Electro-Chemical Building in the late 1940's to help make chlorine for the bleaching process.

10. The Sorensen cells were installed in rows of twelve in the Electro-Chemical Building.

11. I recall that each cell had a metal, pan-shaped box or "shell" on top of the unit. The drawing attached as Exhibit A is a true and accurate drawing of how I recall the Sorensen cell looked.

12. The metal shells were painted red with anti-rust paint and each shell was lined with concrete. Masons who worked at the mill poured the concrete. The concrete was approximately one-and-a-half to two-inches thick. Once the concrete was poured, the shell still maintained its pan-shape;

in other words, the concrete was not a solid rectangular pour. The concrete was used to protect the cell from chemical corrosion.

13. The metal shell also had a metal cover. Anodes were screwed into the bottom of the cover so that they hung from the cover and over the mercury and brine mixture resting in the concrete form. A mini wheel (which looked like a water wheel) agitated the salt water and mercury mixture.

14. Liquid mercury flowed through the concrete forms.

15. Periodically, the maintenance department would be called upon to refurbish the Sorensen cells. As part of the refurbishment process, I was asked to remove the old, cracked concrete from the metal shells and replace it with new concrete.

16. To refurbish the cells, the Mill would have to cease operations on an entire row of cells in order to remove the one cell that needed repair. Usually, I was asked to refurbish specific cells and not an entire row at one time.

17. To refurbish the cell, I had to remove the cell and take it to the masons. The masons would remove the old concrete liner by chipping it out with a hammer or some other tool.

18. The painters would then repaint the metal shell with red, rust-proof paint.

19. The masons would then pour a new concrete liner from a form and insert the new liner back into the metal shell.

20. Once the concrete dried, the maintenance department would deliver the refurbished cell to the Electro-Chemical Building. I often was the person in maintenance who returned the cell.

21. The process of refurbishing a cell took several days.

22. Concrete waste, including cracked concrete, which did contain mercury residue, was a by-product of the refurbishing process. Before the bridge to the Island Landfill was built in 1956, I deposited waste from the refurbished cells on the Mill property in trenches along the west side of the Davidson River between what is now the carbonate plant and the clarifiers. Over time, I dug three different trenches along the Davidson River which we used to deposit waste. The drawing attached as Exhibit B approximately represents the location where I built the trenches and buried the waste.

23. I buried the concrete and brick waste in the trench to the north of a road that used to run to the river in that area marked on Exhibit B. Film waste was primarily deposited in the trenches to the south of that road.

Initially, wet and dry film was incinerated on the property. The approximate location of the incinerator is drawn on the map attached as Exhibit B. The incinerator stopped working and then we began digging trenches to deposit the film waste.

24. In 1956, we began running out of room to bury waste in the trenches along the Davidson River and had to build a bridge to the Island Landfill so that we would have additional room to dispose of waste. I dug the footings for the bridge.

25. After the bridge to the Island Landfill was built, I began burying waste on the Island Landfill, including the concrete waste with residual mercury from the refurbishing process.

26. Although I was not personally involved with this project, I recall that Olin Corporation removed some of the Sorensen cells on the east side of the Electro-Chemical Building approximately ten years before it removed the remaining cells from the building in 1973. My recollection is that the cells were removed to provide additional space in the Electro-Chemical Building.

27. I know that these first rows of cells were removed prior to January 1, 1970 because I was not personally involved in their removal. If

the cells had been removed after January 1, 1970, it would have been my responsibility to remove the concrete from the cells.

28. I did, however, remove the concrete from the cells when they were completely removed from the Electro-Chemical Building in 1973.

29. Because I worked in the maintenance department, I am familiar with the drain system in the Electro-Chemical Building. The south side of the Electro-Chemical Building has the "main drain" in the building. The main drain was made of concrete and was deep enough to walk in under the building and below ground.

30. I do not recall the concrete drain under the building ever undergoing a restoration or significant repair while I was at the Mill. I do not recall the Mill ever replacing the concrete in the main drain.

31. The main drain sloped westward to a trap for mercury. The trap was a concrete-lined, u-shaped container that caught escaping mercury draining from the main floor of the Electro-Chemical Building. The drawing attached as Exhibit C is a true and accurate rendering of the Electro-Chemical Building and I have marked the spot at the west end of the main drain where the mercury trap was located. The sketch attached as Exhibit D is a true and accurate representation of the main drain underground showing how mercury

traveled to the mercury trap at the west end of the drain. The sketch is not intended to be drawn to scale.

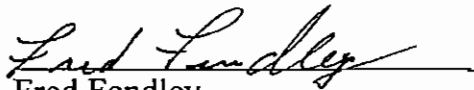
32. Periodically, Mill employees would use special mercury-recovery tools to remove any mercury caught in the trap. The mercury was scooped out of the trap with a spoon-like tool and put into a mercury container with a long handle. The mercury container was approximately 18 inches tall and 6-8 inches across. The handle may also have been 18 inches tall.

33. When the bulk of the mercury was removed from the trap, a pipette was used to collect the residual mercury not collected by the spoon-like tool.

34. I retired in 1985 with almost 45 years of service at the Mill.

I declare under penalty of perjury that the foregoing is true and correct.

This the 13 day of November, 2007.


Fred Fendley

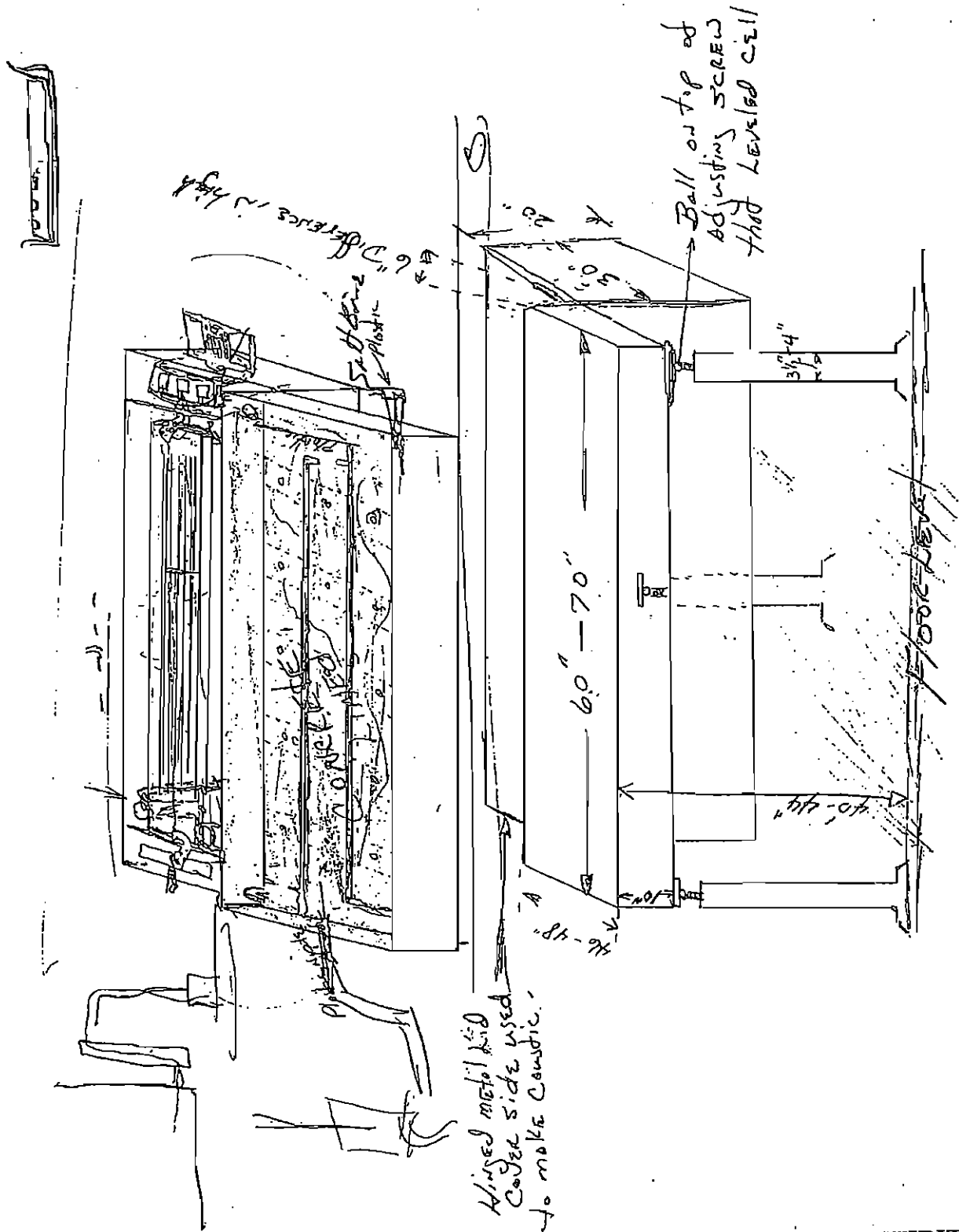
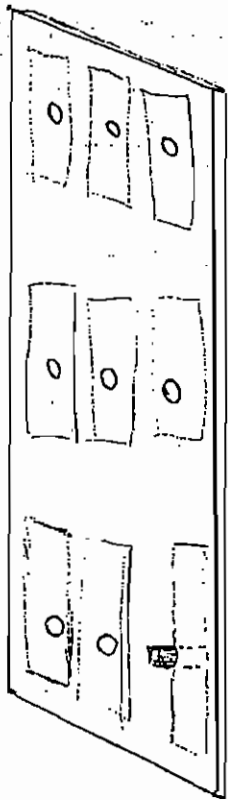
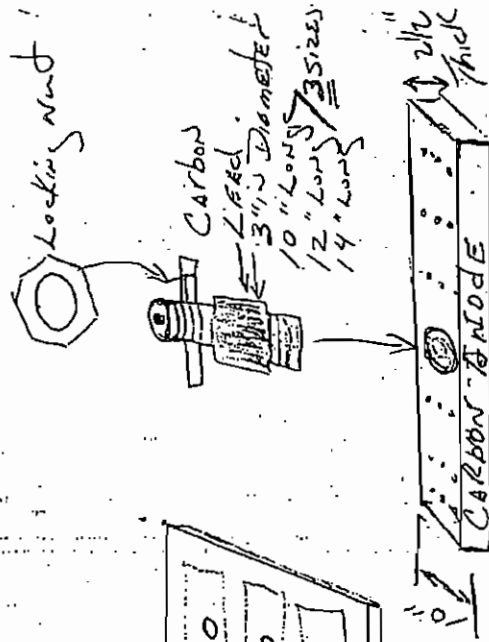
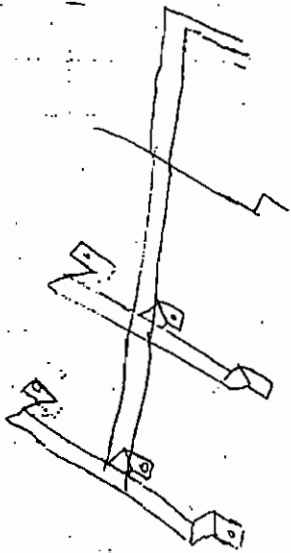


EXHIBIT A



18" - 20"
LONG

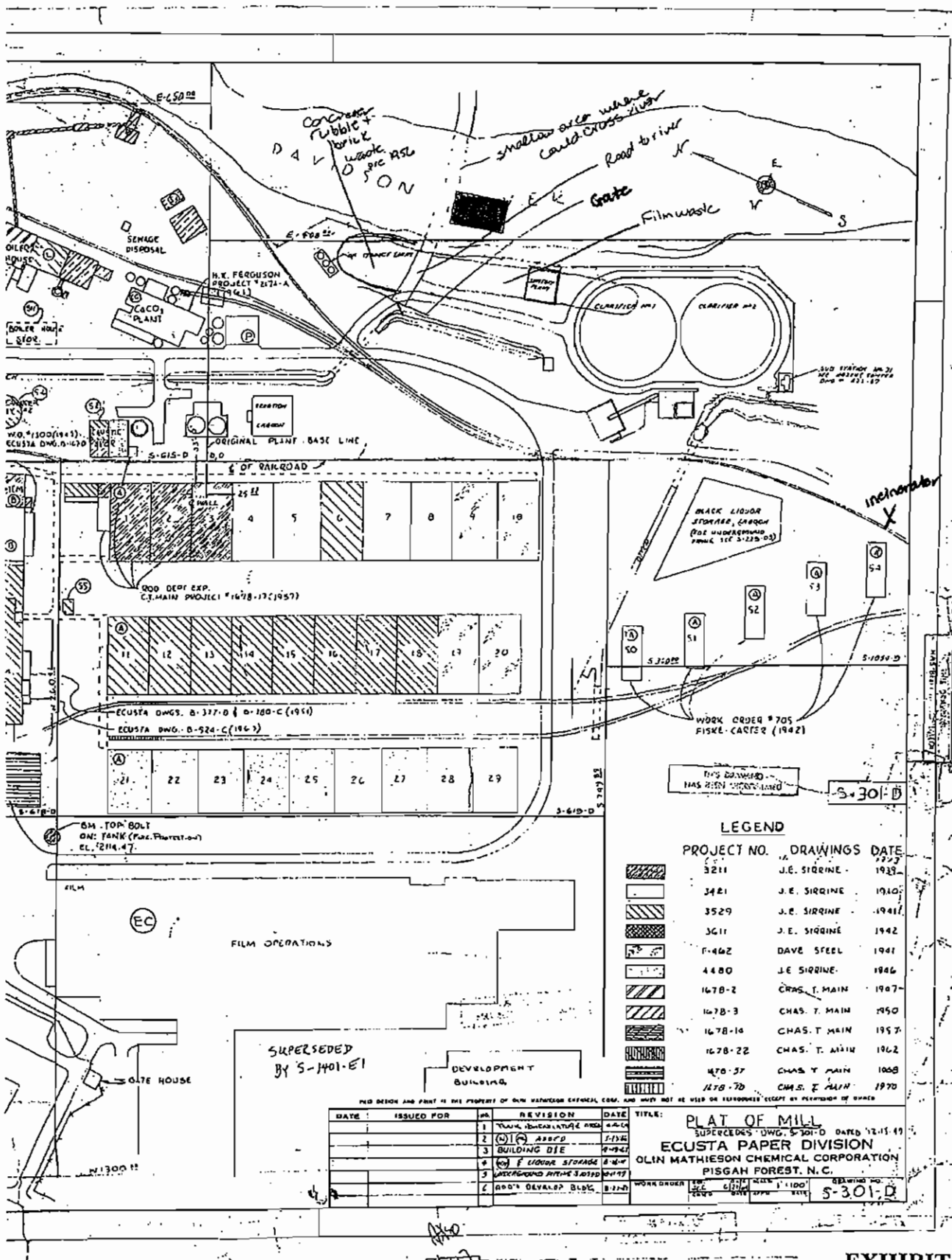


EXHIBIT B

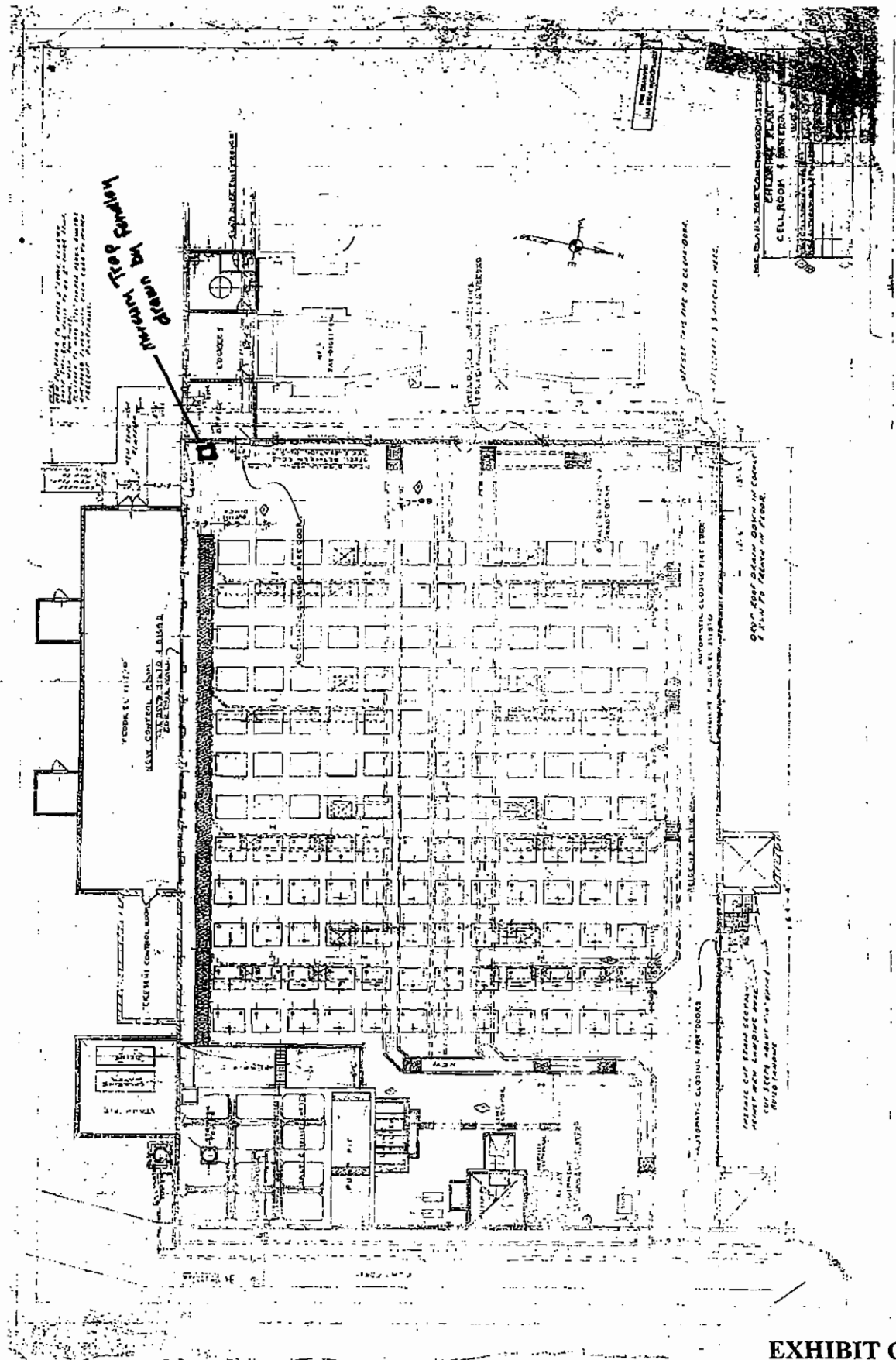


EXHIBIT C

OPERATING FLOOR →

DITCH 230" to 36" WIDE

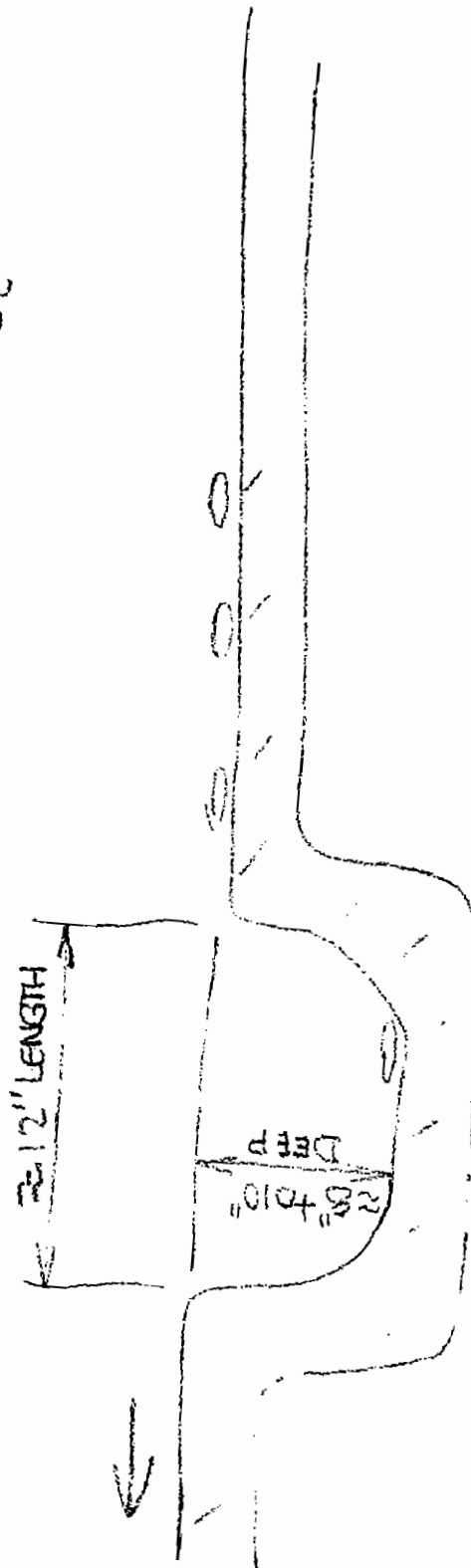


EXHIBIT D

EXHIBIT 3

LABORATORY ANALYTICAL DATA



Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kinsey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

December 31, 2007

Mr. Paul Coker
Shaw E&I
3 Independence Pointe
Greenville, SC 29615

RE: Project: ECUSTA/123445
Pace Project No.: 9210454

Dear Mr. Coker:

Enclosed are the analytical results for sample(s) received by the laboratory on December 21, 2007. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brenda Pathammavong

brenda.pathammavong@pacelabs.com
Project Manager

Enclosures

cc: Mr. Bill Chadeayne, Shaw E&I

REPORT OF LABORATORY ANALYSIS

Page 1 of 43

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CERTIFICATIONS

Project: ECUSTA/123445
Pace Project No.: 9210454

Charlotte Certification IDs

North Carolina Drinking Water Certification Number: 37706
North Carolina Wastewater Certification Number: 12
North Carolina Field Services Certification Number: 5342
South Carolina Certification Number: 990060001
South Carolina Bioassay Certification Number: 990060003

Tennessee Certification Number: 04010
Virginia Certification Number: 00213
Florida/NELAP Certification Number: E87627
Kansas Certification Number: E-10364
Louisiana/LELAP Certification Number: 04034

Asheville Certification IDs

Florida/NELAP Certification Number: E87648
Louisiana/LELAP Certification Number: 03095
New Jersey Certification Number: NC011
North Carolina Drinking Water Certification Number: 37712
North Carolina Wastewater Certification Number: 40
North Carolina Bioassay Certification Number: 9

Pennsylvania Certification Number: 68-03578
South Carolina Certification Number: 99030001
South Carolina Bioassay Certification Number: 99030002
Tennessee Certification Number: 2980
Virginia Certification Number: 00072

Eden Certification IDs

North Carolina Drinking Water Certification Number: 37738
Virginia Drinking Water Certification Number: 00424

North Carolina Wastewater Certification Number: 633

REPORT OF LABORATORY ANALYSIS

Page 2 of 43

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(704)875-9092

SAMPLE ANALYTE COUNT

Project: ECUSTA/123445
Pace Project No.: 9210454

Lab ID	Sample ID	Method	Analytes Reported	Laboratory
9210454001	T1106B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210454002	T1110B50L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8270	75	PASI-C
9210454003	T1103B75L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8270	75	PASI-C
9210454004	T1103B90L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8270	75	PASI-C
9210454005	T1103B100L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8270	75	PASI-C
9210454006	T1103B85LF	EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210454007	T11A03B10L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210454008	T11A03B23L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8270	75	PASI-C
9210454009	T1403B25L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210454010	T1503B25L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8270	75	PASI-C
9210454011	T1603B25L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A

REPORT OF LABORATORY ANALYSIS

Page 3 of 43

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SAMPLE ANALYTE COUNT

Project: ECUSTA/123445
Pace Project No.: 9210454

Lab ID	Sample ID	Method	Analytes Reported	Laboratory
9210454012	T1110B10L	EPA 7471	1	PASI-A
		EPA 8270	75	PASI-C
		ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210454013	T1103B102L	EPA 8270	75	PASI-C
		ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8270	75	PASI-C
9210454014	T1103B24L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8270	75	PASI-C

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1106B00L Lab ID: 9210454001 Collected: 12/20/07 10:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.8 mg/kg		0.42	1	12/27/07 12:00	12/28/07 18:29	7440-38-2	
Barium	55.1 mg/kg		0.42	1	12/27/07 12:00	12/28/07 18:29	7440-39-3	
Cadmium	ND mg/kg		0.083	1	12/27/07 12:00	12/28/07 18:29	7440-43-9	
Chromium	5.0 mg/kg		0.42	1	12/27/07 12:00	12/28/07 18:29	7440-47-3	
Lead	11.4 mg/kg		0.42	1	12/27/07 12:00	12/28/07 18:29	7439-92-1	
Selenium	3.7 mg/kg		0.83	1	12/27/07 12:00	12/28/07 18:29	7782-49-2	
Silver	ND mg/kg		0.42	1	12/27/07 12:00	12/28/07 18:29	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.75 mg/kg		0.13	20	12/27/07 10:27	12/27/07 15:08	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	11.7 %		0.10	1		12/26/07 15:11		

Sample: T1110B50L Lab ID: 9210454002 Collected: 12/20/07 10:20 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.3 mg/kg		0.56	1	12/27/07 12:00	12/28/07 18:35	7440-38-2	
Barium	48.3 mg/kg		0.56	1	12/27/07 12:00	12/28/07 18:35	7440-39-3	
Cadmium	ND mg/kg		0.11	1	12/27/07 12:00	12/28/07 18:35	7440-43-9	
Chromium	4.9 mg/kg		0.56	1	12/27/07 12:00	12/28/07 18:35	7440-47-3	
Lead	5.8 mg/kg		0.56	1	12/27/07 12:00	12/28/07 18:35	7439-92-1	
Selenium	3.2 mg/kg		1.1	1	12/27/07 12:00	12/28/07 18:35	7782-49-2	
Silver	ND mg/kg		0.56	1	12/27/07 12:00	12/28/07 18:35	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.041 mg/kg		0.0053	1	12/27/07 10:27	12/27/07 11:50	7439-97-6	
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND ug/kg		561	1	12/22/07 00:00	12/28/07 06:14	83-32-9	
Acenaphthylene	ND ug/kg		561	1	12/22/07 00:00	12/28/07 06:14	208-96-8	
Aniline	ND ug/kg		561	1	12/22/07 00:00	12/28/07 06:14	62-53-3	
Anthracene	700 ug/kg		561	1	12/22/07 00:00	12/28/07 06:14	120-12-7	
Benzo(a)anthracene	1780 ug/kg		561	1	12/22/07 00:00	12/28/07 06:14	56-55-3	
Benzo(a)pyrene	1230 ug/kg		561	1	12/22/07 00:00	12/28/07 06:14	50-32-8	
Benzo(b)fluoranthene	1210 ug/kg		561	1	12/22/07 00:00	12/28/07 06:14	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		561	1	12/22/07 00:00	12/28/07 06:14	191-24-2	
Benzo(k)fluoranthene	1110 ug/kg		561	1	12/22/07 00:00	12/28/07 06:14	207-08-9	
Benzoic acid	ND ug/kg		2800	1	12/22/07 00:00	12/28/07 06:14	65-85-0	
Benzyl alcohol	ND ug/kg		1120	1	12/22/07 00:00	12/28/07 06:14	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		561	1	12/22/07 00:00	12/28/07 06:14	101-55-3	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1110B50L Lab ID: 9210454002 Collected: 12/20/07 10:20 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Butylbenzylphthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	1120	1	12/22/07 00:00	12/28/07 06:14	59-50-7	
4-Chloroaniline	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	108-60-1	
2-Chloronaphthalene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	91-58-7	
2-Chlorophenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	7005-72-3	
Chrysene	1710	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	53-70-3	
Dibenzofuran	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	120-83-2	
Diethylphthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	105-67-9	
Dimethylphthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	131-11-3	
Di-n-butylphthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	1120	1	12/22/07 00:00	12/28/07 06:14	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	606-20-2	
Di-n-octylphthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	117-81-7	
Fluoranthene	3750	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	206-44-0	
Fluorene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	87-68-3	
Hexachlorobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	77-47-4	
Hexachloroethane	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	193-39-5	
Isophorone	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	78-59-1	
1-Methylnaphthalene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	90-12-0	
2-Methylnaphthalene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14		
Naphthalene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	91-20-3	
2-Nitroaniline	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	88-74-4	
3-Nitroaniline	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	99-09-2	
4-Nitroaniline	ND	ug/kg	1120	1	12/22/07 00:00	12/28/07 06:14	100-01-6	
Nitrobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	98-95-3	
2-Nitrophenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	88-75-5	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1110B50L Lab ID: 9210454002 Collected: 12/20/07 10:20 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
4-Nitrophenol	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	86-30-6	
Pentachlorophenol	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	87-86-5	
Phenanthrene	2770	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	85-01-8	
Phenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	108-95-2	
Pyrene	3580	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	88-06-2	
Nitrobenzene-d5 (S)	58 %		10-120	1	12/22/07 00:00	12/28/07 06:14	4165-60-0	
2-Fluorobiphenyl (S)	56 %		10-120	1	12/22/07 00:00	12/28/07 06:14	321-60-8	
Terphenyl-d14 (S)	56 %		10-116	1	12/22/07 00:00	12/28/07 06:14	1718-51-0	
Phenol-d6 (S)	66 %		10-120	1	12/22/07 00:00	12/28/07 06:14	13127-88-3	
2-Fluorophenol (S)	58 %		10-120	1	12/22/07 00:00	12/28/07 06:14	367-12-4	
2,4,6-Tribromophenol (S)	68 %		10-116	1	12/22/07 00:00	12/28/07 06:14	118-79-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	11.7 %		0.10	1		12/26/07 15:11		

Sample: T1103B75L Lab ID: 9210454003 Collected: 12/20/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	3.0	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:40	7440-38-2	
Barium	74.9	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:40	7440-39-3	
Cadmium	ND	mg/kg	0.072	1	12/27/07 12:00	12/28/07 18:40	7440-43-9	
Chromium	11.4	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:40	7440-47-3	
Lead	18.5	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:40	7439-92-1	
Selenium	3.9	mg/kg	0.72	1	12/27/07 12:00	12/28/07 18:40	7782-49-2	
Silver	ND	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:40	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.96	mg/kg	0.13	20	12/27/07 10:27	12/27/07 15:10	7439-97-6	
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	83-32-9	
Acenaphthylene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	208-96-8	
Aniline	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	62-53-3	
Anthracene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	120-12-7	
Benzo(a)anthracene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	56-55-3	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B75L Lab ID: 9210454003 Collected: 12/20/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Benzo(a)pyrene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	207-08-9	
Benzoic acid	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	65-85-0	
Benzyl alcohol	ND	ug/kg	768	1	12/22/07 00:00	12/28/07 05:54	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	101-55-3	
Butylbenzylphthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	768	1	12/22/07 00:00	12/28/07 05:54	59-50-7	
4-Chloroaniline	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	108-60-1	
2-Chloronaphthalene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	91-58-7	
2-Chlorophenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	7005-72-3	
Chrysene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	53-70-3	
Dibenzofuran	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	120-83-2	
Diethylphthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	105-67-9	
Dimethylphthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	131-11-3	
Di-n-butylphthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	768	1	12/22/07 00:00	12/28/07 05:54	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	606-20-2	
Di-n-octylphthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	117-81-7	
Fluoranthene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	206-44-0	
Fluorene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	87-68-3	
Hexachlorobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	77-47-4	
Hexachloroethane	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	193-39-5	
Isophorone	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	78-59-1	
1-Methylnaphthalene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	90-12-0	
2-Methylnaphthalene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	95-48-7	

Date: 12/31/2007 11:27 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1103B75L Lab ID: 9210454003 Collected: 12/20/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54		
Naphthalene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	91-20-3	
2-Nitroaniline	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	88-74-4	
3-Nitroaniline	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	99-09-2	
4-Nitroaniline	ND	ug/kg	768	1	12/22/07 00:00	12/28/07 05:54	100-01-6	
Nitrobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	98-95-3	
2-Nitrophenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	88-75-5	
4-Nitrophenol	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	86-30-6	
Pentachlorophenol	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	87-86-5	
Phenanthrene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	85-01-8	
Phenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	108-95-2	
Pyrene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	88-06-2	
Nitrobenzene-d5 (S)	40 %		10-120	1	12/22/07 00:00	12/28/07 05:54	4165-60-0	
2-Fluorobiphenyl (S)	46 %		10-120	1	12/22/07 00:00	12/28/07 05:54	321-60-8	
Terphenyl-d14 (S)	45 %		10-116	1	12/22/07 00:00	12/28/07 05:54	1718-51-0	
Phenol-d6 (S)	45 %		10-120	1	12/22/07 00:00	12/28/07 05:54	13127-88-3	
2-Fluorophenol (S)	39 %		10-120	1	12/22/07 00:00	12/28/07 05:54	367-12-4	
2,4,6-Tribromophenol (S)	51 %		10-116	1	12/22/07 00:00	12/28/07 05:54	118-79-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	14.1 %		0.10	1		12/26/07 15:11		

Sample: T1103B90L Lab ID: 9210454004 Collected: 12/20/07 11:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.1	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:55	7440-38-2	
Barium	70.6	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:55	7440-39-3	
Cadmium	ND	mg/kg	0.095	1	12/27/07 12:00	12/28/07 18:55	7440-43-9	
Chromium	22.1	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:55	7440-47-3	
Lead	19.0	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:55	7439-92-1	
Selenium	5.0	mg/kg	0.95	1	12/27/07 12:00	12/28/07 18:55	7782-49-2	
Silver	ND	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:55	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.23	mg/kg	0.025	5	12/27/07 10:27	12/27/07 15:13	7439-97-6	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B90L Lab ID: 9210454004 Collected: 12/20/07 11:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	83-32-9	
Acenaphthylene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	208-96-8	
Aniline	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	62-53-3	
Anthracene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	120-12-7	
Benzo(a)anthracene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	56-55-3	
Benzo(a)pyrene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	207-08-9	
Benzoic acid	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	65-85-0	
Benzyl alcohol	ND	ug/kg	751	1	12/22/07 00:00	12/28/07 07:17	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	101-55-3	
Butylbenzylphthalate	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	751	1	12/22/07 00:00	12/28/07 07:17	59-50-7	
4-Chloroaniline	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	108-60-1	
2-Chloronaphthalene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	91-58-7	
2-Chlorophenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	7005-72-3	
Chrysene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	53-70-3	
Dibenzofuran	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	120-83-2	
Diethylphthalate	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	105-67-9	
Dimethylphthalate	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	131-11-3	
Di-n-butylphthalate	2430	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	751	1	12/22/07 00:00	12/28/07 07:17	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	606-20-2	
Di-n-octylphthalate	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	117-81-7	
Fluoranthene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	206-44-0	
Fluorene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	87-68-3	
Hexachlorobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	77-47-4	
Hexachloroethane	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	67-72-1	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1103B90L Lab ID: 9210454004 Collected: 12/20/07 11:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Indeno(1,2,3-cd)pyrene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	193-39-5	
Isophorone	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	78-59-1	
1-Methylnaphthalene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	90-12-0	
2-Methylnaphthalene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17		
Naphthalene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	91-20-3	
2-Nitroaniline	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	88-74-4	
3-Nitroaniline	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	99-09-2	
4-Nitroaniline	ND	ug/kg	751	1	12/22/07 00:00	12/28/07 07:17	100-01-6	
Nitrobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	98-95-3	
2-Nitrophenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	88-75-5	
4-Nitrophenol	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	86-30-6	
Pentachlorophenol	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	87-86-5	
Phenanthrene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	85-01-8	
Phenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	108-95-2	
Pyrene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	88-06-2	
Nitrobenzene-d5 (S)	54 %		10-120	1	12/22/07 00:00	12/28/07 07:17	4165-60-0	
2-Fluorobiphenyl (S)	58 %		10-120	1	12/22/07 00:00	12/28/07 07:17	321-60-8	
Terphenyl-d14 (S)	71 %		10-116	1	12/22/07 00:00	12/28/07 07:17	1718-51-0	
Phenol-d6 (S)	59 %		10-120	1	12/22/07 00:00	12/28/07 07:17	13127-88-3	
2-Fluorophenol (S)	52 %		10-120	1	12/22/07 00:00	12/28/07 07:17	367-12-4	
2,4,6-Tribromophenol (S)	61 %		10-116	1	12/22/07 00:00	12/28/07 07:17	118-79-6	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture 12.1 % 0.10 1 12/26/07 15:12

Sample: T1103B100L Lab ID: 9210454005 Collected: 12/20/07 11:40 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.0	mg/kg	0.55	1	12/27/07 12:00	12/28/07 19:00	7440-38-2	
Barium	80.8	mg/kg	0.55	1	12/27/07 12:00	12/28/07 19:00	7440-39-3	
Cadmium	ND	mg/kg	0.11	1	12/27/07 12:00	12/28/07 19:00	7440-43-9	
Chromium	11.9	mg/kg	0.55	1	12/27/07 12:00	12/28/07 19:00	7440-47-3	
Lead	12.8	mg/kg	0.55	1	12/27/07 12:00	12/28/07 19:00	7439-92-1	
Selenium	4.9	mg/kg	1.1	1	12/27/07 12:00	12/28/07 19:00	7782-49-2	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B100L Lab ID: 9210454005 Collected: 12/20/07 11:40 Received: 12/21/07 13:30 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Silver	ND	mg/kg	0.55	1	12/27/07 12:00	12/28/07 19:00	7440-22-4	
7471 Mercury								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.040	mg/kg	0.0065	1	12/27/07 10:27	12/27/07 12:03	7439-97-6	
8270 MSSV PFE								
Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	83-32-9	
Acenaphthylene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	208-96-8	
Aniline	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	62-53-3	
Anthracene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	120-12-7	
Benzo(a)anthracene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	56-55-3	
Benzo(a)pyrene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	207-08-9	
Benzoic acid	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	65-85-0	
Benzyl alcohol	ND	ug/kg	831	1	12/22/07 00:00	12/28/07 04:30	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	101-55-3	
Butylbenzylphthalate	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	831	1	12/22/07 00:00	12/28/07 04:30	59-50-7	
4-Chloroaniline	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	108-60-1	
2-Chloronaphthalene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	91-58-7	
2-Chlorophenol	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	7005-72-3	
Chrysene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	53-70-3	
Dibenzofuran	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	120-83-2	
Diethylphthalate	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	105-67-9	
Dimethylphthalate	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	131-11-3	
Di-n-butylphthalate	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	831	1	12/22/07 00:00	12/28/07 04:30	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	606-20-2	
Di-n-octylphthalate	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	122-66-7	

Date: 12/31/2007 11:27 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B100L Lab ID: 9210454005 Collected: 12/20/07 11:40 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
bis(2-Ethylhexyl)phthalate	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	117-81-7	
Fluoranthene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	206-44-0	
Fluorene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	87-68-3	
Hexachlorobenzene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	77-47-4	
Hexachloroethane	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	193-39-5	
Isophorone	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	78-59-1	
1-Methylnaphthalene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	90-12-0	
2-Methylnaphthalene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30		
Naphthalene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	91-20-3	
2-Nitroaniline	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	88-74-4	
3-Nitroaniline	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	99-09-2	
4-Nitroaniline	ND	ug/kg	831	1	12/22/07 00:00	12/28/07 04:30	100-01-6	
Nitrobenzene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	98-95-3	
2-Nitrophenol	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	88-75-5	
4-Nitrophenol	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	86-30-6	
Pentachlorophenol	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	87-86-5	
Phenanthrene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	85-01-8	
Phenol	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	108-95-2	
Pyrene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	88-06-2	
Nitrobenzene-d5 (S)	42 %		10-120	1	12/22/07 00:00	12/28/07 04:30	4165-60-0	
2-Fluorobiphenyl (S)	41 %		10-120	1	12/22/07 00:00	12/28/07 04:30	321-60-8	
Terphenyl-d14 (S)	39 %		10-116	1	12/22/07 00:00	12/28/07 04:30	1718-51-0	
Phenol-d6 (S)	46 %		10-120	1	12/22/07 00:00	12/28/07 04:30	13127-88-3	
2-Fluorophenol (S)	44 %		10-120	1	12/22/07 00:00	12/28/07 04:30	367-12-4	
2,4,6-Tribromophenol (S)	48 %		10-116	1	12/22/07 00:00	12/28/07 04:30	118-79-6	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	20.6 %	0.10	1	12/26/07 16:08
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Date: 12/31/2007 11:27 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B85LF Lab ID: 9210454006 Collected: 12/20/07 12:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	ND	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:06	7440-38-2	
Barium	2.0	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:06	7440-39-3	
Cadmium	ND	mg/kg	0.096	1	12/27/07 12:00	12/28/07 19:06	7440-43-9	
Chromium	0.65	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:06	7440-47-3	
Lead	11.7	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:06	7439-92-1	
Selenium	ND	mg/kg	0.96	1	12/27/07 12:00	12/28/07 19:06	7782-49-2	
Silver	ND	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:06	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.0055	mg/kg	0.0044	1	12/27/07 10:27	12/27/07 12:05	7439-97-6	

Sample: T11A03B10L Lab ID: 9210454007 Collected: 12/20/07 13:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	159	mg/kg	0.47	1	12/27/07 12:00	12/28/07 19:10	7440-38-2	
Barium	68.4	mg/kg	0.47	1	12/27/07 12:00	12/28/07 19:10	7440-39-3	
Cadmium	ND	mg/kg	0.094	1	12/27/07 12:00	12/28/07 19:10	7440-43-9	
Chromium	6.6	mg/kg	0.47	1	12/27/07 12:00	12/28/07 19:10	7440-47-3	
Lead	15.3	mg/kg	0.47	1	12/27/07 12:00	12/28/07 19:10	7439-92-1	
Selenium	6.5	mg/kg	0.94	1	12/27/07 12:00	12/28/07 19:10	7782-49-2	
Silver	ND	mg/kg	0.47	1	12/27/07 12:00	12/28/07 19:10	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.27	mg/kg	0.058	10	12/27/07 10:27	12/27/07 15:15	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	10.1	%	0.10	1		12/26/07 16:08		

Sample: T11A03B23L Lab ID: 9210454008 Collected: 12/20/07 13:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.8	mg/kg	0.44	1	12/27/07 12:00	12/28/07 19:24	7440-38-2	
Barium	77.6	mg/kg	0.44	1	12/27/07 12:00	12/28/07 19:24	7440-39-3	
Cadmium	ND	mg/kg	0.089	1	12/27/07 12:00	12/28/07 19:24	7440-43-9	
Chromium	15.4	mg/kg	0.44	1	12/27/07 12:00	12/28/07 19:24	7440-47-3	
Lead	16.4	mg/kg	0.44	1	12/27/07 12:00	12/28/07 19:24	7439-92-1	
Selenium	5.5	mg/kg	0.89	1	12/27/07 12:00	12/28/07 19:24	7782-49-2	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T11A03B23L Lab ID: 9210454008 Collected: 12/20/07 13:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Silver	ND	mg/kg	0.44	1	12/27/07 12:00	12/28/07 19:24	7440-22-4	
7471 Mercury								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.11	mg/kg	0.0072	1	12/27/07 10:27	12/27/07 12:17	7439-97-6	
8270 MSSV PFE								
Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	83-32-9	
Acenaphthylene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	208-96-8	
Aniline	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	62-53-3	
Anthracene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	120-12-7	
Benzo(a)anthracene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	56-55-3	
Benzo(a)pyrene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	207-08-9	
Benzoic acid	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	65-85-0	
Benzyl alcohol	ND	ug/kg	821	1	12/22/07 00:00	12/28/07 06:56	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	101-55-3	
Butylbenzylphthalate	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	821	1	12/22/07 00:00	12/28/07 06:56	59-50-7	
4-Chloroaniline	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	108-60-1	
2-Chloronaphthalene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	91-58-7	
2-Chlorophenol	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	7005-72-3	
Chrysene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	53-70-3	
Dibenzofuran	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	120-83-2	
Diethylphthalate	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	105-67-9	
Dimethylphthalate	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	131-11-3	
Di-n-butylphthalate	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	821	1	12/22/07 00:00	12/28/07 06:56	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	606-20-2	
Di-n-octylphthalate	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	122-66-7	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T11A03B23L Lab ID: 9210454008 Collected: 12/20/07 13:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
bis(2-Ethylhexyl)phthalate	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	117-81-7	
Fluoranthene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	206-44-0	
Fluorene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	87-68-3	
Hexachlorobenzene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	77-47-4	
Hexachloroethane	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	193-39-5	
Isophorone	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	78-59-1	
1-Methylnaphthalene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	90-12-0	
2-Methylnaphthalene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 08:56	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56		
Naphthalene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	91-20-3	
2-Nitroaniline	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	88-74-4	
3-Nitroaniline	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	99-09-2	
4-Nitroaniline	ND	ug/kg	821	1	12/22/07 00:00	12/28/07 06:56	100-01-6	
Nitrobenzene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	98-95-3	
2-Nitrophenol	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	88-75-5	
4-Nitrophenol	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	86-30-6	
Pentachlorophenol	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	87-86-5	
Phenanthrene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	85-01-8	
Phenol	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	108-95-2	
Pyrene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	88-06-2	
Nitrobenzene-d5 (S)	50 %		10-120	1	12/22/07 00:00	12/28/07 06:56	4165-60-0	
2-Fluorobiphenyl (S)	55 %		10-120	1	12/22/07 00:00	12/28/07 06:56	321-60-8	
Terphenyl-d14 (S)	68 %		10-116	1	12/22/07 00:00	12/28/07 08:56	1718-51-0	
Phenol-d6 (S)	40 %		10-120	1	12/22/07 00:00	12/28/07 06:56	13127-88-3	
2-Fluorophenol (S)	22 %		10-120	1	12/22/07 00:00	12/28/07 06:56	367-12-4	
2,4,6-Tribromophenol (S)	55 %		10-116	1	12/22/07 00:00	12/28/07 06:56	118-79-6	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	19.6 %	0.10	1	12/26/07 16:09
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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1403B25L Lab ID: 9210454009 Collected: 12/20/07 16:00 Received: 12/21/07 13:30 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.0	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:37	7440-38-2	
Barium	79.2	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:37	7440-39-3	
Cadmium	ND	mg/kg	0.095	1	12/27/07 12:00	12/28/07 19:37	7440-43-9	
Chromium	9.7	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:37	7440-47-3	
Lead	18.9	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:37	7439-92-1	
Selenium	5.6	mg/kg	0.95	1	12/27/07 12:00	12/28/07 19:37	7782-49-2	
Silver	ND	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:37	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.32	mg/kg	0.050	10	12/27/07 10:27	12/27/07 15:18	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	12.6	%	0.10	1		12/26/07 16:09		

Sample: T1503B25L Lab ID: 9210454010 Collected: 12/20/07 16:30 Received: 12/21/07 13:30 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.6	mg/kg	0.50	1	12/27/07 12:00	12/28/07 19:57	7440-38-2	
Barium	71.0	mg/kg	0.50	1	12/27/07 12:00	12/28/07 19:57	7440-39-3	
Cadmium	ND	mg/kg	0.10	1	12/27/07 12:00	12/28/07 19:57	7440-43-9	
Chromium	9.6	mg/kg	0.50	1	12/27/07 12:00	12/28/07 19:57	7440-47-3	
Lead	17.0	mg/kg	0.50	1	12/27/07 12:00	12/28/07 19:57	7439-92-1	
Selenium	5.6	mg/kg	1.0	1	12/27/07 12:00	12/28/07 19:57	7782-49-2	
Silver	ND	mg/kg	0.50	1	12/27/07 12:00	12/28/07 19:57	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.12	mg/kg	0.0063	1	12/27/07 10:27	12/27/07 12:24	7439-97-6	
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	83-32-9	
Acenaphthylene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	208-96-8	
Aniline	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	62-53-3	
Anthracene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	120-12-7	
Benzo(a)anthracene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	56-55-3	
Benzo(a)pyrene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	207-08-9	
Benzoic acid	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	65-85-0	
Benzyl alcohol	ND	ug/kg	779	1	12/22/07 00:00	12/28/07 03:28	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	101-55-3	

Date: 12/31/2007 11:27 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1503B25L Lab ID: 9210454010 Collected: 12/20/07 16:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Butylbenzylphthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	779	1	12/22/07 00:00	12/28/07 03:28	59-50-7	
4-Chloroaniline	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	108-60-1	
2-Chloronaphthalene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	91-58-7	
2-Chlorophenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	7005-72-3	
Chrysene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	53-70-3	
Dibenzofuran	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	120-83-2	
Diethylphthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	105-67-9	
Dimethylphthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	131-11-3	
Di-n-butylphthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	779	1	12/22/07 00:00	12/28/07 03:28	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	606-20-2	
Di-n-octylphthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	117-81-7	
Fluoranthene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	206-44-0	
Fluorene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	87-68-3	
Hexachlorobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	77-47-4	
Hexachloroethane	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	193-39-5	
Isophorone	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	78-59-1	
1-Methylnaphthalene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	90-12-0	
2-Methylnaphthalene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28		
Naphthalene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	91-20-3	
2-Nitroaniline	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	88-74-4	
3-Nitroaniline	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	99-09-2	
4-Nitroaniline	ND	ug/kg	779	1	12/22/07 00:00	12/28/07 03:28	100-01-6	
Nitrobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	98-95-3	
2-Nitrophenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	88-75-5	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1503B25L Lab ID: 9210454010 Collected: 12/20/07 16:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
4-Nitrophenol	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	86-30-6	
Pentachlorophenol	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	87-86-5	
Phenanthrene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	85-01-8	
Phenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	108-95-2	
Pyrene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	88-06-2	
Nitrobenzene-d5 (S)	31 %		10-120	1	12/22/07 00:00	12/28/07 03:28	4165-60-0	
2-Fluorobiphenyl (S)	38 %		10-120	1	12/22/07 00:00	12/28/07 03:28	321-60-8	
Terphenyl-d14 (S)	47 %		10-116	1	12/22/07 00:00	12/28/07 03:28	1718-51-0	
Phenol-d6 (S)	33 %		10-120	1	12/22/07 00:00	12/28/07 03:28	13127-88-3	
2-Fluorophenol (S)	23 %		10-120	1	12/22/07 00:00	12/28/07 03:28	367-12-4	
2,4,6-Tribromophenol (S)	43 %		10-116	1	12/22/07 00:00	12/28/07 03:28	118-79-6	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture 15.3 % 0.10 1 12/26/07 16:09

Sample: T1603B25L Lab ID: 9210454011 Collected: 12/20/07 17:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.0	mg/kg	0.57	1	12/27/07 12:00	12/28/07 20:03	7440-38-2	
Barium	59.7	mg/kg	0.57	1	12/27/07 12:00	12/28/07 20:03	7440-39-3	
Cadmium	ND	mg/kg	0.11	1	12/27/07 12:00	12/28/07 20:03	7440-43-9	
Chromium	10.8	mg/kg	0.57	1	12/27/07 12:00	12/28/07 20:03	7440-47-3	
Lead	10.8	mg/kg	0.57	1	12/27/07 12:00	12/28/07 20:03	7439-92-1	
Selenium	4.5	mg/kg	1.1	1	12/27/07 12:00	12/28/07 20:03	7782-49-2	
Silver	ND	mg/kg	0.57	1	12/27/07 12:00	12/28/07 20:03	7440-22-4	

7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury 0.050 mg/kg 0.0062 1 12/27/07 10:27 12/27/07 12:26 7439-97-6

8270 MSSV PFE

Analytical Method: EPA 8270 Preparation Method: EPA 3545

Acenaphthene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	83-32-9	
Acenaphthylene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	208-96-8	
Aniline	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	62-53-3	
Anthracene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	120-12-7	
Benzo(a)anthracene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	56-55-3	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1603B25L Lab ID: 9210454011 Collected: 12/20/07 17:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Benzo(a)pyrene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	207-08-9	
Benzoic acid	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	65-85-0	
Benzyl alcohol	ND	ug/kg	791	1	12/22/07 00:00	12/28/07 03:49	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	101-55-3	
Butylbenzylphthalate	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	791	1	12/22/07 00:00	12/28/07 03:49	59-50-7	
4-Chloroaniline	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	108-60-1	
2-Chloronaphthalene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	91-56-7	
2-Chlorophenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	7005-72-3	
Chrysene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	53-70-3	
Dibenzofuran	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	120-83-2	
Diethylphthalate	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	105-67-9	
Dimethylphthalate	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	131-11-3	
Di-n-butylphthalate	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	791	1	12/22/07 00:00	12/28/07 03:49	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	606-20-2	
Di-n-octylphthalate	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	117-81-7	
Fluoranthene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	206-44-0	
Fluorene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	87-68-3	
Hexachlorobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	77-47-4	
Hexachloroethane	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	193-39-5	
Isophorone	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	78-59-1	
1-Methylnaphthalene	ND	ug/kg	396	1	12/22/07 00:00	12/26/07 03:49	90-12-0	
2-Methylnaphthalene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	396	1	12/22/07 00:00	12/26/07 03:49	95-48-7	

Date: 12/31/2007 11:27 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1603B25L Lab ID: 9210454011 Collected: 12/20/07 17:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49		
Naphthalene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	91-20-3	
2-Nitroaniline	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	88-74-4	
3-Nitroaniline	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	99-09-2	
4-Nitroaniline	ND	ug/kg	791	1	12/22/07 00:00	12/28/07 03:49	100-01-6	
Nitrobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	98-95-3	
2-Nitrophenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	88-75-5	
4-Nitrophenol	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	86-30-6	
Pentachlorophenol	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	87-86-5	
Phenanthrene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	85-01-8	
Phenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	108-95-2	
Pyrene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	88-06-2	
Nitrobenzene-d5 (S)	36 %		10-120	1	12/22/07 00:00	12/28/07 03:49	4165-60-0	
2-Fluorobiphenyl (S)	38 %		10-120	1	12/22/07 00:00	12/28/07 03:49	321-60-8	
Terphenyl-d14 (S)	41 %		10-116	1	12/22/07 00:00	12/28/07 03:49	1718-51-0	
Phenol-d6 (S)	37 %		10-120	1	12/22/07 00:00	12/28/07 03:49	13127-88-3	
2-Fluorophenol (S)	24 %		10-120	1	12/22/07 00:00	12/28/07 03:49	367-12-4	
2,4,6-Tribromophenol (S)	45 %		10-116	1	12/22/07 00:00	12/28/07 03:49	118-79-6	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture 16.6 % 0.10 1 12/26/07 16:09

Sample: T1110B10L Lab ID: 9210454012 Collected: 12/20/07 10:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.5	mg/kg	0.48	1	12/27/07 12:00	12/28/07 20:08	7440-38-2	
Barium	90.5	mg/kg	0.48	1	12/27/07 12:00	12/28/07 20:08	7440-39-3	
Cadmium	ND	mg/kg	0.097	1	12/27/07 12:00	12/28/07 20:08	7440-43-9	
Chromium	13.8	mg/kg	0.48	1	12/27/07 12:00	12/28/07 20:08	7440-47-3	
Lead	15.1	mg/kg	0.48	1	12/27/07 12:00	12/28/07 20:08	7439-92-1	
Selenium	6.0	mg/kg	0.97	1	12/27/07 12:00	12/28/07 20:08	7782-49-2	
Silver	ND	mg/kg	0.48	1	12/27/07 12:00	12/28/07 20:08	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.20	mg/kg	0.013	2	12/27/07 10:27	12/27/07 15:20	7439-97-6	

Date: 12/31/2007 11:27 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1110B10L Lab ID: 9210454012 Collected: 12/20/07 10:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	83-32-9	
Acenaphthylene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	208-96-8	
Aniline	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	62-53-3	
Anthracene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	120-12-7	
Benzo(a)anthracene	1260	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	56-55-3	
Benzo(a)pyrene	839	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	50-32-8	
Benzo(b)fluoranthene	689	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	191-24-2	
Benzo(k)fluoranthene	806	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	207-08-9	
Benzoic acid	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	65-85-0	
Benzyl alcohol	ND	ug/kg	791	1	12/26/07 00:00	12/28/07 05:12	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	101-55-3	
Butylbenzylphthalate	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	791	1	12/26/07 00:00	12/28/07 05:12	59-50-7	
4-Chloroaniline	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	108-60-1	
2-Chloronaphthalene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	91-58-7	
2-Chlorophenol	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	7005-72-3	
Chrysene	1190	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	53-70-3	
Dibenzofuran	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	120-83-2	
Diethylphthalate	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	105-67-9	
Dimethylphthalate	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	131-11-3	
Di-n-butylphthalate	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	791	1	12/26/07 00:00	12/28/07 05:12	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	606-20-2	
Di-n-octylphthalate	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	117-81-7	
Fluoranthene	2170	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	206-44-0	
Fluorene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	87-68-3	
Hexachlorobenzene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	77-47-4	
Hexachloroethane	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	67-72-1	

Date: 12/31/2007 11:27 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1110B10L Lab ID: 9210454012 Collected: 12/20/07 10:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Indeno(1,2,3-cd)pyrene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	193-39-5	
Isophorone	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	78-59-1	
1-Methylnaphthalene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	90-12-0	
2-Methylnaphthalene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12		
Naphthalene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	91-20-3	
2-Nitroaniline	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	88-74-4	
3-Nitroaniline	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	99-09-2	
4-Nitroaniline	ND	ug/kg	791	1	12/26/07 00:00	12/28/07 05:12	100-01-6	
Nitrobenzene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	98-95-3	
2-Nitrophenol	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	88-75-5	
4-Nitrophenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	86-30-6	
Pentachlorophenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	87-86-5	
Phenanthrene	1040	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	85-01-8	
Phenol	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	108-95-2	
Pyrene	1980	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	88-06-2	
Nitrobenzene-d5 (S)	53	%	10-120	1	12/26/07 00:00	12/28/07 05:12	4165-60-0	
2-Fluorobiphenyl (S)	45	%	10-120	1	12/26/07 00:00	12/28/07 05:12	321-60-8	
Terphenyl-d14 (S)	54	%	10-116	1	12/26/07 00:00	12/28/07 05:12	1718-51-0	
Phenol-d6 (S)	52	%	10-120	1	12/26/07 00:00	12/28/07 05:12	13127-88-3	
2-Fluorophenol (S)	45	%	10-120	1	12/26/07 00:00	12/28/07 05:12	367-12-4	
2,4,6-Tribromophenol (S)	70	%	10-116	1	12/26/07 00:00	12/28/07 05:12	118-79-6	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture 16.5 % 0.10 1 12/26/07 16:10

Sample: T1103B102L Lab ID: 9210454013 Collected: 12/20/07 11:45 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.8	mg/kg	0.53	1	12/27/07 12:00	12/28/07 20:14	7440-38-2	
Barium	72.2	mg/kg	0.53	1	12/27/07 12:00	12/28/07 20:14	7440-39-3	
Cadmium	ND	mg/kg	0.11	1	12/27/07 12:00	12/28/07 20:14	7440-43-9	
Chromium	11.3	mg/kg	0.53	1	12/27/07 12:00	12/28/07 20:14	7440-47-3	
Lead	9.7	mg/kg	0.53	1	12/27/07 12:00	12/28/07 20:14	7439-92-1	
Selenium	5.6	mg/kg	1.1	1	12/27/07 12:00	12/28/07 20:14	7782-49-2	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B102L Lab ID: 9210454013 Collected: 12/20/07 11:45 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Silver	ND	mg/kg	0.53	1	12/27/07 12:00	12/28/07 20:14	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.034	mg/kg	0.0067	1	12/27/07 10:27	12/27/07 12:31	7439-97-6	
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	83-32-9	
Acenaphthylene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	208-96-8	
Aniline	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	62-53-3	
Anthracene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	120-12-7	
Benzo(a)anthracene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	56-55-3	
Benzo(a)pyrene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	207-08-9	
Benzoic acid	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	65-85-0	
Benzyl alcohol	ND	ug/kg	822	1	12/26/07 00:00	12/28/07 05:33	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	101-55-3	
Butylbenzylphthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	822	1	12/26/07 00:00	12/28/07 05:33	59-50-7	
4-Chloroaniline	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	108-60-1	
2-Chloronaphthalene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	91-58-7	
2-Chlorophenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	7005-72-3	
Chrysene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	53-70-3	
Dibenzofuran	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	120-83-2	
Diethylphthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	105-67-9	
Dimethylphthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	131-11-3	
Di-n-butylphthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	822	1	12/26/07 00:00	12/28/07 05:33	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	606-20-2	
Di-n-octylphthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	122-66-7	

Date: 12/31/2007 11:27 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1103B102L Lab ID: 9210454013 Collected: 12/20/07 11:45 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
bis(2-Ethylhexyl)phthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	117-81-7	
Fluoranthene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	206-44-0	
Fluorene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	87-68-3	
Hexachlorobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	77-47-4	
Hexachloroethane	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	193-39-5	
Isophorone	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	78-59-1	
1-Methylnaphthalene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	90-12-0	
2-Methylnaphthalene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33		
Naphthalene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	91-20-3	
2-Nitroaniline	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	88-74-4	
3-Nitroaniline	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	99-09-2	
4-Nitroaniline	ND	ug/kg	822	1	12/26/07 00:00	12/28/07 05:33	100-01-6	
Nitrobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	98-95-3	
2-Nitrophenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	88-75-5	
4-Nitrophenol	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	86-30-6	
Pentachlorophenol	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	87-86-5	
Phenanthrene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	85-01-8	
Phenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	108-95-2	
Pyrene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	88-06-2	
Nitrobenzene-d5 (S)	43 %		10-120	1	12/26/07 00:00	12/28/07 05:33	4165-60-0	
2-Fluorobiphenyl (S)	48 %		10-120	1	12/26/07 00:00	12/28/07 05:33	321-60-8	
Terphenyl-d14 (S)	51 %		10-116	1	12/26/07 00:00	12/28/07 05:33	1718-51-0	
Phenol-d6 (S)	50 %		10-120	1	12/26/07 00:00	12/28/07 05:33	13127-88-3	
2-Fluorophenol (S)	41 %		10-120	1	12/26/07 00:00	12/28/07 05:33	367-12-4	
2,4,6-Tribromophenol (S)	62 %		10-116	1	12/26/07 00:00	12/28/07 05:33	118-79-6	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	19.7 %	0.10	1	12/26/07 16:10
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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B24L Lab ID: 9210454014 Collected: 12/20/07 13:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.8	mg/kg	0.46	1	12/27/07 12:00	12/28/07 20:20	7440-38-2	
Barium	77.8	mg/kg	0.46	1	12/27/07 12:00	12/28/07 20:20	7440-39-3	
Cadmium	ND	mg/kg	0.092	1	12/27/07 12:00	12/28/07 20:20	7440-43-9	
Chromium	13.6	mg/kg	0.46	1	12/27/07 12:00	12/28/07 20:20	7440-47-3	
Lead	17.2	mg/kg	0.46	1	12/27/07 12:00	12/28/07 20:20	7439-92-1	
Selenium	5.5	mg/kg	0.92	1	12/27/07 12:00	12/28/07 20:20	7782-49-2	
Silver	ND	mg/kg	0.46	1	12/27/07 12:00	12/28/07 20:20	7440-22-4	
7471 Mercury								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.11	mg/kg	0.0071	1	12/27/07 10:27	12/27/07 12:34	7439-97-6	
8270 MSSV PFE								
Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	83-32-9	
Acenaphthylene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	208-96-8	
Aniline	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	62-53-3	
Anthracene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	120-12-7	
Benzo(a)anthracene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	56-55-3	
Benzo(a)pyrene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	207-08-9	
Benzoic acid	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	65-85-0	
Benzyl alcohol	ND	ug/kg	811	1	12/26/07 00:00	12/28/07 04:09	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	101-55-3	
Butylbenzylphthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	811	1	12/26/07 00:00	12/28/07 04:09	59-50-7	
4-Chloroaniline	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	108-60-1	
2-Chloronaphthalene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	91-58-7	
2-Chlorophenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	7005-72-3	
Chrysene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	53-70-3	
Dibenzofuran	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	120-83-2	
Diethylphthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	105-67-9	
Dimethylphthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	131-11-3	
Di-n-butylphthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	84-74-2	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B24L Lab ID: 9210454014 Collected: 12/20/07 13:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
4,6-Dinitro-2-methylphenol	ND	ug/kg	811	1	12/26/07 00:00	12/28/07 04:09	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	606-20-2	
Di-n-octylphthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	117-81-7	
Fluoranthene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	206-44-0	
Fluorene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	87-68-3	
Hexachlorobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	77-47-4	
Hexachloroethane	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	193-39-5	
Isophorone	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	78-59-1	
1-Methylnaphthalene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	90-12-0	
2-Methylnaphthalene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09		
Naphthalene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	91-20-3	
2-Nitroaniline	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	88-74-4	
3-Nitroaniline	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	99-09-2	
4-Nitroaniline	ND	ug/kg	811	1	12/26/07 00:00	12/28/07 04:09	100-01-6	
Nitrobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	98-95-3	
2-Nitrophenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	88-75-5	
4-Nitrophenol	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	86-30-6	
Pentachlorophenol	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	87-86-5	
Phenanthrene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	85-01-8	
Phenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	108-95-2	
Pyrene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	88-06-2	
Nitrobenzene-d5 (S)	42 %		10-120	1	12/26/07 00:00	12/28/07 04:09	4165-60-0	
2-Fluorobiphenyl (S)	36 %		10-120	1	12/26/07 00:00	12/28/07 04:09	321-60-8	
Terphenyl-d14 (S)	45 %		10-116	1	12/26/07 00:00	12/28/07 04:09	1718-51-0	
Phenol-d6 (S)	39 %		10-120	1	12/26/07 00:00	12/28/07 04:09	13127-88-3	
2-Fluorophenol (S)	28 %		10-120	1	12/26/07 00:00	12/28/07 04:09	367-12-4	
2,4,6-Tribromophenol (S)	46 %		10-116	1	12/26/07 00:00	12/28/07 04:09	118-79-6	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

18.7 %

0.10

1

12/26/07 16:10

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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: OEXT/2048 Analysis Method: EPA 8270
QC Batch Method: EPA 3545 Analysis Description: 8270 Solid MSSV
Associated Lab Samples: 9210454002, 9210454003, 9210454004, 9210454005, 9210454008, 9210454010, 9210454011

METHOD BLANK: 57686

Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	330	
1,2-Dichlorobenzene	ug/kg	ND	330	
1,2-Diphenylhydrazine	ug/kg	ND	330	
1,3-Dichlorobenzene	ug/kg	ND	330	
1,4-Dichlorobenzene	ug/kg	ND	330	
1-Methylnaphthalene	ug/kg	ND	330	
2,4,5-Trichlorophenol	ug/kg	ND	330	
2,4,6-Trichlorophenol	ug/kg	ND	330	
2,4-Dichlorophenol	ug/kg	ND	330	
2,4-Dimethylphenol	ug/kg	ND	330	
2,4-Dinitrophenol	ug/kg	ND	1650	
2,4-Dinitrotoluene	ug/kg	ND	330	
2,6-Dinitrotoluene	ug/kg	ND	330	
2-Chloronaphthalene	ug/kg	ND	330	
2-Chlorophenol	ug/kg	ND	330	
2-Methylnaphthalene	ug/kg	ND	330	
2-Methylphenol(o-Cresol)	ug/kg	ND	330	
2-Nitroaniline	ug/kg	ND	1650	
2-Nitrophenol	ug/kg	ND	330	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	330	
3,3'-Dichlorobenzidine	ug/kg	ND	1650	
3-Nitroaniline	ug/kg	ND	1650	
4,6-Dinitro-2-methylphenol	ug/kg	ND	660	
4-Bromophenylphenyl ether	ug/kg	ND	330	
4-Chloro-3-methylphenol	ug/kg	ND	660	
4-Chloroaniline	ug/kg	ND	1650	
4-Chlorophenylphenyl ether	ug/kg	ND	330	
4-Nitroaniline	ug/kg	ND	660	
4-Nitrophenol	ug/kg	ND	1650	
Acenaphthene	ug/kg	ND	330	
Acenaphthylene	ug/kg	ND	330	
Aniline	ug/kg	ND	330	
Anthracene	ug/kg	ND	330	
Benzo(a)anthracene	ug/kg	ND	330	
Benzo(a)pyrene	ug/kg	ND	330	
Benzo(b)fluoranthene	ug/kg	ND	330	
Benzo(g,h,i)perylene	ug/kg	ND	330	
Benzo(k)fluoranthene	ug/kg	ND	330	
Benzoic acid	ug/kg	ND	1650	
Benzyl alcohol	ug/kg	ND	660	
bis(2-Chloroethoxy)methane	ug/kg	ND	330	
bis(2-Chloroethyl) ether	ug/kg	ND	330	

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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

METHOD BLANK: 57686

Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
bis(2-Chloroisopropyl) ether	ug/kg	ND	330	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	
Butylbenzylphthalate	ug/kg	ND	330	
Chrysene	ug/kg	ND	330	
Di-n-butylphthalate	ug/kg	ND	330	
Di-n-octylphthalate	ug/kg	ND	330	
Dibenz(a,h)anthracene	ug/kg	ND	330	
Dibenzofuran	ug/kg	ND	330	
Diethylphthalate	ug/kg	ND	330	
Dimethylphthalate	ug/kg	ND	330	
Fluoranthene	ug/kg	ND	330	
Fluorene	ug/kg	ND	330	
Hexachloro-1,3-butadiene	ug/kg	ND	330	
Hexachlorobenzene	ug/kg	ND	330	
Hexachlorocyclopentadiene	ug/kg	ND	330	
Hexachloroethane	ug/kg	ND	330	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	
Isophorone	ug/kg	ND	330	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	
N-Nitrosodimethylamine	ug/kg	ND	330	
N-Nitrosodiphenylamine	ug/kg	ND	330	
Naphthalene	ug/kg	ND	330	
Nitrobenzene	ug/kg	ND	330	
Pentachlorophenol	ug/kg	ND	1650	
Phenanthrene	ug/kg	ND	330	
Phenol	ug/kg	ND	330	
Pyrene	ug/kg	ND	330	
2,4,6-Tribromophenol (S)	%	76	10-116	
2-Fluorobiphenyl (S)	%	65	10-120	
2-Fluorophenol (S)	%	64	10-120	
Nitrobenzene-d5 (S)	%	62	10-120	
Phenol-d6 (S)	%	63	10-120	
Terphenyl-d14 (S)	%	76	10-116	

LABORATORY CONTROL SAMPLE: 57687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1670	1180	71	21-102	
1,2-Dichlorobenzene	ug/kg	1670	1120	67	32-120	
1,2-Diphenylhydrazine	ug/kg	1670	1430	86	31-101	
1,3-Dichlorobenzene	ug/kg	1670	1100	66	29-120	
1,4-Dichlorobenzene	ug/kg	1670	1090	66	32-120	
1-Methylnaphthalene	ug/kg	1670	1340	81	29-108	
2,4,5-Trichlorophenol	ug/kg	1670	1500	90	41-112	

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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

LABORATORY CONTROL SAMPLE: 57687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,6-Trichlorophenol	ug/kg	1670	1480	89	35-116	
2,4-Dichlorophenol	ug/kg	1670	1400	84	25-110	
2,4-Dimethylphenol	ug/kg	1670	1300	78	31-101	
2,4-Dinitrophenol	ug/kg	1670	1170J	70	10-128	
2,4-Dinitrotoluene	ug/kg	1670	1520	91	43-120	
2,6-Dinitrotoluene	ug/kg	1670	1250	75	39-120	
2-Chloronaphthalene	ug/kg	1670	1340	80	40-109	
2-Chlorophenol	ug/kg	1670	1210	73	28-102	
2-Methylnaphthalene	ug/kg	1670	1330	80	30-104	
2-Methylphenol(o-Cresol)	ug/kg	1670	1250	75	31-101	
2-Nitroaniline	ug/kg	1670	1430J	86	39-109	
2-Nitrophenol	ug/kg	1670	1350	81	22-104	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	1390	83	30-112	
3,3'-Dichlorobenzidine	ug/kg	1670	1270J	76	10-120	
3-Nitroaniline	ug/kg	1670	1740	104	16-141	
4,6-Dinitro-2-methylphenol	ug/kg	1670	1330	80	28-119	
4-Bromophenylphenyl ether	ug/kg	1670	1370	82	35-119	
4-Chloro-3-methylphenol	ug/kg	1670	1540	92	28-116	
4-Chloroaniline	ug/kg	1670	1660	100	26-135	
4-Chlorophenylphenyl ether	ug/kg	1670	1510	91	44-112	
4-Nitroaniline	ug/kg	1670	1610	96	15-155	
4-Nitrophenol	ug/kg	1670	1170J	70	25-119	
Acenaphthene	ug/kg	1670	1460	88	38-109	
Acenaphthylene	ug/kg	1670	1520	91	38-109	
Aniline	ug/kg	1670	1370	82	44-135	
Anthracene	ug/kg	1670	1250	75	45-114	
Benzo(a)anthracene	ug/kg	1670	1470	88	45-109	
Benzo(a)pyrene	ug/kg	1670	1460	88	47-117	
Benzo(b)fluoranthene	ug/kg	1670	1170	70	32-113	
Benzo(g,h,i)perylene	ug/kg	1670	1450	87	10-149	
Benzo(k)fluoranthene	ug/kg	1670	1340	81	41-104	
Benzoic acid	ug/kg	1670	445J	27	10-120	
Benzyl alcohol	ug/kg	1670	1220	73	24-115	
bis(2-Chloroethoxy)methane	ug/kg	1670	1440	86	23-110	
bis(2-Chloroethyl) ether	ug/kg	1670	1270	76	23-106	
bis(2-Chloroisopropyl) ether	ug/kg	1670	1280	77	17-110	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1440	87	30-130	
Butylbenzylphthalate	ug/kg	1670	1390	83	35-122	
Chrysene	ug/kg	1670	1510	91	35-116	
Di-n-butylphthalate	ug/kg	1670	1330	80	40-118	
Di-n-octylphthalate	ug/kg	1670	1440	86	34-127	
Dibenz(a,h)anthracene	ug/kg	1670	1360	82	13-139	
Dibenzofuran	ug/kg	1670	1330	80	45-109	
Diethylphthalate	ug/kg	1670	1520	91	45-110	
Dimethylphthalate	ug/kg	1670	1460	87	44-108	
Fluoranthene	ug/kg	1670	1360	81	43-110	
Fluorene	ug/kg	1670	1480	89	40-111	
Hexachloro-1,3-butadiene	ug/kg	1670	1180	71	13-106	

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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

LABORATORY CONTROL SAMPLE: 57687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachlorobenzene	ug/kg	1670	1260	76	31-126	
Hexachlorocyclopentadiene	ug/kg	1670	1200	72	10-136	
Hexachloroethane	ug/kg	1670	1090	65	26-120	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1360	82	17-135	
Isophorone	ug/kg	1670	1640	98	13-179	
N-Nitroso-di-n-propylamine	ug/kg	1670	1420	85	26-115	
N-Nitrosodimethylamine	ug/kg	1670	1360	82	30-150	
N-Nitrosodiphenylamine	ug/kg	1670	1370	82	40-128	
Naphthalene	ug/kg	1670	1350	81	26-120	
Nitrobenzene	ug/kg	1670	1200	72	21-106	
Pentachlorophenol	ug/kg	1670	1250J	75	17-140	
Phenanthrene	ug/kg	1670	1430	86	45-110	
Phenol	ug/kg	1670	1250	75	29-105	
Pyrene	ug/kg	1670	1450	87	38-114	
2,4,6-Tribromophenol (S)	%			83	10-116	
2-Fluorobiphenyl (S)	%			90	10-120	
2-Fluorophenol (S)	%			77	10-120	
Nitrobenzene-d5 (S)	%			80	10-120	
Phenol-d6 (S)	%			77	10-120	
Terphenyl-d14 (S)	%			90	10-116	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 57688

57689

Parameter	Units	929958001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2,4-Trichlorobenzene	ug/kg	ND	2020	2020	1590J	1570J	79	78	10-120		
1,4-Dichlorobenzene	ug/kg	ND	2020	2020	1630J	1610J	81	80	10-120		
2,4-Dinitrotoluene	ug/kg	ND	2020	2020	1050J	1000J	52	50	21-109		
2-Chlorophenol	ug/kg	ND	2020	2020	1810J	1780J	90	88	10-120		
4-Chloro-3-methylphenol	ug/kg	ND	2020	2020	1880J	1560J	93	77	10-111		
4-Nitrophenol	ug/kg	ND	2020	2020	2150J	1970J	107	98	10-121		
Acenaphthene	ug/kg	ND	2020	2020	2040	2160	101	107	17-104	6 M0	
N-Nitroso-di-n-propylamine	ug/kg	ND	2020	2020	1940J	1920J	96	95	10-107		
Pentachlorophenol	ug/kg	ND	2020	2020	2320J	2300J	115	114	10-145		
Phenol	ug/kg	ND	2020	2020	1680J	1800J	83	89	10-120		
Pyrene	ug/kg	ND	2020	2020	3690	4340	157	190	13-114	16 M0	
2,4,6-Tribromophenol (S)	%						91	87	10-116		
2-Fluorobiphenyl (S)	%						105	98	10-120		
2-Fluorophenol (S)	%						95	88	10-120		
Nitrobenzene-d5 (S)	%						87	81	10-120		
Phenol-d6 (S)	%						90	83	10-120		
Terphenyl-d14 (S)	%						130	125	10-118	S0	

QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

QC Batch:	PMST/1342	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	9210454001, 9210454002, 9210454003, 9210454004		

SAMPLE DUPLICATE: 57890

Parameter	Units	9210451001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	32.3	36.1	11	



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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: PMST/1343 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 9210454005, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014

SAMPLE DUPLICATE: 57886

Parameter	Units	9210454005 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	20.6	19.3	7	



QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: MPRP/1660 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454006, 9210454007

METHOD BLANK: 58041

Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454006, 9210454007

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Arsenic	mg/kg	ND	0.50	
Barium	mg/kg	ND	0.50	
Cadmium	mg/kg	ND	0.10	
Chromium	mg/kg	ND	0.50	
Lead	mg/kg	ND	0.50	
Selenium	mg/kg	ND	1.0	
Silver	mg/kg	ND	0.50	

LABORATORY CONTROL SAMPLE: 58042

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	52.0	104	80-120	
Barium	mg/kg	50	48.7	97	80-120	
Cadmium	mg/kg	50	51.2	102	80-120	
Chromium	mg/kg	50	50.2	100	80-120	
Lead	mg/kg	50	51.3	103	80-120	
Selenium	mg/kg	50	50.5	101	80-120	
Silver	mg/kg	25	25.1	100	80-120	

MATRIX SPIKE SAMPLE: 58043

Parameter	Units	9210451001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	2.8	73.8	69.7	91	75-125	
Barium	mg/kg	58.4	73.8	137	106	75-125	
Cadmium	mg/kg	ND	73.8	68.2	93	75-125	
Chromium	mg/kg	12.8	73.8	81.8	93	75-125	
Lead	mg/kg	15.7	73.8	83.3	92	75-125	
Selenium	mg/kg	3.4	73.8	65.9	85	75-125	
Silver	mg/kg	ND	36.9	33.1	90	75-125	

SAMPLE DUPLICATE: 58044

Parameter	Units	9210451002 Result	Dup Result	RPD	Qualifiers
Arsenic	mg/kg	2.4	2.9	21	D6
Barium	mg/kg	98.8	71.9	31	D6
Cadmium	mg/kg	ND	ND		
Chromium	mg/kg	15.4	10.8	35	D6
Lead	mg/kg	8.4	8.8	5	

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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

SAMPLE DUPLICATE: 58044

Parameter	Units	9210451002 Result	Dup Result	RPD	Qualifiers
Selenium	mg/kg	7.0	6.5	8	
Silver	mg/kg	ND	ND		

QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: MPRP/1661 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 9210454008, 9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014

METHOD BLANK: 58045

Associated Lab Samples: 9210454008, 9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Arsenic	mg/kg	ND	0.50	
Barium	mg/kg	ND	0.50	
Cadmium	mg/kg	ND	0.10	
Chromium	mg/kg	ND	0.50	
Lead	mg/kg	ND	0.50	
Selenium	mg/kg	ND	1.0	
Silver	mg/kg	ND	0.50	

LABORATORY CONTROL SAMPLE: 58046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	52.7	105	80-120	
Barium	mg/kg	50	49.4	99	80-120	
Cadmium	mg/kg	50	52.1	104	80-120	
Chromium	mg/kg	50	51.3	103	80-120	
Lead	mg/kg	50	52.3	105	80-120	
Selenium	mg/kg	50	50.8	102	80-120	
Silver	mg/kg	25	25.6	102	80-120	

MATRIX SPIKE SAMPLE: 58047

Parameter	Units	9210454008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	1.8	67.6	64.0	92	75-125	
Barium	mg/kg	77.6	67.6	123	66	75-125	M3
Cadmium	mg/kg	ND	67.6	65.2	98	75-125	
Chromium	mg/kg	15.4	67.6	79.8	95	75-125	
Lead	mg/kg	16.4	67.6	81.4	96	75-125	
Selenium	mg/kg	5.5	67.6	64.2	87	75-125	
Silver	mg/kg	ND	33.8	32.7	97	75-125	

SAMPLE DUPLICATE: 58048

Parameter	Units	9210454009 Result	Dup Result	RPD	Qualifiers
Arsenic	mg/kg	2.0	2.1	7	
Barium	mg/kg	79.2	74.0	7	
Cadmium	mg/kg	ND	ND		
Chromium	mg/kg	9.7	9.5	2	
Lead	mg/kg	18.9	20.3	7	

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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

SAMPLE DUPLICATE: 58048

Parameter	Units	9210454009 Result	Dup Result	RPD	Qualifiers
Selenium	mg/kg	5.6	5.6	1	
Silver	mg/kg	ND	ND		

QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: MERP/1248 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454006, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014

METHOD BLANK: 58061

Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454006, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Mercury	mg/kg	ND	0.0050	

LABORATORY CONTROL SAMPLE: 58062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.067	0.072	108	80-120	

MATRIX SPIKE SAMPLE: 58063

Parameter	Units	9210451010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.15	.09	0.22	72	75-125	M0

SAMPLE DUPLICATE: 58064

Parameter	Units	9210451011 Result	Dup Result	RPD	Qualifiers
Mercury	mg/kg	0.058	0.028	69	R1

QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: OEXT/2067 Analysis Method: EPA 8270
QC Batch Method: EPA 3545 Analysis Description: 8270 Solid MSSV
Associated Lab Samples: 9210454012, 9210454013, 9210454014

METHOD BLANK: 58084

Associated Lab Samples: 9210454006, 9210454012, 9210454013, 9210454014

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	330	
1,2-Dichlorobenzene	ug/kg	ND	330	
1,2-Diphenylhydrazine	ug/kg	ND	330	
1,3-Dichlorobenzene	ug/kg	ND	330	
1,4-Dichlorobenzene	ug/kg	ND	330	
1-Methylnaphthalene	ug/kg	ND	330	
2,4,5-Trichlorophenol	ug/kg	ND	330	
2,4,6-Trichlorophenol	ug/kg	ND	330	
2,4-Dichlorophenol	ug/kg	ND	330	
2,4-Dimethylphenol	ug/kg	ND	330	
2,4-Dinitrophenol	ug/kg	ND	1650	
2,4-Dinitrotoluene	ug/kg	ND	330	
2,6-Dinitrotoluene	ug/kg	ND	330	
2-Chloronaphthalene	ug/kg	ND	330	
2-Chlorophenol	ug/kg	ND	330	
2-Methylnaphthalene	ug/kg	ND	330	
2-Methylphenol(o-Cresol)	ug/kg	ND	330	
2-Nitroaniline	ug/kg	ND	1650	
2-Nitrophenol	ug/kg	ND	330	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	330	
3,3'-Dichlorobenzidine	ug/kg	ND	1650	
3-Nitroaniline	ug/kg	ND	1650	
4,6-Dinitro-2-methylphenol	ug/kg	ND	660	
4-Bromophenylphenyl ether	ug/kg	ND	330	
4-Chloro-3-methylphenol	ug/kg	ND	660	
4-Chloroaniline	ug/kg	ND	1650	
4-Chlorophenylphenyl ether	ug/kg	ND	330	
4-Nitroaniline	ug/kg	ND	660	
4-Nitrophenol	ug/kg	ND	1650	
Acenaphthene	ug/kg	ND	330	
Acenaphthylene	ug/kg	ND	330	
Aniline	ug/kg	ND	330	
Anthracene	ug/kg	ND	330	
Benzo(a)anthracene	ug/kg	ND	330	
Benzo(a)pyrene	ug/kg	ND	330	
Benzo(b)fluoranthene	ug/kg	ND	330	
Benzo(g,h,i)perylene	ug/kg	ND	330	
Benzo(k)fluoranthene	ug/kg	ND	330	
Benzoic acid	ug/kg	ND	1650	
Benzyl alcohol	ug/kg	ND	660	
bis(2-Chloroethoxy)methane	ug/kg	ND	330	
bis(2-Chloroethyl) ether	ug/kg	ND	330	
bis(2-Chloroisopropyl) ether	ug/kg	ND	330	

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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

METHOD BLANK: 58084

Associated Lab Samples: 9210454006, 9210454012, 9210454013, 9210454014

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	
Butylbenzylphthalate	ug/kg	ND	330	
Chrysene	ug/kg	ND	330	
Di-n-butylphthalate	ug/kg	ND	330	
Di-n-octylphthalate	ug/kg	ND	330	
Dibenz(a,h)anthracene	ug/kg	ND	330	
Dibenzofuran	ug/kg	ND	330	
Diethylphthalate	ug/kg	ND	330	
Dimethylphthalate	ug/kg	ND	330	
Fluoranthene	ug/kg	ND	330	
Fluorene	ug/kg	ND	330	
Hexachloro-1,3-butadiene	ug/kg	ND	330	
Hexachlorobenzene	ug/kg	ND	330	
Hexachlorocyclopentadiene	ug/kg	ND	330	
Hexachloroethane	ug/kg	ND	330	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	
Isophorone	ug/kg	ND	330	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	
N-Nitrosodimethylamine	ug/kg	ND	330	
N-Nitrosodiphenylamine	ug/kg	ND	330	
Naphthalene	ug/kg	ND	330	
Nitrobenzene	ug/kg	ND	330	
Pentachlorophenol	ug/kg	ND	1650	
Phenanthrene	ug/kg	ND	330	
Phenol	ug/kg	ND	330	
Pyrene	ug/kg	ND	330	
2,4,6-Tribromophenol (S)	%	87	10-116	
2-Fluorobiphenyl (S)	%	75	10-120	
2-Fluorophenol (S)	%	63	10-120	
Nitrobenzene-d5 (S)	%	69	10-120	
Phenol-d6 (S)	%	66	10-120	
Terphenyl-d14 (S)	%	86	10-116	

LABORATORY CONTROL SAMPLE: 58085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1670	959	58	21-102	
1,2-Dichlorobenzene	ug/kg	1670	849	51	32-120	
1,2-Diphenylhydrazine	ug/kg	1670	1180	71	31-101	
1,3-Dichlorobenzene	ug/kg	1670	829	50	29-120	
1,4-Dichlorobenzene	ug/kg	1670	836	50	32-120	
1-Methylnaphthalene	ug/kg	1670	1480	89	29-108	
2,4,5-Trichlorophenol	ug/kg	1670	1230	74	41-112	
2,4,6-Trichlorophenol	ug/kg	1670	1260	75	35-116	
2,4-Dichlorophenol	ug/kg	1670	1110	67	25-110	

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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

LABORATORY CONTROL SAMPLE: 58085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dimethylphenol	ug/kg	1670	1140	68	31-101	
2,4-Dinitrophenol	ug/kg	1670	923J	55	10-128	
2,4-Dinitrotoluene	ug/kg	1670	1220	73	43-120	
2,6-Dinitrotoluene	ug/kg	1670	1090	65	39-120	
2-Chloronaphthalene	ug/kg	1670	1110	67	40-109	
2-Chlorophenol	ug/kg	1670	959	58	28-102	
2-Methylnaphthalene	ug/kg	1670	1090	65	30-104	
2-Methylphenol(o-Cresol)	ug/kg	1670	991	59	31-101	
2-Nitroaniline	ug/kg	1670	1290J	77	39-109	
2-Nitrophenol	ug/kg	1670	1100	66	22-104	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	1100	66	30-112	
3,3'-Dichlorobenzidine	ug/kg	1670	1010J	61	10-120	
3-Nitroaniline	ug/kg	1670	1370J	82	16-141	
4,6-Dinitro-2-methylphenol	ug/kg	1670	1110	66	28-119	
4-Bromophenylphenyl ether	ug/kg	1670	1130	68	35-119	
4-Chloro-3-methylphenol	ug/kg	1670	1210	73	28-116	
4-Chloroaniline	ug/kg	1670	1910	115	26-135	
4-Chlorophenylphenyl ether	ug/kg	1670	1170	70	44-112	
4-Nitroaniline	ug/kg	1670	1450	87	15-155	
4-Nitrophenol	ug/kg	1670	964J	58	25-119	
Acenaphthene	ug/kg	1670	1210	73	38-109	
Acenaphthylene	ug/kg	1670	1280	77	38-109	
Aniline	ug/kg	1670	1060	64	44-135	
Anthracene	ug/kg	1670	1250	75	45-114	
Benzo(a)anthracene	ug/kg	1670	1240	74	45-109	
Benzo(a)pyrene	ug/kg	1670	1240	74	47-117	
Benzo(b)fluoranthene	ug/kg	1670	1090	66	32-113	
Benzo(g,h,i)perylene	ug/kg	1670	1210	73	10-149	
Benzo(k)fluoranthene	ug/kg	1670	1030	62	41-104	
Benzoic acid	ug/kg	1670	463J	28	10-120	
Benzyl alcohol	ug/kg	1670	958	57	24-115	
bis(2-Chloroethoxy)methane	ug/kg	1670	1140	68	23-110	
bis(2-Chloroethyl) ether	ug/kg	1670	983	59	23-106	
bis(2-Chloroisopropyl) ether	ug/kg	1670	972	58	17-110	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1210	73	30-130	
Butylbenzylphthalate	ug/kg	1670	1180	71	35-122	
Chrysene	ug/kg	1670	1240	74	35-116	
Di-n-butylphthalate	ug/kg	1670	1150	69	40-118	
Di-n-octylphthalate	ug/kg	1670	1200	72	34-127	
Dibenz(a,h)anthracene	ug/kg	1670	1160	70	13-139	
Dibenzofuran	ug/kg	1670	1190	72	45-109	
Diethylphthalate	ug/kg	1670	1320	79	45-110	
Dimethylphthalate	ug/kg	1670	1280	77	44-108	
Fluoranthene	ug/kg	1670	1200	72	43-110	
Fluorene	ug/kg	1670	1300	78	40-111	
Hexachloro-1,3-butadiene	ug/kg	1670	952	57	13-106	
Hexachlorobenzene	ug/kg	1670	1050	63	31-126	
Hexachlorocyclopentadiene	ug/kg	1670	920	55	10-136	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

LABORATORY CONTROL SAMPLE: 58085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachloroethane	ug/kg	1670	800	48	26-120	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1180	71	17-135	
Isophorone	ug/kg	1670	1340	80	13-179	
N-Nitroso-di-n-propylamine	ug/kg	1670	1110	67	26-115	
N-Nitrosodimethylamine	ug/kg	1670	1100	66	30-150	
N-Nitrosodiphenylamine	ug/kg	1670	1160	69	40-128	
Naphthalene	ug/kg	1670	1090	65	26-120	
Nitrobenzene	ug/kg	1670	970	58	21-106	
Pentachlorophenol	ug/kg	1670	1100J	66	17-140	
Phenanthrene	ug/kg	1670	1200	72	45-110	
Phenol	ug/kg	1670	992	60	29-105	
Pyrene	ug/kg	1670	1260	76	38-114	
2,4,6-Tribromophenol (S)	%			80	10-116	
2-Fluorobiphenyl (S)	%			76	10-120	
2-Fluorophenol (S)	%			61	10-120	
Nitrobenzene-d5 (S)	%			67	10-120	
Phenol-d6 (S)	%			63	10-120	
Terphenyl-d14 (S)	%			79	10-116	

QUALIFIERS

Project: ECUSTA/123445
Pace Project No.: 9210454

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-A Pace Analytical Services - Asheville
PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
M0 Matrix spike recovery was outside laboratory control limits.
M3 Matrix spike recovery was outside laboratory control limits due to matrix interferences.
R1 RPD value was outside control limits.
S0 Surrogate recovery outside laboratory control limits.



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December 31, 2007

Mr. Paul Coker
Shaw E&I
3 Independence Pointe
Greenville, SC 29615

RE: Project: Ecusta Plant/123445
Pace Project No.: 9210451

Dear Mr. Coker:

Enclosed are the analytical results for sample(s) received by the laboratory on December 21, 2007. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brenda Pathammavong

brenda.pathammavong@pacelabs.com
Project Manager

Enclosures

cc: Mr. Bill Chadeayne, Shaw E&I

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Charlotte Certification IDs

North Carolina Drinking Water Certification Number: 37706
North Carolina Wastewater Certification Number: 12
North Carolina Field Services Certification Number: 5342
South Carolina Certification Number: 990060001
South Carolina Bioassay Certification Number: 990060003

Tennessee Certification Number: 04010
Virginia Certification Number: 00213
Florida/NELAP Certification Number: E87627
Kansas Certification Number: E-10364
Louisiana/LELAP Certification Number: 04034

Asheville Certification IDs

Florida/NELAP Certification Number: E87648
Louisiana/LELAP Certification Number: 03095
New Jersey Certification Number: NC011
North Carolina Drinking Water Certification Number: 37712
North Carolina Wastewater Certification Number: 40
North Carolina Bioassay Certification Number: 9

Pennsylvania Certification Number: 68-03578
South Carolina Certification Number: 99030001
South Carolina Bioassay Certification Number: 99030002
Tennessee Certification Number: 2980
Virginia Certification Number: 00072

Eden Certification IDs

North Carolina Drinking Water Certification Number: 37738
Virginia Drinking Water Certification Number: 00424

North Carolina Wastewater Certification Number: 633

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SAMPLE ANALYTE COUNT

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Lab ID	Sample ID	Method	Analytes Reported	Laboratory
9210451001	T104B20L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451002	T1A03B03L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451003	T206B30L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451004	T305B69L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451005	T1B03B03L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451006	T303B20L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451007	T306B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8082	8	PASI-C
9210451008	T306B75L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451009	T406B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451010	T506B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451011	T606B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451012	T2A06B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Lab ID	Sample ID	Method	Analytes Reported	Laboratory
9210451013	T706B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445

Pace Project No.: 9210451

Sample: T104B20L Lab ID: 9210451001 Collected: 12/18/07 12:05 Received: 12/21/07 13:30 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.8	mg/kg	0.65	1	12/27/07 12:00	12/28/07 16:56	7440-38-2	
Barium	58.4	mg/kg	0.65	1	12/27/07 12:00	12/28/07 16:56	7440-39-3	
Cadmium	ND	mg/kg	0.13	1	12/27/07 12:00	12/28/07 16:56	7440-43-9	
Chromium	12.8	mg/kg	0.65	1	12/27/07 12:00	12/28/07 16:56	7440-47-3	
Lead	15.7	mg/kg	0.65	1	12/27/07 12:00	12/28/07 16:56	7439-92-1	
Selenium	3.4	mg/kg	1.3	1	12/27/07 12:00	12/28/07 16:56	7782-49-2	
Silver	ND	mg/kg	0.65	1	12/27/07 12:00	12/28/07 16:56	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	2.3	mg/kg	0.13	20	12/26/07 11:25	12/26/07 16:23	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	32.3	%	0.10	1		12/26/07 15:08		

Sample: T1A03B03L Lab ID: 9210451002 Collected: 12/18/07 14:20 Received: 12/21/07 13:30 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.4	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:07	7440-38-2	
Barium	98.8	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:07	7440-39-3	
Cadmium	ND	mg/kg	0.12	1	12/27/07 12:00	12/28/07 17:07	7440-43-9	
Chromium	15.4	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:07	7440-47-3	
Lead	8.4	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:07	7439-92-1	
Selenium	7.0	mg/kg	1.2	1	12/27/07 12:00	12/28/07 17:07	7782-49-2	
Silver	ND	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:07	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.059	mg/kg	0.0057	1	12/26/07 11:25	12/26/07 14:19	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	19.6	%	0.10	1		12/26/07 15:08		

Sample: T206B30L Lab ID: 9210451003 Collected: 12/18/07 16:00 Received: 12/21/07 13:30 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	0.61	mg/kg	0.37	1	12/27/07 12:00	12/28/07 17:19	7440-38-2	
Barium	52.1	mg/kg	0.37	1	12/27/07 12:00	12/28/07 17:19	7440-39-3	
Cadmium	ND	mg/kg	0.074	1	12/27/07 12:00	12/28/07 17:19	7440-43-9	

Date: 12/31/2007 11:25 AM

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Sample: T206B30L		Lab ID: 9210451003	Collected: 12/18/07 16:00		Received: 12/21/07 13:30		Matrix: Solid	
Results reported on a "dry-weight" basis								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Chromium	5.5 mg/kg		0.37	1	12/27/07 12:00	12/28/07 17:19	7440-47-3	
Lead	5.2 mg/kg		0.37	1	12/27/07 12:00	12/28/07 17:19	7439-92-1	
Selenium	1.8 mg/kg		0.74	1	12/27/07 12:00	12/28/07 17:19	7782-49-2	
Silver	ND mg/kg		0.37	1	12/27/07 12:00	12/28/07 17:19	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.017 mg/kg		0.0056	1	12/26/07 11:25	12/26/07 14:21	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	10.1 %		0.10	1		12/26/07 15:08		

Sample: T305B69L		Lab ID: 9210451004	Collected: 12/18/07 16:00		Received: 12/21/07 13:30		Matrix: Solid	
Results reported on a "dry-weight" basis								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	3.5 mg/kg		0.46	1	12/27/07 12:00	12/28/07 17:24	7440-38-2	
Barium	53.2 mg/kg		0.46	1	12/27/07 12:00	12/28/07 17:24	7440-39-3	
Cadmium	ND mg/kg		0.092	1	12/27/07 12:00	12/28/07 17:24	7440-43-9	
Chromium	6.0 mg/kg		0.46	1	12/27/07 12:00	12/28/07 17:24	7440-47-3	
Lead	17.3 mg/kg		0.46	1	12/27/07 12:00	12/28/07 17:24	7439-92-1	
Selenium	4.3 mg/kg		0.92	1	12/27/07 12:00	12/28/07 17:24	7782-49-2	
Silver	ND mg/kg		0.46	1	12/27/07 12:00	12/28/07 17:24	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	5.4 mg/kg		4.8	1000	12/26/07 11:25	12/26/07 16:26	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	6.2 %		0.10	1		12/26/07 15:08		

Sample: T1B03B03L		Lab ID: 9210451005	Collected: 12/18/07 16:00		Received: 12/21/07 13:30		Matrix: Solid	
Results reported on a "dry-weight" basis								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	3.5 mg/kg		0.48	1	12/27/07 12:00	12/28/07 17:29	7440-38-2	
Barium	99.3 mg/kg		0.48	1	12/27/07 12:00	12/28/07 17:29	7440-39-3	
Cadmium	ND mg/kg		0.095	1	12/27/07 12:00	12/28/07 17:29	7440-43-9	
Chromium	13.1 mg/kg		0.48	1	12/27/07 12:00	12/28/07 17:29	7440-47-3	
Lead	135 mg/kg		0.48	1	12/27/07 12:00	12/28/07 17:29	7439-92-1	
Selenium	6.0 mg/kg		0.95	1	12/27/07 12:00	12/28/07 17:29	7782-49-2	

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Sample: T1B03B03L Lab ID: 9210451005 Collected: 12/18/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Silver	ND	mg/kg	0.48	1	12/27/07 12:00	12/28/07 17:29	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	7.9	mg/kg	0.64	100	12/26/07 11:25	12/26/07 16:46	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	13.7	%	0.10	1		12/26/07 15:09		

Sample: T303B20L Lab ID: 9210451006 Collected: 12/19/07 09:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.4	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:35	7440-38-2	
Barium	85.3	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:35	7440-39-3	
Cadmium	ND	mg/kg	0.12	1	12/27/07 12:00	12/28/07 17:35	7440-43-9	
Chromium	11.0	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:35	7440-47-3	
Lead	18.9	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:35	7439-92-1	
Selenium	6.4	mg/kg	1.2	1	12/27/07 12:00	12/28/07 17:35	7782-49-2	
Silver	ND	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:35	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	2.1	mg/kg	0.74	100	12/26/07 11:25	12/26/07 16:31	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	19.0	%	0.10	1		12/26/07 15:09		

Sample: T306B00L Lab ID: 9210451007 Collected: 12/19/07 09:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB Analytical Method: EPA 8082 Preparation Method: EPA 3545								
PCB-1016 (Aroclor 1016)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	12672-29-6	
PCB-1254 (Aroclor 1254)	217	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	11096-82-5	
Decachlorobiphenyl (S)	33	%	10-128	1	12/26/07 00:00	12/28/07 14:40	2051-24-3	

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445

Pace Project No.: 9210451

Sample: T306B00L Lab ID: 9210451007 Collected: 12/19/07 09:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	0.65	mg/kg	0.39	1	12/27/07 12:00	12/28/07 17:49	7440-38-2	
Barium	20.4	mg/kg	0.39	1	12/27/07 12:00	12/28/07 17:49	7440-39-3	
Cadmium	ND	mg/kg	0.078	1	12/27/07 12:00	12/28/07 17:49	7440-43-9	
Chromium	3.0	mg/kg	0.39	1	12/27/07 12:00	12/28/07 17:49	7440-47-3	
Lead	4.7	mg/kg	0.39	1	12/27/07 12:00	12/28/07 17:49	7439-92-1	
Selenium	2.3	mg/kg	0.78	1	12/27/07 12:00	12/28/07 17:49	7782-49-2	
Silver	ND	mg/kg	0.39	1	12/27/07 12:00	12/28/07 17:49	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	2.5	mg/kg	0.56	100	12/26/07 11:25	12/26/07 16:34	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	13.1	%	0.10	1		12/26/07 15:09		

Sample: T306B75L Lab ID: 9210451008 Collected: 12/19/07 10:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	9.2	mg/kg	0.61	1	12/27/07 12:00	12/28/07 17:54	7440-38-2	
Barium	69.5	mg/kg	0.61	1	12/27/07 12:00	12/28/07 17:54	7440-39-3	
Cadmium	ND	mg/kg	0.12	1	12/27/07 12:00	12/28/07 17:54	7440-43-9	
Chromium	16.7	mg/kg	0.61	1	12/27/07 12:00	12/28/07 17:54	7440-47-3	
Lead	48.7	mg/kg	0.61	1	12/27/07 12:00	12/28/07 17:54	7439-92-1	
Selenium	4.8	mg/kg	1.2	1	12/27/07 12:00	12/28/07 17:54	7782-49-2	
Silver	ND	mg/kg	0.61	1	12/27/07 12:00	12/28/07 17:54	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	10.1	mg/kg	5.5	1000	12/26/07 11:25	12/26/07 16:37	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	14.1	%	0.10	1		12/26/07 15:09		

Sample: T406B00L Lab ID: 9210451009 Collected: 12/19/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.8	mg/kg	0.60	1	12/27/07 12:00	12/28/07 18:00	7440-38-2	
Barium	66.6	mg/kg	0.60	1	12/27/07 12:00	12/28/07 18:00	7440-39-3	
Cadmium	ND	mg/kg	0.12	1	12/27/07 12:00	12/28/07 18:00	7440-43-9	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445

Pace Project No.: 9210451

Sample: T406B00L Lab ID: 9210451009 Collected: 12/19/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Chromium	12.1	mg/kg	0.60	1	12/27/07 12:00	12/28/07 18:00	7440-47-3	
Lead	9.7	mg/kg	0.60	1	12/27/07 12:00	12/28/07 18:00	7439-92-1	
Selenium	5.7	mg/kg	1.2	1	12/27/07 12:00	12/28/07 18:00	7782-49-2	
Silver	ND	mg/kg	0.60	1	12/27/07 12:00	12/28/07 18:00	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.39	mg/kg	0.13	20	12/26/07 11:25	12/26/07 16:39	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	19.6	%	0.10	1		12/26/07 15:09		

Sample: T506B00L Lab ID: 9210451010 Collected: 12/19/07 11:45 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	5.4	mg/kg	0.46	1	12/27/07 12:00	12/28/07 18:05	7440-38-2	
Barium	59.1	mg/kg	0.46	1	12/27/07 12:00	12/28/07 18:05	7440-39-3	
Cadmium	ND	mg/kg	0.092	1	12/27/07 12:00	12/28/07 18:05	7440-43-9	
Chromium	13.0	mg/kg	0.46	1	12/27/07 12:00	12/28/07 18:05	7440-47-3	
Lead	29.2	mg/kg	0.46	1	12/27/07 12:00	12/28/07 18:05	7439-92-1	
Selenium	9.7	mg/kg	0.92	1	12/27/07 12:00	12/28/07 18:05	7782-49-2	
Silver	ND	mg/kg	0.46	1	12/27/07 12:00	12/28/07 18:05	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.15	mg/kg	0.0067	1	12/27/07 10:27	12/27/07 11:20	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	10.8	%	0.10	1		12/26/07 15:10		

Sample: T606B00L Lab ID: 9210451011 Collected: 12/19/07 14:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.8	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:11	7440-38-2	
Barium	70.0	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:11	7440-39-3	
Cadmium	ND	mg/kg	0.071	1	12/27/07 12:00	12/28/07 18:11	7440-43-9	
Chromium	7.1	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:11	7440-47-3	
Lead	4.9	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:11	7439-92-1	
Selenium	3.3	mg/kg	0.71	1	12/27/07 12:00	12/28/07 18:11	7782-49-2	

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Sample: T606B00L Lab ID: 9210451011 Collected: 12/19/07 14:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Silver	ND	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:11	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.058	mg/kg	0.0069	1	12/27/07 10:27	12/27/07 11:25	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	13.5	%	0.10	1		12/26/07 15:10		

Sample: T2A06B00L Lab ID: 9210451012 Collected: 12/19/07 16:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.5	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:17	7440-38-2	
Barium	84.3	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:17	7440-39-3	
Cadmium	ND	mg/kg	0.094	1	12/27/07 12:00	12/28/07 18:17	7440-43-9	
Chromium	17.5	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:17	7440-47-3	
Lead	10.2	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:17	7439-92-1	
Selenium	5.9	mg/kg	0.94	1	12/27/07 12:00	12/28/07 18:17	7782-49-2	
Silver	ND	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:17	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.12	mg/kg	0.0077	1	12/27/07 10:27	12/27/07 11:35	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	27.7	%	0.10	1		12/26/07 15:10		

Sample: T706B00L Lab ID: 9210451013 Collected: 12/19/07 17:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	3.4	mg/kg	0.55	1	12/27/07 12:00	12/28/07 18:23	7440-38-2	
Barium	63.8	mg/kg	0.55	1	12/27/07 12:00	12/28/07 18:23	7440-39-3	
Cadmium	ND	mg/kg	0.11	1	12/27/07 12:00	12/28/07 18:23	7440-43-9	
Chromium	15.2	mg/kg	0.55	1	12/27/07 12:00	12/28/07 18:23	7440-47-3	
Lead	56.5	mg/kg	0.55	1	12/27/07 12:00	12/28/07 18:23	7439-92-1	
Selenium	6.6	mg/kg	1.1	1	12/27/07 12:00	12/28/07 18:23	7782-49-2	
Silver	ND	mg/kg	0.55	1	12/27/07 12:00	12/28/07 18:23	7440-22-4	

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Sample: T706B00L Lab ID: 9210451013 Collected: 12/19/07 17:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	1.8 mg/kg		0.15	20	12/27/07 10:27	12/27/07 15:06	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	25.1 %		0.10	1		12/26/07 15:11		



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QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

QC Batch: PMST/1342 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 9210451001, 9210451002, 9210451003, 9210451004, 9210451005, 9210451006, 9210451007, 9210451008,
9210451009, 9210451010, 9210451011, 9210451012, 9210451013

SAMPLE DUPLICATE: 57890

Parameter	Units	9210451001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	32.3	36.1	11	



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QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

QC Batch: MERP/1247 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 9210451001, 9210451002, 9210451003, 9210451004, 9210451005, 9210451006, 9210451007, 9210451008, 9210451009

METHOD BLANK: 57926

Associated Lab Samples: 9210451001, 9210451002, 9210451003, 9210451004, 9210451005, 9210451006, 9210451007, 9210451008, 9210451009

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Mercury	mg/kg	ND	0.0050	

LABORATORY CONTROL SAMPLE: 57927

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.067	0.069	104	80-120	

MATRIX SPIKE SAMPLE: 57928

Parameter	Units	929874012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	ND	.089	0.10	108	75-125	

SAMPLE DUPLICATE: 57929

Parameter	Units	929874013 Result	Dup Result	RPD	Qualifiers
Mercury	mg/kg	0.046	0.045	3	

QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

QC Batch: OEXT/2062 Analysis Method: EPA 8082
QC Batch Method: EPA 3545 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 9210451007

METHOD BLANK: 57983

Associated Lab Samples: 9210451007

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	33.0	
PCB-1221 (Aroclor 1221)	ug/kg	ND	33.0	
PCB-1232 (Aroclor 1232)	ug/kg	ND	33.0	
PCB-1242 (Aroclor 1242)	ug/kg	ND	33.0	
PCB-1248 (Aroclor 1248)	ug/kg	ND	33.0	
PCB-1254 (Aroclor 1254)	ug/kg	ND	33.0	
PCB-1260 (Aroclor 1260)	ug/kg	ND	33.0	
Decachlorobiphenyl (S)	%	49	10-128	

LABORATORY CONTROL SAMPLE & LCSD: 57984

57985

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	167	110	142	66	85	42-137	25	30	
PCB-1260 (Aroclor 1260)	ug/kg	167	93.3	103	56	62	46-140	10	30	
Decachlorobiphenyl (S)	%				64	62	10-128			

QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

QC Batch: MPRP/1660 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 9210451001, 9210451002, 9210451003, 9210451004, 9210451005, 9210451006, 9210451007, 9210451008, 9210451009, 9210451010, 9210451011, 9210451012, 9210451013

METHOD BLANK: 58041

Associated Lab Samples: 9210451001, 9210451002, 9210451003, 9210451004, 9210451005, 9210451006, 9210451007, 9210451008, 9210451009, 9210451010, 9210451011, 9210451012, 9210451013

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Arsenic	mg/kg	ND	0.50	
Barium	mg/kg	ND	0.50	
Cadmium	mg/kg	ND	0.10	
Chromium	mg/kg	ND	0.50	
Lead	mg/kg	ND	0.50	
Selenium	mg/kg	ND	1.0	
Silver	mg/kg	ND	0.50	

LABORATORY CONTROL SAMPLE: 58042

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	52.0	104	80-120	
Barium	mg/kg	50	48.7	97	80-120	
Cadmium	mg/kg	50	51.2	102	80-120	
Chromium	mg/kg	50	50.2	100	80-120	
Lead	mg/kg	50	51.3	103	80-120	
Selenium	mg/kg	50	50.5	101	80-120	
Silver	mg/kg	25	25.1	100	80-120	

MATRIX SPIKE SAMPLE: 58043

Parameter	Units	9210451001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	2.8	73.8	69.7	91	75-125	
Barium	mg/kg	58.4	73.8	137	106	75-125	
Cadmium	mg/kg	ND	73.8	68.2	93	75-125	
Chromium	mg/kg	12.8	73.8	81.8	93	75-125	
Lead	mg/kg	15.7	73.8	83.3	92	75-125	
Selenium	mg/kg	3.4	73.8	65.9	85	75-125	
Silver	mg/kg	ND	36.9	33.1	90	75-125	

SAMPLE DUPLICATE: 58044

Parameter	Units	9210451002 Result	Dup Result	RPD	Qualifiers
Arsenic	mg/kg	2.4	2.9	21	D6
Barium	mg/kg	98.8	71.9	31	D6
Cadmium	mg/kg	ND	ND		
Chromium	mg/kg	15.4	10.8	35	D6

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QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

SAMPLE DUPLICATE: 58044

Parameter	Units	9210451002 Result	Dup Result	RPD	Qualifiers
Lead	mg/kg	8.4	8.8	5	
Selenium	mg/kg	7.0	6.5	8	
Silver	mg/kg	ND	ND		



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QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

QC Batch: MERP/1248 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 9210451010, 9210451011, 9210451012, 9210451013

METHOD BLANK: 58061

Associated Lab Samples: 9210451010, 9210451011, 9210451012, 9210451013

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Mercury	mg/kg	ND	0.0050	

LABORATORY CONTROL SAMPLE: 58062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.067	0.072	108	80-120	

MATRIX SPIKE SAMPLE: 58063

Parameter	Units	9210451010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.15	.09	0.22	72	75-125	M0

SAMPLE DUPLICATE: 58064

Parameter	Units	9210451011 Result	Dup Result	RPD	Qualifiers
Mercury	mg/kg	0.058	0.028	69	R1



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QUALIFIERS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

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LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

M0 Matrix spike recovery was outside laboratory control limits.

R1 RPD value was outside control limits.

February 13, 2008

Mr. Michael Singer
Renova Partners, LLC
36 Washington Street, Suite 390
Wellesley, MA 02481

**Re: Follow-up Letter Report to Olin Area Investigation Report
Former Ecusta Paper Mill, Pisgah Forest, NC**

Dear Mr. Singer

This is a follow-up letter report describing additional laboratory analyses received since the Olin Area Investigation Report was submitted in January 2008. At the time of the previous submittal, some samples had been held at the lab pending notification to release for analysis, and the analytical report for VOCs had not been received from the lab. This letter report provides a summary of the additional analytical results. Refer to the previous report for the site background description and the methods used in sampling.

ANALYTICAL RESULTS AND DISCUSSION

Sorensen Cell Area

Four samples were on hold at the analytical lab and later released for analysis. The results for these four samples are shown in revised **Table 1**, which also includes the previous analytical results. Sample T306B02L had a mercury concentration of 9.8 milligrams per kilogram (mg/kg) which is higher than the NC Default SRG of 4.6 mg/kg. Concrete encountered at the beginning of Trench 3 was sampled (T306B03LC) and all results were below NC Default SRGs. These additional samples are shown on **Figure 1**.

Film Waste Area

The samples from the film waste area were analyzed for VOC, SVOC, and RCRA Metals. No new samples were analyzed for metals. The results that were included with the previous report are shown in **Table 2**. Four samples were on hold for SVOC analysis at the analytical lab and were later released for analysis. The SVOC results for these samples are shown on revised **Table 3**. The sample at the beginning of Trench 11 (T1106B00L) had some hits above the NC Default SRGs. This sample was collected at a depth of 6 ft below land surface (bls). Two other

Mr. Michael Singer
February 13, 2008
Page 2

samples were collected at 3 ft bls and did not have any hits greater than the NC Default SRGs. A sample of the film waste (T1103B85LF) was also analyzed with no detections above the NC Default SRGs.

The previous report presented only the SVOC and RCRA Metals results since the VOC results were not available at the time. The VOC results are shown in revised **Table 4**. None of the results were greater than the NC Default SRGs or EPA Residential PRGs. The additional samples for the Film Waste Area are shown on **Figure 2**.

If you need any additional information, please call me at (352) 241-2221.

Sincerely,
Shaw Environmental, Inc.

A handwritten signature in black ink, appearing to read 'Will F. Chadeayne', with a long horizontal flourish extending to the right.

William F. Chadeayne, P.G.
Project Manager

Attachments

Tables

Table 1
Detected Analytes for Soil Samples from the Sorensen Cell Area
(Revision 1: add 4 released samples)

Sample ID	Arsenic mg/kg	Barium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Selenium mg/kg	PCB-1254 mg/kg
NC Default SRG ¹	4.4 (nc)	1,080* (nc)	44 (nc)	400**	4.6 (nc)	78 (nc)	1.0 (c)
EPA Residential PRGs ²	22 (nc) (0.39)	5,400 (nc)	210 (C)	400**	23 (nc)	390 (nc)	0.220 (c)
T104B20L	2.8	58.4	12.8	15.7	2.3	3.4	NA
T1A03B03L	2.4	98.8	15.4	8.4	0.059	7.0	NA
T1B03B03L	3.5	99.3	13.1	135	7.9	6.0	NA
T206B30L	0.61	52.1	5.5	5.2	0.017	1.8	NA
T2A06B00L	2.5	84.3	17.5	10.2	0.12	5.9	NA
T306B00L	0.65	20.4	3.0	4.7	2.5	2.3	0.217
T303B20L	2.4	85.3	11.0	18.9	2.1	6.4	NA
T305B69L	3.5	53.2	6.0	17.3	5.4	4.3	NA
T306B75L	9.2	69.5	16.7	48.7	10.1	4.8	NA
T406B00L	2.8	66.6	12.1	9.7	0.39	5.7	NA
T506B00L	5.4	59.1	13.0	29.2	0.15	9.7	NA
T606B00L	1.8	70.0	7.1	4.9	0.058	3.3	NA
T706B00L	3.4	63.8	15.2	56.5	1.8	6.6	NA
T1B03B00L released	3.3	78.6	9.6	12.8	0.14	1.2	NA
T306B02L released	3.4	89.0	26.1	42.7	9.8	ND	NA
T306B03LC released ***	1.5	47.0	15.6	30.3	0.22	ND	NA
T306B76L released	10.2	113	13.6	67.3	4.0	ND	NA

1 - North Carolina default Soil Remediation Goals (SRGs) for Inactive Hazardous sites (August 2007) for non-carcinogens are based on Hazard Index of 1.0 and assumes five non-carcinogens are present, i.e., Hazard Quotient=0.2.

2 - US EPA Preliminary Remediation Goals (PRGs) for non-carcinogens are based on Hazard Index of 1.0 and assumes one non-carcinogen is present, i.e., Hazard quotient=1.0.

c - SRGs and PRGs are based on carcinogenic effects. For arsenic, carcinogenic value is less than the method detection limit (MDL).

nc - SRGs and PRGs are for non-carcinogenic effects.

NA - Not analyzed.

* NC Default PRG is not listed in the tables and was calculated using assumptions for NC Default SRGs.

** US EPA Guidance on lead cleanup levels. This value cannot be adjusted.

*** This sample is of concrete.

Note - Bolded values exceed either NC Default SRG and/or EPA Residential PRG value.

ND - Not detected.

Table 2
Detected Metal Analytes for Soil Samples from the Film Waste Area

Sample ID	Arsenic mg/kg	Barium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Selenium mg/kg
NC Default SRG ¹	4.4 (nc)	1,080* (nc)	44 (nc)	400**	4.6 (nc)	78 (nc)
EPA Residential PRGs ²	22 (nc) (0.39 c)	5,400 (nc)	210 (c)	400**	23 (nc)	390 (nc)
T1106B00L	1.8	55.1	5.0	11.4	0.75	3.7
T1110B10L	1.5	90.5	13.8	15.1	0.2	6
T1103B24L	1.8	77.8	13.6	17.2	0.11	5.5
T1110B50L	2.3	48.3	4.9	5.8	0.041	3.2
T1103B75L	3	74.9	11.4	18.5	0.96	3.9
T1103B85LF ***	ND	2	0.7	11.7	0.0055	ND
T1103B90L	2.1	70.6	22.1	19	0.23	5.0
T1103B100L	2	80.8	11.9	12.8	0.04	4.9
T1103B102L	1.8	72.2	11.3	9.7	0.034	5.6
T11A03B10L	159	68.4	6.6	15.3	0.27	6.5
T11A03B23L	1.8	77.6	15.4	16.4	0.11	5.5
T1403B25L	2	79.2	9.7	18.9	0.32	5.6
T1503B25L	2.6	71	9.6	17	0.12	5.6
T1603B25L	2	59.7	10.8	10.8	0.05	4.5

1 - North Carolina default Soil Remediation Goals (SRGs) for Inactive Hazardous sites (August 2007) for non-carcinogens are based on Hazard Index of 1.0 and assumes five non-carcinogens are present, i.e., Hazard Quotient=0.2.

2 - US EPA Preliminary Remediation Goals (PRGs) for non-carcinogens are based on Hazard Index of 1.0 and assumes one non-carcinogen is present, i.e., Hazard quotient=1.0.

c - SRGs and PRGs are based on carcinogenic effects. For arsenic, carcinogenic value is less than the method detection limit (MDL).

nc - SRGs and PRGs are for non-carcinogenic effects.

ND - Not detected.

* NC Default PRG is not listed in the tables and was calculated using assumptions for NC Default SRGs.

** US EPA Guidance on lead cleanup levels. This value cannot be adjusted.

*** This sample is of film material.

Note - Bolded values exceed either NC Default SRG and/or EPA Residential PRG value.

Table 3
Detected SVOC Analytes for Soil Samples from Film Waste Area
(Revision 1: add 4 released samples)

Sample ID	Acenaphthene ug/kg	Anthracene ug/kg	Benz[a]anthracene ug/kg	Benzo[a]pyrene ug/kg	Benzo[b]fluoranthene ug/kg	Benzo[k]fluoranthene ug/kg	1H-Cy-ethyl-3-benzylphthalate ug/kg	Chrysene ug/kg	Dibutylphthalate ug/kg	Fluoranthene ug/kg	1-Methyl-naphthalene ug/kg	Phenanthrene ug/kg	Pyrene ug/kg
NC Default SRG ¹	740,000 (nc)	4,100 (nc)	22 (c)	22 (c)	220 (c)	2,200 (c)	35,000 (c)	22,000 (c)	1,220,000 (nc)	440,000 (nc)	11,300 (nc)	NE	440,000 (nc)
EPA Residential PRGs, ¹	3,700,000 (nc)	22,000 (nc)	620 (c)	62 (c)	620 (c)	6,200 (c)	35,000 (c)	62,000 (c)	6,100,000 (nc)	2,700,000 (nc)	NE	NE	2,300,000 (nc)
T11103B10L	ND	ND	1,260	839	689	806	ND	1,190	ND	ND	ND	1,040	1,980
T1103B24L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T11103B50L	ND	700	1,760	1,230	1,210	1,110	ND	1,710	ND	3,750	ND	2,770	3,580
T1103B75L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1103B90L	ND	ND	ND	ND	ND	ND	ND	ND	2,430	ND	ND	ND	ND
T1103B100L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1103B102L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T11A03B23L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1503B25L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1603B25L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T1106B00L released	686	1880	4910	3100	2720	3140	ND	4480	ND	788	ND	7850	10500
T1103B85LF released *	ND	ND	ND	ND	ND	ND	ND	ND	408,000	ND	ND	ND	ND
T11A03B10L released	ND	ND	ND	ND	ND	24,100	ND	ND	ND	ND	374	ND	ND
T1403B25L released	ND	ND	ND	ND	ND	25,300	1470	ND	ND	ND	ND	ND	ND

1 - North Carolina default Soil Remediation Goals (SRGs) for Inactive Hazardous sites (August 2007) for non-carcinogens are based on Hazard Index of 1.0 and assumes five non-carcinogens are present, i.e., Hazard Quotient=0.2.
2 - US EPA Preliminary Remediation Goals (PRGs) for non-carcinogens are based on Hazard Index of 1.0 and assumes one non-carcinogen is present, i.e., Hazard Quotient=1.0.
c - SRGs and PRGs are for carcinogenic effects
* - This is a film material sample.
ND - Not detected.
NE - SRG or PRG is not established. Pyrene is used as a surrogate for phenanthrene and 2-Methyl-naphthalene.
Note - Bolded values exceed either NC Default SRG and/or EPA Residential PRG value.

Table 4
Detected VOC Analytes for Soil Samples from Film Waste Area

Sample ID	Acetone ug/kg	p-isopropyltoluene ug/kg	Naphthalene ug/kg	Tetrachloroethene (PCE) ug/kg	1,2,4 Trimethylbenzene ug/kg	1,3,5 Trimethylbenzene ug/kg	Toluene ug/kg	Xylene (Total) ug/kg
NC Default SRG ¹	2,800,000 (nc)	NE	11,200 (nc)	480 (c)	NE	NE	132,000 (nc)	54,000 (nc)
EPA Residential PRGs ²	1,400,000 (nc)	NE	56,000 (nc)	480 (c)	52,000 (nc)	21,000 (nc)	520,000 (nc)	270,000 (nc)
T110B10L	154	ND	ND	ND	ND	ND	ND	ND
T1103B24L	169	ND	ND	ND	6.6	ND	8.6	14.5
T110B50L	ND	ND	ND	ND	10.4	ND	13.1	22.8
T1103B75L	ND	ND	ND	ND	ND	ND	6.7	ND
T1103B90L	145	ND	ND	ND	6.2	7.7	9.2	14.3
T1103B100L	ND	ND	ND	ND	14.3	ND	6.4	17.8
T1103B102L	244	ND	ND	ND	ND	ND	6.9	ND
T11A03B23L	ND	ND	ND	ND	ND	ND	10.2	15.4
T1103B25L	ND	ND	ND	ND	13.8	ND	ND	23.0
T1603B25L	169	ND	ND	ND	12.7	ND	14.7	28.7
T1106B00L	ND	ND	8.8	7.4	6.2	ND	ND	11.5
T1103B85LF *	100	11.0	ND	ND	ND	ND	ND	ND
T11A03B10L	264	ND	9.0	ND	ND	ND	ND	ND
T1403B25L	ND	ND	ND	ND	6.3	ND	7.5	11.8

1 - North Carolina default Soil Remediation Goals (SRGs) for Inactive Hazardous sites (August 2007) for non-carcinogens are based on Hazard Index of 1.0 and assumes five non-carcinogens are present, i.e., Hazard Quotient=0.2.

2 - US EPA Preliminary Remediation Goals (PRGs) for non-carcinogens are based on Hazard Index of 1.0 and assumes one non-carcinogen is present, i.e., Hazard quotient=1.0.

c - SRGs and PRGs are for carcinogenic effects.

nc - SRGs and PRGs are for non-carcinogenic effects.

* This sample is of film material.

ND - Not detected.

NE - SRG or PRG is not established.

Note - Bolded values exceed either NC Default SRG and/or EPA Residential PRG value.

Figures

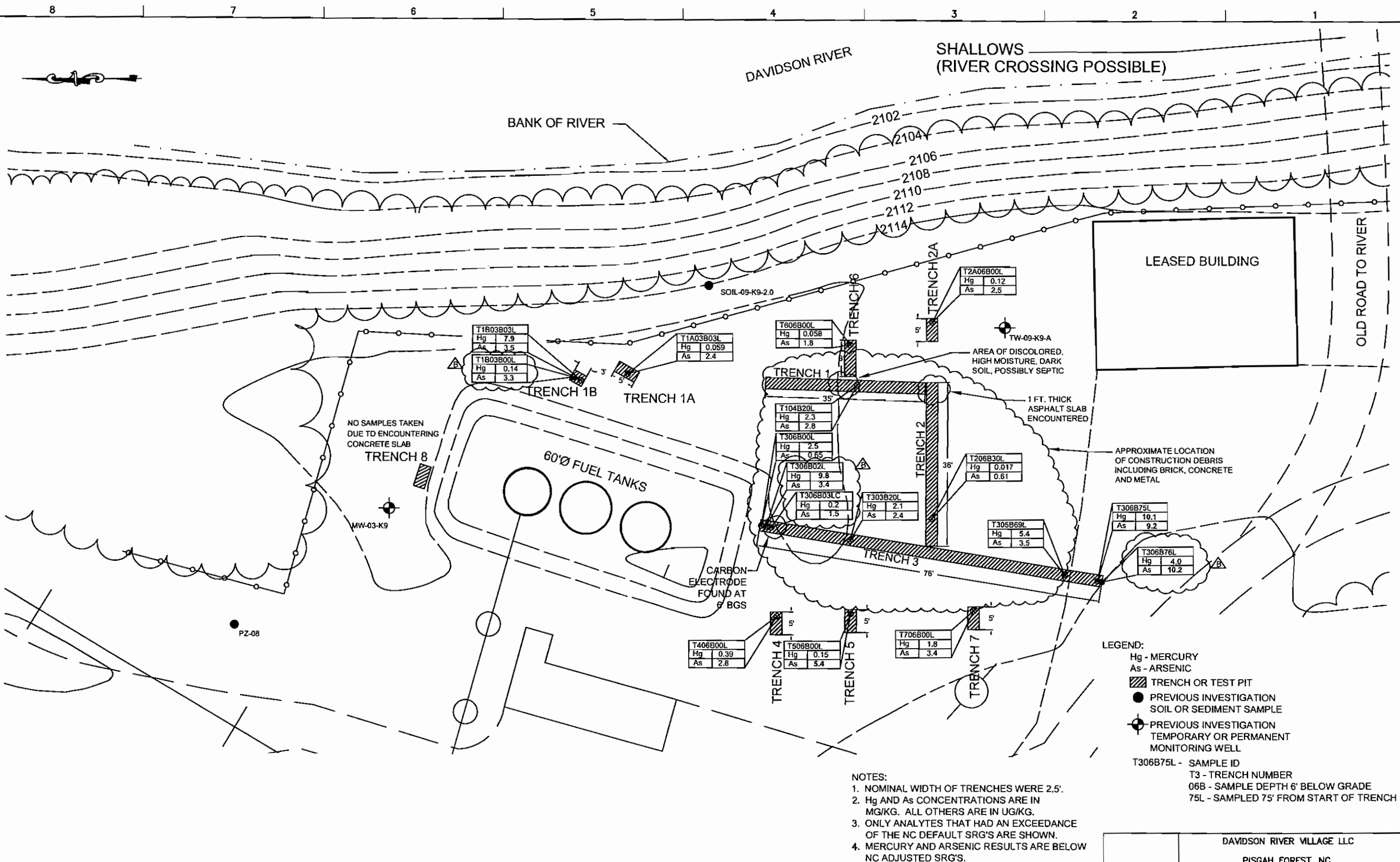
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REV	DATE	BY	CHKD	APRVD	DESCRIPTION/ISSUE
1	12/31/07	AA	RLS		UPDATED ANALYTICAL RESULTS
2		LJ	RS		PRELIMINARY

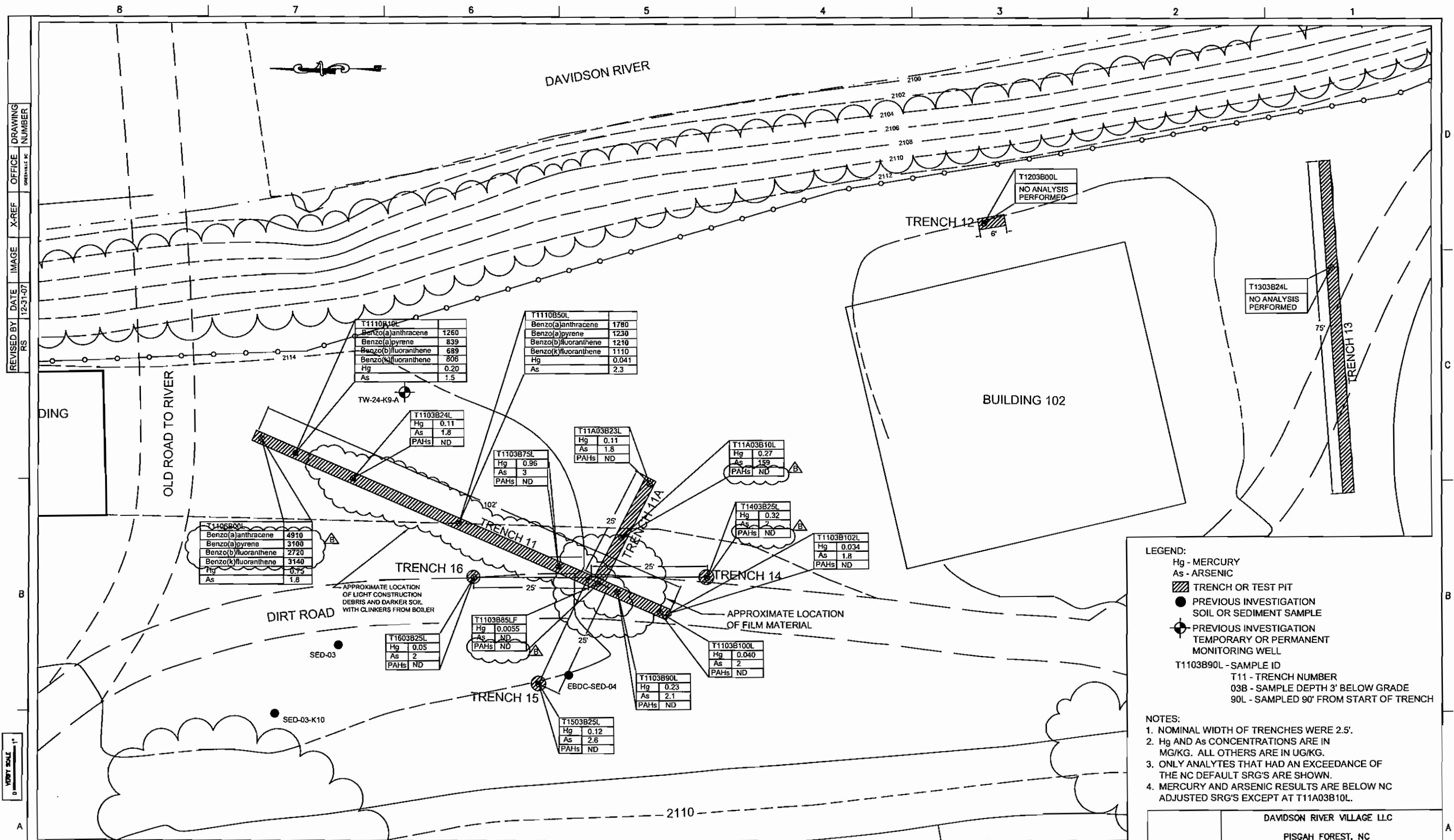
DESIGNED BY:	RS	CHECKED BY:	
DRAWN BY:	RS	12-31-07	APPROVED BY:
SIZE:	D	SCALE:	1" = 10'
DRAWING NO.	123445-01	SHEET NO.	SHT 1 OF 2
REVISION NO.	8		



DAVIDSON RIVER VILLAGE LLC

PISGAH FOREST, NC

REMEDATION PROJECT AREAS FOR SUSPECTED OLN DISPOSAL AREAS SORESENSEN CELL AREA



LEGEND:
Hg - MERCURY
As - ARSENIC
TRENCH OR TEST PIT
PREVIOUS INVESTIGATION SOIL OR SEDIMENT SAMPLE
PREVIOUS INVESTIGATION TEMPORARY OR PERMANENT MONITORING WELL
T1103B90L - SAMPLE ID
T11 - TRENCH NUMBER
03B - SAMPLE DEPTH 3' BELOW GRADE
90L - SAMPLED 90' FROM START OF TRENCH

NOTES:
1. NOMINAL WIDTH OF TRENCHES WERE 2.5'.
2. Hg AND As CONCENTRATIONS ARE IN MG/KG. ALL OTHERS ARE IN UG/KG.
3. ONLY ANALYTES THAT HAD AN EXCEEDANCE OF THE NC DEFAULT SRG'S ARE SHOWN.
4. MERCURY AND ARSENIC RESULTS ARE BELOW NC ADJUSTED SRG'S EXCEPT AT T11A03B10L.

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REV	DATE	BY	CHKD	APPROV	DESCRIPTION/ISSUE
1	12-31-07	AA	RLS		UPDATED ANALYTICAL RESULTS
2		LJ	RS		PRELIMINARY

DAVIDSON RIVER VILLAGE LLC PISGAH FOREST, NC REMEDATION PROJECT AREAS FOR SUSPECTED OLIN DISPOSAL AREAS FILM WASTE AREA					
DESIGNED BY:	RS	CHECKED BY:		APPROVED BY:	
DRAWN BY:	RS	12-31-07			
SIZE:	D	SCALE:	1" = 10'	DRAWING NO.	123445-02
SHEET NO.	SHT 2 OF 2	REVISION NO.	8		



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January 10, 2008

Mr. Paul Coker
Shaw E&I
3 Independence Pointe
Greenville, SC 29615

RE: Project: Ecusta Plant/123445
Pace Project No.: 9210451

Dear Mr. Coker:

Enclosed are the analytical results for sample(s) received by the laboratory on December 21, 2007. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin for
Brenda Pathammavong
brenda.pathammavong@pacelabs.com
Project Manager

Enclosures

cc: Mr. Bill Chadeayne, Shaw E&I

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Charlotte Certification IDs

Florida/NELAP Certification Number: E87627
Kansas Certification Number: E-10364
Louisiana/LELAP Certification Number: 04034
North Carolina Drinking Water Certification Number: 37706
North Carolina Wastewater Certification Number: 12

North Carolina Field Services Certification Number: 5342
South Carolina Certification Number: 990060001
South Carolina Bioassay Certification Number: 990060003
Tennessee Certification Number: 04010
Virginia Certification Number: 00213

Asheville Certification IDs

Florida/NELAP Certification Number: E87648
Louisiana/LELAP Certification Number: 03095
New Jersey Certification Number: NC011
North Carolina Drinking Water Certification Number: 37712
North Carolina Wastewater Certification Number: 40
North Carolina Bioassay Certification Number: 9

Pennsylvania Certification Number: 68-03578
South Carolina Certification Number: 99030001
South Carolina Bioassay Certification Number: 99030002
Tennessee Certification Number: 2980
Virginia Certification Number: 00072

Eden Certification IDs

North Carolina Drinking Water Certification Number: 37738
Virginia Drinking Water Certification Number: 00424

North Carolina Wastewater Certification Number: 633

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SAMPLE ANALYTE COUNT

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Lab ID	Sample ID	Method	Analytes Reported	Laboratory
9210451001	T104B20L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451002	T1A03B03L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451003	T206B30L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451004	T305B69L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451005	T1B03B03L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451006	T303B20L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451007	T306B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8082	8	PASI-C
9210451008	T306B75L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451009	T406B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451010	T506B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451011	T606B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451012	T2A06B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Lab ID	Sample ID	Method	Analytes Reported	Laboratory
9210451013	T706B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451017	T1B03B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	9	PASI-A
		EPA 7471	1	PASI-A
9210451018	T306B02L	ASTM D2974-87	1	PASI-C
		EPA 6010	11	PASI-A
		EPA 7471	1	PASI-A
9210451019	T306B03LC	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210451020	T306B76L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Sample: T104B20L Lab ID: 9210451001 Collected: 12/18/07 12:05 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.8 mg/kg		0.65	1	12/27/07 12:00	12/28/07 16:56	7440-38-2	
Barium	58.4 mg/kg		0.65	1	12/27/07 12:00	12/28/07 16:56	7440-39-3	
Cadmium	ND mg/kg		0.13	1	12/27/07 12:00	12/28/07 16:56	7440-43-9	
Chromium	12.8 mg/kg		0.65	1	12/27/07 12:00	12/28/07 16:56	7440-47-3	
Lead	15.7 mg/kg		0.65	1	12/27/07 12:00	12/28/07 16:56	7439-92-1	
Selenium	3.4 mg/kg		1.3	1	12/27/07 12:00	12/28/07 16:56	7782-49-2	
Silver	ND mg/kg		0.65	1	12/27/07 12:00	12/28/07 16:56	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	2.3 mg/kg		0.13	20	12/26/07 11:25	12/26/07 16:23	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	32.3 %		0.10	1		12/26/07 15:08		

Sample: T1A03B03L Lab ID: 9210451002 Collected: 12/18/07 14:20 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.4 mg/kg		0.59	1	12/27/07 12:00	12/28/07 17:07	7440-38-2	
Barium	98.8 mg/kg		0.59	1	12/27/07 12:00	12/28/07 17:07	7440-39-3	
Cadmium	ND mg/kg		0.12	1	12/27/07 12:00	12/28/07 17:07	7440-43-9	
Chromium	15.4 mg/kg		0.59	1	12/27/07 12:00	12/28/07 17:07	7440-47-3	
Lead	8.4 mg/kg		0.59	1	12/27/07 12:00	12/28/07 17:07	7439-92-1	
Selenium	7.0 mg/kg		1.2	1	12/27/07 12:00	12/28/07 17:07	7782-49-2	
Silver	ND mg/kg		0.59	1	12/27/07 12:00	12/28/07 17:07	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.059 mg/kg		0.0057	1	12/26/07 11:25	12/26/07 14:19	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	19.6 %		0.10	1		12/26/07 15:08		

Sample: T206B30L Lab ID: 9210451003 Collected: 12/18/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	0.61 mg/kg		0.37	1	12/27/07 12:00	12/28/07 17:19	7440-38-2	
Barium	52.1 mg/kg		0.37	1	12/27/07 12:00	12/28/07 17:19	7440-39-3	
Cadmium	ND mg/kg		0.074	1	12/27/07 12:00	12/28/07 17:19	7440-43-9	

Date: 01/10/2008 11:52 AM

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Sample: T206B30L Lab ID: 9210451003 Collected: 12/18/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Chromium	5.5 mg/kg		0.37	1	12/27/07 12:00	12/28/07 17:19	7440-47-3	
Lead	5.2 mg/kg		0.37	1	12/27/07 12:00	12/28/07 17:19	7439-92-1	
Selenium	1.8 mg/kg		0.74	1	12/27/07 12:00	12/28/07 17:19	7782-49-2	
Silver	ND mg/kg		0.37	1	12/27/07 12:00	12/28/07 17:19	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.017 mg/kg		0.0056	1	12/26/07 11:25	12/26/07 14:21	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	10.1 %		0.10	1		12/26/07 15:08		

Sample: T305B69L Lab ID: 9210451004 Collected: 12/18/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	3.5 mg/kg		0.46	1	12/27/07 12:00	12/28/07 17:24	7440-38-2	
Barium	53.2 mg/kg		0.46	1	12/27/07 12:00	12/28/07 17:24	7440-39-3	
Cadmium	ND mg/kg		0.092	1	12/27/07 12:00	12/28/07 17:24	7440-43-9	
Chromium	6.0 mg/kg		0.46	1	12/27/07 12:00	12/28/07 17:24	7440-47-3	
Lead	17.3 mg/kg		0.46	1	12/27/07 12:00	12/28/07 17:24	7439-92-1	
Selenium	4.3 mg/kg		0.92	1	12/27/07 12:00	12/28/07 17:24	7782-49-2	
Silver	ND mg/kg		0.46	1	12/27/07 12:00	12/28/07 17:24	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	5.4 mg/kg		4.8	1000	12/26/07 11:25	12/26/07 16:26	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	6.2 %		0.10	1		12/26/07 15:08		

Sample: T1B03B03L Lab ID: 9210451005 Collected: 12/18/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	3.5 mg/kg		0.48	1	12/27/07 12:00	12/28/07 17:29	7440-38-2	
Barium	99.3 mg/kg		0.48	1	12/27/07 12:00	12/28/07 17:29	7440-39-3	
Cadmium	ND mg/kg		0.095	1	12/27/07 12:00	12/28/07 17:29	7440-43-9	
Chromium	13.1 mg/kg		0.48	1	12/27/07 12:00	12/28/07 17:29	7440-47-3	
Lead	135 mg/kg		0.48	1	12/27/07 12:00	12/28/07 17:29	7439-92-1	
Selenium	6.0 mg/kg		0.95	1	12/27/07 12:00	12/28/07 17:29	7782-49-2	

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Sample: T1B03B03L Lab ID: 9210451005 Collected: 12/18/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Silver	ND	mg/kg	0.48	1	12/27/07 12:00	12/28/07 17:29	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	7.9	mg/kg	0.64	100	12/26/07 11:25	12/26/07 16:46	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	13.7	%	0.10	1		12/26/07 15:09		

Sample: T303B20L Lab ID: 9210451006 Collected: 12/19/07 09:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.4	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:35	7440-38-2	
Barium	85.3	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:35	7440-39-3	
Cadmium	ND	mg/kg	0.12	1	12/27/07 12:00	12/28/07 17:35	7440-43-9	
Chromium	11.0	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:35	7440-47-3	
Lead	18.9	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:35	7439-92-1	
Selenium	6.4	mg/kg	1.2	1	12/27/07 12:00	12/28/07 17:35	7782-49-2	
Silver	ND	mg/kg	0.59	1	12/27/07 12:00	12/28/07 17:35	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	2.1	mg/kg	0.74	100	12/26/07 11:25	12/26/07 16:31	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	19.0	%	0.10	1		12/26/07 15:09		

Sample: T306B00L Lab ID: 9210451007 Collected: 12/19/07 09:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB Analytical Method: EPA 8082 Preparation Method: EPA 3545								
PCB-1016 (Aroclor 1016)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	12672-29-6	
PCB-1254 (Aroclor 1254)	217	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	38.0	1	12/26/07 00:00	12/28/07 14:40	11096-82-5	
Decachlorobiphenyl (S)	33	%	10-128	1	12/26/07 00:00	12/28/07 14:40	2051-24-3	

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445

Pace Project No.: 9210451

Sample: T306B00L Lab ID: 9210451007 Collected: 12/19/07 09:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	0.65 mg/kg		0.39	1	12/27/07 12:00	12/28/07 17:49	7440-38-2	
Barium	20.4 mg/kg		0.39	1	12/27/07 12:00	12/28/07 17:49	7440-39-3	
Cadmium	ND mg/kg		0.078	1	12/27/07 12:00	12/28/07 17:49	7440-43-9	
Chromium	3.0 mg/kg		0.39	1	12/27/07 12:00	12/28/07 17:49	7440-47-3	
Lead	4.7 mg/kg		0.39	1	12/27/07 12:00	12/28/07 17:49	7439-92-1	
Selenium	2.3 mg/kg		0.78	1	12/27/07 12:00	12/28/07 17:49	7782-49-2	
Silver	ND mg/kg		0.39	1	12/27/07 12:00	12/28/07 17:49	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	2.5 mg/kg		0.56	100	12/26/07 11:25	12/26/07 16:34	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	13.1 %		0.10	1		12/26/07 15:09		

Sample: T306B75L Lab ID: 9210451008 Collected: 12/19/07 10:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	9.2 mg/kg		0.61	1	12/27/07 12:00	12/28/07 17:54	7440-38-2	
Barium	69.5 mg/kg		0.61	1	12/27/07 12:00	12/28/07 17:54	7440-39-3	
Cadmium	ND mg/kg		0.12	1	12/27/07 12:00	12/28/07 17:54	7440-43-9	
Chromium	16.7 mg/kg		0.61	1	12/27/07 12:00	12/28/07 17:54	7440-47-3	
Lead	48.7 mg/kg		0.61	1	12/27/07 12:00	12/28/07 17:54	7439-92-1	
Selenium	4.8 mg/kg		1.2	1	12/27/07 12:00	12/28/07 17:54	7782-49-2	
Silver	ND mg/kg		0.61	1	12/27/07 12:00	12/28/07 17:54	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	10.1 mg/kg		5.5	1000	12/26/07 11:25	12/26/07 16:37	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	14.1 %		0.10	1		12/26/07 15:09		

Sample: T406B00L Lab ID: 9210451009 Collected: 12/19/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.8 mg/kg		0.60	1	12/27/07 12:00	12/28/07 18:00	7440-38-2	
Barium	66.6 mg/kg		0.60	1	12/27/07 12:00	12/28/07 18:00	7440-39-3	
Cadmium	ND mg/kg		0.12	1	12/27/07 12:00	12/28/07 18:00	7440-43-9	

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Sample: T406B00L Lab ID: 9210451009 Collected: 12/19/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Chromium	12.1 mg/kg		0.60	1	12/27/07 12:00	12/28/07 18:00	7440-47-3	
Lead	9.7 mg/kg		0.60	1	12/27/07 12:00	12/28/07 18:00	7439-92-1	
Selenium	5.7 mg/kg		1.2	1	12/27/07 12:00	12/28/07 18:00	7782-49-2	
Silver	ND mg/kg		0.60	1	12/27/07 12:00	12/28/07 18:00	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.39 mg/kg		0.13	20	12/26/07 11:25	12/26/07 16:39	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	19.6 %		0.10	1		12/26/07 15:09		

Sample: T506B00L Lab ID: 9210451010 Collected: 12/19/07 11:45 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	5.4 mg/kg		0.46	1	12/27/07 12:00	12/28/07 18:05	7440-38-2	
Barium	59.1 mg/kg		0.46	1	12/27/07 12:00	12/28/07 18:05	7440-39-3	
Cadmium	ND mg/kg		0.092	1	12/27/07 12:00	12/28/07 18:05	7440-43-9	
Chromium	13.0 mg/kg		0.46	1	12/27/07 12:00	12/28/07 18:05	7440-47-3	
Lead	29.2 mg/kg		0.46	1	12/27/07 12:00	12/28/07 18:05	7439-92-1	
Selenium	9.7 mg/kg		0.92	1	12/27/07 12:00	12/28/07 18:05	7782-49-2	
Silver	ND mg/kg		0.46	1	12/27/07 12:00	12/28/07 18:05	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.15 mg/kg		0.0067	1	12/27/07 10:27	12/27/07 11:20	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	10.8 %		0.10	1		12/26/07 15:10		

Sample: T606B00L Lab ID: 9210451011 Collected: 12/19/07 14:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.8 mg/kg		0.36	1	12/27/07 12:00	12/28/07 18:11	7440-38-2	
Barium	70.0 mg/kg		0.36	1	12/27/07 12:00	12/28/07 18:11	7440-39-3	
Cadmium	ND mg/kg		0.071	1	12/27/07 12:00	12/28/07 18:11	7440-43-9	
Chromium	7.1 mg/kg		0.36	1	12/27/07 12:00	12/28/07 18:11	7440-47-3	
Lead	4.9 mg/kg		0.36	1	12/27/07 12:00	12/28/07 18:11	7439-92-1	
Selenium	3.3 mg/kg		0.71	1	12/27/07 12:00	12/28/07 18:11	7782-49-2	

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ANALYTICAL RESULTS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Sample: T606B00L Lab ID: 9210451011 Collected: 12/19/07 14:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Silver	ND	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:11	7440-22-4	
7471 Mercury								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.058	mg/kg	0.0069	1	12/27/07 10:27	12/27/07 11:25	7439-97-6	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Percent Moisture	13.5	%	0.10	1		12/26/07 15:10		

Sample: T2A06B00L Lab ID: 9210451012 Collected: 12/19/07 16:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.5	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:17	7440-38-2	
Barium	84.3	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:17	7440-39-3	
Cadmium	ND	mg/kg	0.094	1	12/27/07 12:00	12/28/07 18:17	7440-43-9	
Chromium	17.5	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:17	7440-47-3	
Lead	10.2	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:17	7439-92-1	
Selenium	5.9	mg/kg	0.94	1	12/27/07 12:00	12/28/07 18:17	7782-49-2	
Silver	ND	mg/kg	0.47	1	12/27/07 12:00	12/28/07 18:17	7440-22-4	
7471 Mercury								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.12	mg/kg	0.0077	1	12/27/07 10:27	12/27/07 11:35	7439-97-6	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Percent Moisture	27.7	%	0.10	1		12/26/07 15:10		

Sample: T706B00L Lab ID: 9210451013 Collected: 12/19/07 17:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	3.4	mg/kg	0.55	1	12/27/07 12:00	12/28/07 18:23	7440-38-2	
Barium	63.8	mg/kg	0.55	1	12/27/07 12:00	12/28/07 18:23	7440-39-3	
Cadmium	ND	mg/kg	0.11	1	12/27/07 12:00	12/28/07 18:23	7440-43-9	
Chromium	15.2	mg/kg	0.55	1	12/27/07 12:00	12/28/07 18:23	7440-47-3	
Lead	56.5	mg/kg	0.55	1	12/27/07 12:00	12/28/07 18:23	7439-92-1	
Selenium	6.6	mg/kg	1.1	1	12/27/07 12:00	12/28/07 18:23	7782-49-2	
Silver	ND	mg/kg	0.55	1	12/27/07 12:00	12/28/07 18:23	7440-22-4	



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ANALYTICAL RESULTS

Project: Ecusta Plant/123445

Pace Project No.: 9210451

Sample: T706B00L Lab ID: 9210451013 Collected: 12/19/07 17:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	1.8	mg/kg	0.15	20	12/27/07 10:27	12/27/07 15:06	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	25.1	%	0.10	1		12/26/07 15:11		

Sample: T1B03B00L Lab ID: 9210451017 Collected: 12/18/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Aluminum	11400	mg/kg	99.7	10	01/04/08 10:45	01/04/08 17:26	7429-90-5	
Arsenic	3.3	mg/kg	0.50	1	01/04/08 10:45	01/04/08 14:34	7440-38-2	
Barium	78.6	mg/kg	0.50	1	01/04/08 10:45	01/04/08 14:34	7440-39-3	
Cadmium	ND	mg/kg	0.10	1	01/04/08 10:45	01/04/08 14:34	7440-43-9	
Chromium	9.6	mg/kg	0.50	1	01/04/08 10:45	01/04/08 14:34	7440-47-3	
Lead	12.8	mg/kg	0.50	1	01/04/08 10:45	01/04/08 14:34	7439-92-1	
Selenium	1.2	mg/kg	1.0	1	01/04/08 10:45	01/04/08 14:34	7782-49-2	
Silicon	2890	mg/kg	99.7	10	01/04/08 10:45	01/04/08 17:26	7440-21-3	
Silver	ND	mg/kg	0.50	1	01/04/08 10:45	01/04/08 14:34	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.14	mg/kg	0.0058	1	01/02/08 12:34	01/02/08 14:56	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	13.6	%	0.10	1		01/02/08 08:19		

Sample: T306B02L Lab ID: 9210451018 Collected: 12/18/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Aluminum	12600	mg/kg	97.8	10	01/04/08 10:45	01/04/08 17:30	7429-90-5	
Arsenic	3.4	mg/kg	0.49	1	01/04/08 10:45	01/04/08 14:42	7440-38-2	
Barium	89.0	mg/kg	0.49	1	01/04/08 10:45	01/04/08 14:42	7440-39-3	
Cadmium	0.20	mg/kg	0.098	1	01/04/08 10:45	01/04/08 14:42	7440-43-9	
Calcium	34600	mg/kg	97.8	10	01/04/08 10:45	01/04/08 17:30	7440-70-2	
Chromium	26.1	mg/kg	0.49	1	01/04/08 10:45	01/04/08 14:42	7440-47-3	
Iron	15900	mg/kg	48.9	10	01/04/08 10:45	01/04/08 17:30	7439-89-6	
Lead	42.7	mg/kg	0.49	1	01/04/08 10:45	01/04/08 14:42	7439-92-1	
Selenium	ND	mg/kg	0.98	1	01/04/08 10:45	01/04/08 14:42	7782-49-2	
Silicon	5070	mg/kg	97.8	10	01/04/08 10:45	01/04/08 17:30	7440-21-3	

Date: 01/10/2008 11:52 AM

REPORT OF LABORATORY ANALYSIS

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(704)875-9092

ANALYTICAL RESULTS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Sample: T306B02L Lab ID: 9210451018 Collected: 12/18/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Silver	ND	mg/kg	0.49	1	01/04/08 10:45	01/04/08 14:42	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	9.8	mg/kg	0.54	100	01/02/08 12:34	01/02/08 15:54	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	10.3	%	0.10	1		01/02/08 08:20		

Sample: T306B03LC Lab ID: 9210451019 Collected: 12/19/07 09:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.5	mg/kg	0.51	1	01/04/08 10:45	01/04/08 14:52	7440-38-2	
Barium	47.0	mg/kg	0.51	1	01/04/08 10:45	01/04/08 14:52	7440-39-3	
Cadmium	0.14	mg/kg	0.10	1	01/04/08 10:45	01/04/08 14:52	7440-43-9	
Chromium	15.6	mg/kg	0.51	1	01/04/08 10:45	01/04/08 14:52	7440-47-3	
Lead	30.3	mg/kg	0.51	1	01/04/08 10:45	01/04/08 14:52	7439-92-1	
Selenium	ND	mg/kg	1.0	1	01/04/08 10:45	01/04/08 14:52	7782-49-2	
Silver	ND	mg/kg	0.51	1	01/04/08 10:45	01/04/08 14:52	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.22	mg/kg	0.013	2	01/02/08 12:34	01/02/08 15:59	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	7.9	%	0.10	1		01/02/08 08:20		

Sample: T306B76L Lab ID: 9210451020 Collected: 12/19/07 10:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	10.2	mg/kg	0.57	1	01/04/08 10:45	01/04/08 14:56	7440-38-2	
Barium	113	mg/kg	0.57	1	01/04/08 10:45	01/04/08 14:56	7440-39-3	
Cadmium	0.60	mg/kg	0.11	1	01/04/08 10:45	01/04/08 14:56	7440-43-9	
Chromium	13.6	mg/kg	0.57	1	01/04/08 10:45	01/04/08 14:56	7440-47-3	
Lead	67.3	mg/kg	0.57	1	01/04/08 10:45	01/04/08 14:56	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/04/08 10:45	01/04/08 14:56	7782-49-2	
Silver	ND	mg/kg	0.57	1	01/04/08 10:45	01/04/08 14:56	7440-22-4	



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ANALYTICAL RESULTS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

Sample: T306B76L Lab ID: 9210451020 Collected: 12/19/07 10:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	4.0	mg/kg	0.61	100	01/02/08 12:34	01/02/08 16:04	7439-97-6	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	15.4	%	0.10	1		01/02/08 08:20		



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QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

QC Batch: PMST/1342 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 9210451001, 9210451002, 9210451003, 9210451004, 9210451005, 9210451006, 9210451007, 9210451008,
9210451009, 9210451010, 9210451011, 9210451012, 9210451013

SAMPLE DUPLICATE: 57890

Parameter	Units	9210451001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	32.3	36.1	11	



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QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

QC Batch: MERP/1247 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 9210451001, 9210451002, 9210451003, 9210451004, 9210451005, 9210451006, 9210451007, 9210451008, 9210451009

METHOD BLANK: 57926

Associated Lab Samples: 9210451001, 9210451002, 9210451003, 9210451004, 9210451005, 9210451006, 9210451007, 9210451008, 9210451009

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Mercury	mg/kg	ND	0.0050	

LABORATORY CONTROL SAMPLE: 57927

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.067	0.069	104	80-120	

MATRIX SPIKE SAMPLE: 57928

Parameter	Units	929874012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	ND	.089	0.10	108	75-125	

SAMPLE DUPLICATE: 57929

Parameter	Units	929874013 Result	Dup Result	RPD	Qualifiers
Mercury	mg/kg	0.046	0.045	3	



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QUALITY CONTROL DATA

Project: Ecusta Plant/123445

Pace Project No.: 9210451

QC Batch: OEXT/2062

Analysis Method: EPA 8082

QC Batch Method: EPA 3545

Analysis Description: 8082 GCS PCB

Associated Lab Samples: 9210451007

METHOD BLANK: 57983

Associated Lab Samples: 9210451007

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	33.0	
PCB-1221 (Aroclor 1221)	ug/kg	ND	33.0	
PCB-1232 (Aroclor 1232)	ug/kg	ND	33.0	
PCB-1242 (Aroclor 1242)	ug/kg	ND	33.0	
PCB-1248 (Aroclor 1248)	ug/kg	ND	33.0	
PCB-1254 (Aroclor 1254)	ug/kg	ND	33.0	
PCB-1260 (Aroclor 1260)	ug/kg	ND	33.0	
Decachlorobiphenyl (S)	%	49	10-128	

LABORATORY CONTROL SAMPLE & LCSD: 57984

57985

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	167	110	142	66	85	42-137	25	30	
PCB-1260 (Aroclor 1260)	ug/kg	167	93.3	103	56	62	46-140	10	30	
Decachlorobiphenyl (S)	%				64	62	10-128			



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QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

QC Batch: MPRP/1660 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 9210451001, 9210451002, 9210451003, 9210451004, 9210451005, 9210451006, 9210451007, 9210451008, 9210451009, 9210451010, 9210451011, 9210451012, 9210451013

METHOD BLANK: 58041

Associated Lab Samples: 9210451001, 9210451002, 9210451003, 9210451004, 9210451005, 9210451006, 9210451007, 9210451008, 9210451009, 9210451010, 9210451011, 9210451012, 9210451013

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Arsenic	mg/kg	ND	0.50	
Barium	mg/kg	ND	0.50	
Cadmium	mg/kg	ND	0.10	
Chromium	mg/kg	ND	0.50	
Lead	mg/kg	ND	0.50	
Selenium	mg/kg	ND	1.0	
Silver	mg/kg	ND	0.50	

LABORATORY CONTROL SAMPLE: 58042

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	52.0	104	80-120	
Barium	mg/kg	50	48.7	97	80-120	
Cadmium	mg/kg	50	51.2	102	80-120	
Chromium	mg/kg	50	50.2	100	80-120	
Lead	mg/kg	50	51.3	103	80-120	
Selenium	mg/kg	50	50.5	101	80-120	
Silver	mg/kg	25	25.1	100	80-120	

MATRIX SPIKE SAMPLE: 58043

Parameter	Units	9210451001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	2.8	73.8	69.7	91	75-125	
Barium	mg/kg	58.4	73.8	137	106	75-125	
Cadmium	mg/kg	ND	73.8	68.2	93	75-125	
Chromium	mg/kg	12.8	73.8	81.8	93	75-125	
Lead	mg/kg	15.7	73.8	83.3	92	75-125	
Selenium	mg/kg	3.4	73.8	65.9	85	75-125	
Silver	mg/kg	ND	36.9	33.1	90	75-125	

SAMPLE DUPLICATE: 58044

Parameter	Units	9210451002 Result	Dup Result	RPD	Qualifiers
Arsenic	mg/kg	2.4	2.9	21	D6
Barium	mg/kg	98.8	71.9	31	D6
Cadmium	mg/kg	ND	ND		
Chromium	mg/kg	15.4	10.8	35	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Ecusta Plant/123445

Pace Project No.: 9210451

SAMPLE DUPLICATE: 58044

Parameter	Units	9210451002 Result	Dup Result	RPD	Qualifiers
Lead	mg/kg	8.4	8.8	5	
Selenium	mg/kg	7.0	6.5	8	
Silver	mg/kg	ND	ND		



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QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

QC Batch: MERP/1248 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 9210451010, 9210451011, 9210451012, 9210451013

METHOD BLANK: 58061

Associated Lab Samples: 9210451010, 9210451011, 9210451012, 9210451013

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Mercury	mg/kg	ND	0.0050	

LABORATORY CONTROL SAMPLE: 58062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.067	0.072	108	80-120	

MATRIX SPIKE SAMPLE: 58063

Parameter	Units	9210451010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.15	.09	0.22	72	75-125	M0

SAMPLE DUPLICATE: 58064

Parameter	Units	9210451011 Result	Dup Result	RPD	Qualifiers
Mercury	mg/kg	0.058	0.028	69	R1



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QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

QC Batch:	PMST/1354	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	9210451017, 9210451018, 9210451019, 9210451020		

SAMPLE DUPLICATE: 59521

Parameter	Units	9210451017 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	13.6	15.1	10	



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QUALITY CONTROL DATA

Project: Ecusta Plant/123445
Pace Project No.: 9210451

QC Batch: MERP/1255 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 9210451017, 9210451018, 9210451019, 9210451020

METHOD BLANK: 59568

Associated Lab Samples: 9210451017, 9210451018, 9210451019, 9210451020

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Mercury	mg/kg	ND	0.0050	

LABORATORY CONTROL SAMPLE: 59569

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.067	0.073	109	80-120	

MATRIX SPIKE SAMPLE: 59570

Parameter	Units	9210451017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.14	.075	0.22	102	75-125	

SAMPLE DUPLICATE: 59571

Parameter	Units	9210451018 Result	Dup Result	RPD	Qualifiers
Mercury	mg/kg	9.8	6.7	38 R1	



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QUALITY CONTROL DATA

Project: Ecusta Plant/123445

Pace Project No.: 9210451

QC Batch: MPRP/1692 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 9210451017, 9210451018, 9210451019, 9210451020

METHOD BLANK: 59986

Associated Lab Samples: 9210451017, 9210451018, 9210451019, 9210451020

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Aluminum	mg/kg	ND	10.0	
Arsenic	mg/kg	ND	0.50	
Barium	mg/kg	ND	0.50	
Cadmium	mg/kg	ND	0.10	
Calcium	mg/kg	ND	10.0	
Chromium	mg/kg	ND	0.50	
Iron	mg/kg	ND	5.0	
Lead	mg/kg	ND	0.50	
Selenium	mg/kg	ND	1.0	
Silicon	mg/kg	ND	10.0	
Silver	mg/kg	ND	0.50	

LABORATORY CONTROL SAMPLE: 59987

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/kg	500	512	102	80-120	
Arsenic	mg/kg	50	48.6	97	80-120	
Barium	mg/kg	50	48.3	97	80-120	
Cadmium	mg/kg	50	47.9	96	80-120	
Calcium	mg/kg	500	522	104	80-120	
Chromium	mg/kg	50	48.3	97	80-120	
Iron	mg/kg	500	562	112	80-120	
Lead	mg/kg	50	47.4	95	80-120	
Selenium	mg/kg	50	48.3	97	80-120	
Silicon	mg/kg	250	240	96	80-120	
Silver	mg/kg	25	25.0	100	80-120	

MATRIX SPIKE SAMPLE: 59988

Parameter	Units	9210451017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/kg	11400	491	16000	925	75-125	M3
Arsenic	mg/kg	3.3	49.1	50.1	96	75-125	
Barium	mg/kg	78.6	49.1	130	105	75-125	
Cadmium	mg/kg	ND	49.1	43.3	88	75-125	
Calcium	mg/kg	1970	491	2520	111	75-125	M3
Chromium	mg/kg	9.6	49.1	54.7	92	75-125	
Iron	mg/kg	8800	491	15000	1270	75-125	M3
Lead	mg/kg	12.8	49.1	53.8	84	75-125	
Selenium	mg/kg	1.2	49.1	42.5	84	75-125	
Silicon	mg/kg	2890	245	3070	72	75-125	M3

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QUALITY CONTROL DATA

Project: Ecusta Plant/123445

Pace Project No.: 9210451

MATRIX SPIKE SAMPLE: 59988

Parameter	Units	9210451017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Silver	mg/kg	ND	24.5	23.4	96	75-125	

SAMPLE DUPLICATE: 59989

Parameter	Units	9210451018 Result	Dup Result	RPD	Qualifiers
Aluminum	mg/kg	12600	12500	1	
Arsenic	mg/kg	3.4	2.3	39	R3
Barium	mg/kg	89.0	91.5	3	
Cadmium	mg/kg	0.20	0.29	35	R3
Calcium	mg/kg	34600	77400	76	R3
Chromium	mg/kg	26.1	17.9	37	R3
Iron	mg/kg	15900	15300	4	
Lead	mg/kg	42.7	30.8	33	R3
Selenium	mg/kg	ND	ND		
Silicon	mg/kg	5070	9780	63	R3
Silver	mg/kg	ND	ND		



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QUALIFIERS

Project: Ecusta Plant/123445
Pace Project No.: 9210451

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

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LABORATORIES

PASI-A Pace Analytical Services - Asheville
PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
M0 Matrix spike recovery was outside laboratory control limits.
M3 Matrix spike recovery was outside laboratory control limits due to matrix interferences.
R1 RPD value was outside control limits.
R3 RPD value was outside control limits due to uncertainty of values at or near the PRL.



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January 10, 2008

Mr. Paul Coker
Shaw E&I
3 Independence Pointe
Greenville, SC 29615

RE: Project: ECUSTA/123445
Pace Project No.: 9210454

Dear Mr. Coker:

Enclosed are the analytical results for sample(s) received by the laboratory on December 21, 2007. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin for
Brenda Pathammavong
brenda.pathammavong@pacelabs.com
Project Manager

Enclosures

cc: Mr. Bill Chadeayne, Shaw E&I

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CERTIFICATIONS

Project: ECUSTA/123445
Pace Project No.: 9210454

Charlotte Certification IDs

Florida/NELAP Certification Number: E87627
Kansas Certification Number: E-10364
Louisiana/LELAP Certification Number: 04034
North Carolina Drinking Water Certification Number: 37706
North Carolina Wastewater Certification Number: 12

North Carolina Field Services Certification Number: 5342
South Carolina Certification Number: 990060001
South Carolina Bioassay Certification Number: 990060003
Tennessee Certification Number: 04010
Virginia Certification Number: 00213

Asheville Certification IDs

Florida/NELAP Certification Number: E87648
Louisiana/LELAP Certification Number: 03095
New Jersey Certification Number: NC011
North Carolina Drinking Water Certification Number: 37712
North Carolina Wastewater Certification Number: 40
North Carolina Bioassay Certification Number: 9

Pennsylvania Certification Number: 68-03578
South Carolina Certification Number: 99030001
South Carolina Bioassay Certification Number: 99030002
Tennessee Certification Number: 2980
Virginia Certification Number: 00072

Eden Certification IDs

North Carolina Drinking Water Certification Number: 37738
Virginia Drinking Water Certification Number: 00424

North Carolina Wastewater Certification Number: 633

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Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: ECUSTA/123445
Pace Project No.: 9210454

Lab ID	Sample ID	Method	Analytes Reported	Laboratory
9210454001	T1106B00L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
9210454002	T1110B50L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
9210454003	T1103B75L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
9210454004	T1103B90L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
9210454005	T1103B100L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
9210454006	T1103B85LF	EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
9210454007	T11A03B10L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
		EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
9210454008	T11A03B23L	ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: ECUSTA/123445
Pace Project No.: 9210454

Lab ID	Sample ID	Method	Analytes Reported	Laboratory
9210454009	T1403B25L	EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
		ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210454010	T1503B25L	EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
		ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210454011	T1603B25L	EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
		ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210454012	T1110B10L	EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
		ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210454013	T1103B102L	EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
		ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A
9210454014	T1103B24L	EPA 8260	71	PASI-C
		EPA 8270	75	PASI-C
		ASTM D2974-87	1	PASI-C
		EPA 6010	7	PASI-A
		EPA 7471	1	PASI-A

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1106B00L Lab ID: 9210454001 Collected: 12/20/07 10:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.8 mg/kg		0.42	1	12/27/07 12:00	12/28/07 18:29	7440-38-2	
Barium	55.1 mg/kg		0.42	1	12/27/07 12:00	12/28/07 18:29	7440-39-3	
Cadmium	ND mg/kg		0.083	1	12/27/07 12:00	12/28/07 18:29	7440-43-9	
Chromium	5.0 mg/kg		0.42	1	12/27/07 12:00	12/28/07 18:29	7440-47-3	
Lead	11.4 mg/kg		0.42	1	12/27/07 12:00	12/28/07 18:29	7439-92-1	
Selenium	3.7 mg/kg		0.83	1	12/27/07 12:00	12/28/07 18:29	7782-49-2	
Silver	ND mg/kg		0.42	1	12/27/07 12:00	12/28/07 18:29	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.75 mg/kg		0.13	20	12/27/07 10:27	12/27/07 15:08	7439-97-6	
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	686 ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	83-32-9	
Acenaphthylene	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	208-96-8	
Aniline	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	62-53-3	
Anthracene	1880 ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	120-12-7	
Benzo(a)anthracene	4910 ug/kg		1870	5	12/22/07 00:00	12/29/07 03:38	56-55-3	
Benzo(a)pyrene	3100 ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	50-32-8	
Benzo(b)fluoranthene	2720 ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	191-24-2	
Benzo(k)fluoranthene	3140 ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	207-08-9	
Benzoic acid	ND ug/kg		1870	1	12/22/07 00:00	12/28/07 07:37	65-85-0	
Benzyl alcohol	ND ug/kg		748	1	12/22/07 00:00	12/28/07 07:37	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	101-55-3	
Butylbenzylphthalate	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		748	1	12/22/07 00:00	12/28/07 07:37	59-50-7	
4-Chloroaniline	ND ug/kg		1870	1	12/22/07 00:00	12/28/07 07:37	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	108-60-1	
2-Chloronaphthalene	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	91-58-7	
2-Chlorophenol	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	7005-72-3	
Chrysene	4480 ug/kg		1870	5	12/22/07 00:00	12/29/07 03:38	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	53-70-3	
Dibenzofuran	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		1870	1	12/22/07 00:00	12/28/07 07:37	91-94-1	
2,4-Dichlorophenol	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	120-83-2	
Diethylphthalate	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	84-66-2	
2,4-Dimethylphenol	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	105-67-9	
Dimethylphthalate	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	131-11-3	
Di-n-butylphthalate	ND ug/kg		374	1	12/22/07 00:00	12/28/07 07:37	84-74-2	

Date: 01/10/2008 11:53 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1106B00L Lab ID: 9210454001 Collected: 12/20/07 10:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
4,6-Dinitro-2-methylphenol	ND	ug/kg	748	1	12/22/07 00:00	12/28/07 07:37	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1870	1	12/22/07 00:00	12/28/07 07:37	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	606-20-2	
Di-n-octylphthalate	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	117-81-7	
Fluoranthene	10400	ug/kg	1870	5	12/22/07 00:00	12/29/07 03:38	206-44-0	
Fluorene	788	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	87-68-3	
Hexachlorobenzene	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	77-47-4	
Hexachloroethane	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	193-39-5	
Isophorone	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	78-59-1	
1-Methylnaphthalene	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	90-12-0	
2-Methylnaphthalene	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37		
Naphthalene	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	91-20-3	
2-Nitroaniline	ND	ug/kg	1870	1	12/22/07 00:00	12/28/07 07:37	88-74-4	
3-Nitroaniline	ND	ug/kg	1870	1	12/22/07 00:00	12/28/07 07:37	99-09-2	
4-Nitroaniline	ND	ug/kg	748	1	12/22/07 00:00	12/28/07 07:37	100-01-6	
Nitrobenzene	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	98-95-3	
2-Nitrophenol	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	88-75-5	
4-Nitrophenol	ND	ug/kg	1870	1	12/22/07 00:00	12/28/07 07:37	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	86-30-6	
Pentachlorophenol	ND	ug/kg	1870	1	12/22/07 00:00	12/28/07 07:37	87-86-5	
Phenanthrene	7850	ug/kg	1870	5	12/22/07 00:00	12/29/07 03:38	85-01-8	
Phenol	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	108-95-2	
Pyrene	10500	ug/kg	1870	5	12/22/07 00:00	12/29/07 03:38	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	374	1	12/22/07 00:00	12/28/07 07:37	88-06-2	
Nitrobenzene-d5 (S)	50 %		10-120	1	12/22/07 00:00	12/28/07 07:37	4165-60-0	
2-Fluorobiphenyl (S)	54 %		10-120	1	12/22/07 00:00	12/28/07 07:37	321-60-8	
Terphenyl-d14 (S)	63 %		10-116	1	12/22/07 00:00	12/28/07 07:37	1718-51-0	
Phenol-d6 (S)	51 %		10-120	1	12/22/07 00:00	12/28/07 07:37	13127-88-3	
2-Fluorophenol (S)	49 %		10-120	1	12/22/07 00:00	12/28/07 07:37	367-12-4	
2,4,6-Tribromophenol (S)	57 %		10-116	1	12/22/07 00:00	12/28/07 07:37	118-79-6	

8260 MSV 5030 Low Level

Analytical Method: EPA 8260

Acetone	ND	ug/kg	113	1	01/01/08 05:53	67-64-1
Benzene	ND	ug/kg	5.7	1	01/01/08 05:53	71-43-2

Date: 01/10/2008 11:53 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1106B00L Lab ID: 9210454001 Collected: 12/20/07 10:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Bromobenzene	ND	ug/kg	5.7	1		01/01/08 05:53	108-86-1	
Bromochloromethane	ND	ug/kg	5.7	1		01/01/08 05:53	74-97-5	
Bromodichloromethane	ND	ug/kg	5.7	1		01/01/08 05:53	75-27-4	
Bromoform	ND	ug/kg	5.7	1		01/01/08 05:53	75-25-2	
Bromomethane	ND	ug/kg	11.3	1		01/01/08 05:53	74-83-9	
2-Butanone (MEK)	ND	ug/kg	113	1		01/01/08 05:53	78-93-3	
n-Butylbenzene	ND	ug/kg	5.7	1		01/01/08 05:53	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.7	1		01/01/08 05:53	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.7	1		01/01/08 05:53	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.7	1		01/01/08 05:53	56-23-5	
Chlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:53	108-90-7	
Chloroethane	ND	ug/kg	11.3	1		01/01/08 05:53	75-00-3	
Chloroform	ND	ug/kg	5.7	1		01/01/08 05:53	67-66-3	
Chloromethane	ND	ug/kg	11.3	1		01/01/08 05:53	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.7	1		01/01/08 05:53	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.7	1		01/01/08 05:53	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.7	1		01/01/08 05:53	96-12-8	
Dibromochloromethane	ND	ug/kg	5.7	1		01/01/08 05:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.7	1		01/01/08 05:53	106-93-4	
Dibromomethane	ND	ug/kg	5.7	1		01/01/08 05:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:53	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.3	1		01/01/08 05:53	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.7	1		01/01/08 05:53	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.7	1		01/01/08 05:53	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.7	1		01/01/08 05:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.7	1		01/01/08 05:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.7	1		01/01/08 05:53	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.7	1		01/01/08 05:53	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.7	1		01/01/08 05:53	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.7	1		01/01/08 05:53	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.7	1		01/01/08 05:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.7	1		01/01/08 05:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.7	1		01/01/08 05:53	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.7	1		01/01/08 05:53	108-20-3	
Ethylbenzene	ND	ug/kg	5.7	1		01/01/08 05:53	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.7	1		01/01/08 05:53	87-68-3	
2-Hexanone	ND	ug/kg	56.6	1		01/01/08 05:53	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.7	1		01/01/08 05:53	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.7	1		01/01/08 05:53	99-87-6	
Methylene Chloride	ND	ug/kg	108	19		01/01/08 05:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	56.6	1		01/01/08 05:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.7	1		01/01/08 05:53	1634-04-4	
Naphthalene	8.8	ug/kg	5.7	1		01/01/08 05:53	91-20-3	
n-Propylbenzene	ND	ug/kg	5.7	1		01/01/08 05:53	103-65-1	

Date: 01/10/2008 11:53 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1106B00L Lab ID: 9210454001 Collected: 12/20/07 10:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Styrene	ND	ug/kg	5.7	1		01/01/08 05:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.7	1		01/01/08 05:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.7	1		01/01/08 05:53	79-34-5	
Tetrachloroethene	ND	ug/kg	5.7	1		01/01/08 05:53	127-18-4	
Toluene	7.4	ug/kg	5.7	1		01/01/08 05:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.7	1		01/01/08 05:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.7	1		01/01/08 05:53	79-00-5	
Trichloroethene	ND	ug/kg	5.7	1		01/01/08 05:53	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.7	1		01/01/08 05:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.7	1		01/01/08 05:53	96-18-4	
1,2,4-Trimethylbenzene	6.2	ug/kg	5.7	1		01/01/08 05:53	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.7	1		01/01/08 05:53	108-67-8	
Vinyl acetate	ND	ug/kg	56.6	1		01/01/08 05:53	108-05-4	
Vinyl chloride	ND	ug/kg	11.3	1		01/01/08 05:53	75-01-4	
Xylene (Total)	11.5	ug/kg	11.3	1		01/01/08 05:53	1330-20-7	
m&p-Xylene	ND	ug/kg	11.3	1		01/01/08 05:53	1330-20-7	
o-Xylene	ND	ug/kg	5.7	1		01/01/08 05:53	95-47-6	
Dibromofluoromethane (S)	108	%	79-116	1		01/01/08 05:53	1868-53-7	
Toluene-d8 (S)	91	%	88-110	1		01/01/08 05:53	2037-26-5	
4-Bromofluorobenzene (S)	78	%	74-115	1		01/01/08 05:53	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	69-121	1		01/01/08 05:53	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture 11.7 % 0.10 1 12/26/07 15:11

Sample: T1110B50L Lab ID: 9210454002 Collected: 12/20/07 10:20 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Arsenic	2.3	mg/kg	0.56	1	12/27/07 12:00	12/28/07 18:35	7440-38-2	
Barium	48.3	mg/kg	0.56	1	12/27/07 12:00	12/28/07 18:35	7440-39-3	
Cadmium	ND	mg/kg	0.11	1	12/27/07 12:00	12/28/07 18:35	7440-43-9	
Chromium	4.9	mg/kg	0.56	1	12/27/07 12:00	12/28/07 18:35	7440-47-3	
Lead	5.8	mg/kg	0.56	1	12/27/07 12:00	12/28/07 18:35	7439-92-1	
Selenium	3.2	mg/kg	1.1	1	12/27/07 12:00	12/28/07 18:35	7782-49-2	
Silver	ND	mg/kg	0.56	1	12/27/07 12:00	12/28/07 18:35	7440-22-4	

7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury 0.041 mg/kg 0.0053 1 12/27/07 10:27 12/27/07 11:50 7439-97-6



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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1110B50L Lab ID: 9210454002 Collected: 12/20/07 10:20 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	83-32-9	
Acenaphthylene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	208-96-8	
Aniline	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	62-53-3	
Anthracene	700	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	120-12-7	
Benzo(a)anthracene	1780	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	56-55-3	
Benzo(a)pyrene	1230	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	50-32-8	
Benzo(b)fluoranthene	1210	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	191-24-2	
Benzo(k)fluoranthene	1110	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	207-08-9	
Benzoic acid	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	65-85-0	
Benzyl alcohol	ND	ug/kg	1120	1	12/22/07 00:00	12/28/07 06:14	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	101-55-3	
Butylbenzylphthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	1120	1	12/22/07 00:00	12/28/07 06:14	59-50-7	
4-Chloroaniline	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	108-60-1	
2-Chloronaphthalene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	91-58-7	
2-Chlorophenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	7005-72-3	
Chrysene	1710	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	53-70-3	
Dibenzofuran	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	120-83-2	
Diethylphthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	105-67-9	
Dimethylphthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	131-11-3	
Di-n-butylphthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	1120	1	12/22/07 00:00	12/28/07 06:14	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	606-20-2	
Di-n-octylphthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	117-81-7	
Fluoranthene	3750	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	206-44-0	
Fluorene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	87-68-3	
Hexachlorobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	77-47-4	
Hexachloroethane	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	67-72-1	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1110B50L Lab ID: 9210454002 Collected: 12/20/07 10:20 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Indeno(1,2,3-cd)pyrene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	193-39-5	
Isophorone	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	78-59-1	
1-Methylnaphthalene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	90-12-0	
2-Methylnaphthalene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14		
Naphthalene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	91-20-3	
2-Nitroaniline	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	88-74-4	
3-Nitroaniline	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	99-09-2	
4-Nitroaniline	ND	ug/kg	1120	1	12/22/07 00:00	12/28/07 06:14	100-01-6	
Nitrobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	98-95-3	
2-Nitrophenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	88-75-5	
4-Nitrophenol	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	86-30-6	
Pentachlorophenol	ND	ug/kg	2800	1	12/22/07 00:00	12/28/07 06:14	87-86-5	
Phenanthrene	2770	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	85-01-8	
Phenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	108-95-2	
Pyrene	3580	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	561	1	12/22/07 00:00	12/28/07 06:14	88-06-2	
Nitrobenzene-d5 (S)	58 %		10-120	1	12/22/07 00:00	12/28/07 06:14	4165-60-0	
2-Fluorobiphenyl (S)	56 %		10-120	1	12/22/07 00:00	12/28/07 06:14	321-60-8	
Terphenyl-d14 (S)	56 %		10-116	1	12/22/07 00:00	12/28/07 06:14	1718-51-0	
Phenol-d6 (S)	66 %		10-120	1	12/22/07 00:00	12/28/07 06:14	13127-88-3	
2-Fluorophenol (S)	58 %		10-120	1	12/22/07 00:00	12/28/07 06:14	367-12-4	
2,4,6-Tribromophenol (S)	68 %		10-116	1	12/22/07 00:00	12/28/07 06:14	118-79-6	

8260 MSV 5030 Low Level

Analytical Method: EPA 8260

Acetone	ND	ug/kg	113	1	01/01/08 05:19	67-64-1	
Benzene	ND	ug/kg	5.7	1	01/01/08 05:19	71-43-2	
Bromobenzene	ND	ug/kg	5.7	1	01/01/08 05:19	108-86-1	
Bromochloromethane	ND	ug/kg	5.7	1	01/01/08 05:19	74-97-5	
Bromodichloromethane	ND	ug/kg	5.7	1	01/01/08 05:19	75-27-4	
Bromoform	ND	ug/kg	5.7	1	01/01/08 05:19	75-25-2	
Bromomethane	ND	ug/kg	11.3	1	01/01/08 05:19	74-83-9	
2-Butanone (MEK)	ND	ug/kg	113	1	01/01/08 05:19	78-93-3	
n-Butylbenzene	ND	ug/kg	5.7	1	01/01/08 05:19	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.7	1	01/01/08 05:19	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.7	1	01/01/08 05:19	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.7	1	01/01/08 05:19	56-23-5	
Chlorobenzene	ND	ug/kg	5.7	1	01/01/08 05:19	108-90-7	
Chloroethane	ND	ug/kg	11.3	1	01/01/08 05:19	75-00-3	
Chloroform	ND	ug/kg	5.7	1	01/01/08 05:19	67-66-3	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1110B50L Lab ID: 9210454002 Collected: 12/20/07 10:20 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Chloromethane	ND	ug/kg	11.3	1		01/01/08 05:19	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.7	1		01/01/08 05:19	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.7	1		01/01/08 05:19	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.7	1		01/01/08 05:19	96-12-8	
Dibromochloromethane	ND	ug/kg	5.7	1		01/01/08 05:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.7	1		01/01/08 05:19	106-93-4	
Dibromomethane	ND	ug/kg	5.7	1		01/01/08 05:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:19	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.3	1		01/01/08 05:19	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.7	1		01/01/08 05:19	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.7	1		01/01/08 05:19	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.7	1		01/01/08 05:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.7	1		01/01/08 05:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.7	1		01/01/08 05:19	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.7	1		01/01/08 05:19	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.7	1		01/01/08 05:19	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.7	1		01/01/08 05:19	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.7	1		01/01/08 05:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.7	1		01/01/08 05:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.7	1		01/01/08 05:19	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.7	1		01/01/08 05:19	108-20-3	
Ethylbenzene	ND	ug/kg	5.7	1		01/01/08 05:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.7	1		01/01/08 05:19	87-68-3	
2-Hexanone	ND	ug/kg	56.6	1		01/01/08 05:19	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.7	1		01/01/08 05:19	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.7	1		01/01/08 05:19	99-87-6	
Methylene Chloride	ND	ug/kg	5.7	1		01/01/08 05:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	56.6	1		01/01/08 05:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.7	1		01/01/08 05:19	1634-04-4	
Naphthalene	ND	ug/kg	5.7	1		01/01/08 05:19	91-20-3	
n-Propylbenzene	ND	ug/kg	5.7	1		01/01/08 05:19	103-65-1	
Styrene	ND	ug/kg	5.7	1		01/01/08 05:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.7	1		01/01/08 05:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.7	1		01/01/08 05:19	79-34-5	
Tetrachloroethene	ND	ug/kg	5.7	1		01/01/08 05:19	127-18-4	
Toluene	13.1	ug/kg	5.7	1		01/01/08 05:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.7	1		01/01/08 05:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.7	1		01/01/08 05:19	79-00-5	
Trichloroethene	ND	ug/kg	5.7	1		01/01/08 05:19	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.7	1		01/01/08 05:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.7	1		01/01/08 05:19	96-18-4	
1,2,4-Trimethylbenzene	10.4	ug/kg	5.7	1		01/01/08 05:19	95-63-6	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1110B50L Lab ID: 9210454002 Collected: 12/20/07 10:20 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level Analytical Method: EPA 8260								
1,3,5-Trimethylbenzene	ND	ug/kg	5.7	1		01/01/08 05:19	108-67-8	
Vinyl acetate	ND	ug/kg	56.6	1		01/01/08 05:19	108-05-4	
Vinyl chloride	ND	ug/kg	11.3	1		01/01/08 05:19	75-01-4	
Xylene (Total)	22.8	ug/kg	11.3	1		01/01/08 05:19	1330-20-7	
m&p-Xylene	16.1	ug/kg	11.3	1		01/01/08 05:19	1330-20-7	
o-Xylene	6.7	ug/kg	5.7	1		01/01/08 05:19	95-47-6	
Dibromofluoromethane (S)	102	%	79-116	1		01/01/08 05:19	1868-53-7	
Toluene-d8 (S)	93	%	88-110	1		01/01/08 05:19	2037-26-5	
4-Bromofluorobenzene (S)	77	%	74-115	1		01/01/08 05:19	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	69-121	1		01/01/08 05:19	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	11.7	%	0.10	1		12/26/07 15:11		

Sample: T1103B75L Lab ID: 9210454003 Collected: 12/20/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	3.0	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:40	7440-38-2	
Barium	74.9	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:40	7440-39-3	
Cadmium	ND	mg/kg	0.072	1	12/27/07 12:00	12/28/07 18:40	7440-43-9	
Chromium	11.4	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:40	7440-47-3	
Lead	18.5	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:40	7439-92-1	
Selenium	3.9	mg/kg	0.72	1	12/27/07 12:00	12/28/07 18:40	7782-49-2	
Silver	ND	mg/kg	0.36	1	12/27/07 12:00	12/28/07 18:40	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.96	mg/kg	0.13	20	12/27/07 10:27	12/27/07 15:10	7439-97-6	
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	83-32-9	
Acenaphthylene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	208-96-8	
Aniline	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	62-53-3	
Anthracene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	120-12-7	
Benzo(a)anthracene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	56-55-3	
Benzo(a)pyrene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	207-08-9	
Benzoic acid	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	65-85-0	
Benzyl alcohol	ND	ug/kg	768	1	12/22/07 00:00	12/28/07 05:54	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	101-55-3	

Date: 01/10/2008 11:53 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ECUSTA123445
Pace Project No.: 9210454

Sample: T1103B75L Lab ID: 9210454003 Collected: 12/20/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Butylbenzylphthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	768	1	12/22/07 00:00	12/28/07 05:54	59-50-7	
4-Chloroaniline	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	108-60-1	
2-Chloronaphthalene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	91-58-7	
2-Chlorophenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	7005-72-3	
Chrysene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	53-70-3	
Dibenzofuran	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	120-83-2	
Diethylphthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	105-67-9	
Dimethylphthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	131-11-3	
Di-n-butylphthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	768	1	12/22/07 00:00	12/28/07 05:54	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	606-20-2	
Di-n-octylphthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	117-81-7	
Fluoranthene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	206-44-0	
Fluorene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	87-68-3	
Hexachlorobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	77-47-4	
Hexachloroethane	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	193-39-5	
Isophorone	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	78-59-1	
1-Methylnaphthalene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	90-12-0	
2-Methylnaphthalene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54		
Naphthalene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	91-20-3	
2-Nitroaniline	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	88-74-4	
3-Nitroaniline	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	99-09-2	
4-Nitroaniline	ND	ug/kg	768	1	12/22/07 00:00	12/28/07 05:54	100-01-6	
Nitrobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	98-95-3	
2-Nitrophenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	88-75-5	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1103B75L Lab ID: 9210454003 Collected: 12/20/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
4-Nitrophenol	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	86-30-6	
Pentachlorophenol	ND	ug/kg	1920	1	12/22/07 00:00	12/28/07 05:54	87-86-5	
Phenanthrene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	85-01-8	
Phenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	108-95-2	
Pyrene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	384	1	12/22/07 00:00	12/28/07 05:54	88-06-2	
Nitrobenzene-d5 (S)	40	%	10-120	1	12/22/07 00:00	12/28/07 05:54	4165-60-0	
2-Fluorobiphenyl (S)	46	%	10-120	1	12/22/07 00:00	12/28/07 05:54	321-60-8	
Terphenyl-d14 (S)	45	%	10-116	1	12/22/07 00:00	12/28/07 05:54	1718-51-0	
Phenol-d6 (S)	45	%	10-120	1	12/22/07 00:00	12/28/07 05:54	13127-88-3	
2-Fluorophenol (S)	39	%	10-120	1	12/22/07 00:00	12/28/07 05:54	367-12-4	
2,4,6-Tribromophenol (S)	51	%	10-116	1	12/22/07 00:00	12/28/07 05:54	118-79-6	

8260 MSV 5030 Low Level

Analytical Method: EPA 8260

Acetone	ND	ug/kg	116	1	01/01/08 05:01	67-64-1	
Benzene	ND	ug/kg	5.8	1	01/01/08 05:01	71-43-2	
Bromobenzene	ND	ug/kg	5.8	1	01/01/08 05:01	108-86-1	
Bromochloromethane	ND	ug/kg	5.8	1	01/01/08 05:01	74-97-5	
Bromodichloromethane	ND	ug/kg	5.8	1	01/01/08 05:01	75-27-4	
Bromoform	ND	ug/kg	5.8	1	01/01/08 05:01	75-25-2	
Bromomethane	ND	ug/kg	11.6	1	01/01/08 05:01	74-83-9	
2-Butanone (MEK)	ND	ug/kg	116	1	01/01/08 05:01	78-93-3	
n-Butylbenzene	ND	ug/kg	5.8	1	01/01/08 05:01	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.8	1	01/01/08 05:01	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.8	1	01/01/08 05:01	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.8	1	01/01/08 05:01	56-23-5	
Chlorobenzene	ND	ug/kg	5.8	1	01/01/08 05:01	108-90-7	
Chloroethane	ND	ug/kg	11.6	1	01/01/08 05:01	75-00-3	
Chloroform	ND	ug/kg	5.8	1	01/01/08 05:01	67-66-3	
Chloromethane	ND	ug/kg	11.6	1	01/01/08 05:01	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.8	1	01/01/08 05:01	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.8	1	01/01/08 05:01	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.8	1	01/01/08 05:01	96-12-8	
Dibromochloromethane	ND	ug/kg	5.8	1	01/01/08 05:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.8	1	01/01/08 05:01	106-93-4	
Dibromomethane	ND	ug/kg	5.8	1	01/01/08 05:01	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.8	1	01/01/08 05:01	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.8	1	01/01/08 05:01	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.8	1	01/01/08 05:01	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.6	1	01/01/08 05:01	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.8	1	01/01/08 05:01	75-34-3	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B75L Lab ID: 9210454003 Collected: 12/20/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
1,2-Dichloroethane	ND	ug/kg	5.8	1		01/01/08 05:01	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.8	1		01/01/08 05:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.8	1		01/01/08 05:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.8	1		01/01/08 05:01	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.8	1		01/01/08 05:01	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.8	1		01/01/08 05:01	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.8	1		01/01/08 05:01	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.8	1		01/01/08 05:01	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.8	1		01/01/08 05:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.8	1		01/01/08 05:01	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.8	1		01/01/08 05:01	108-20-3	
Ethylbenzene	ND	ug/kg	5.8	1		01/01/08 05:01	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.8	1		01/01/08 05:01	87-68-3	
2-Hexanone	ND	ug/kg	58.2	1		01/01/08 05:01	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.8	1		01/01/08 05:01	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.8	1		01/01/08 05:01	99-87-6	
Methylene Chloride	ND	ug/kg	75.7	13		01/01/08 05:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	58.2	1		01/01/08 05:01	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.8	1		01/01/08 05:01	1634-04-4	
Naphthalene	ND	ug/kg	5.8	1		01/01/08 05:01	91-20-3	
n-Propylbenzene	ND	ug/kg	5.8	1		01/01/08 05:01	103-65-1	
Styrene	ND	ug/kg	5.8	1		01/01/08 05:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.8	1		01/01/08 05:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.8	1		01/01/08 05:01	79-34-5	
Tetrachloroethene	ND	ug/kg	5.8	1		01/01/08 05:01	127-18-4	
Toluene	6.7	ug/kg	5.8	1		01/01/08 05:01	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.8	1		01/01/08 05:01	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.8	1		01/01/08 05:01	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.8	1		01/01/08 05:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.8	1		01/01/08 05:01	79-00-5	
Trichloroethene	ND	ug/kg	5.8	1		01/01/08 05:01	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.8	1		01/01/08 05:01	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.8	1		01/01/08 05:01	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.8	1		01/01/08 05:01	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.8	1		01/01/08 05:01	108-67-8	
Vinyl acetate	ND	ug/kg	58.2	1		01/01/08 05:01	108-05-4	
Vinyl chloride	ND	ug/kg	11.6	1		01/01/08 05:01	75-01-4	
Xylene (Total)	ND	ug/kg	11.6	1		01/01/08 05:01	1330-20-7	
m&p-Xylene	ND	ug/kg	11.6	1		01/01/08 05:01	1330-20-7	
o-Xylene	ND	ug/kg	5.8	1		01/01/08 05:01	95-47-6	
Dibromofluoromethane (S)	99 %		79-116	1		01/01/08 05:01	1868-53-7	
Toluene-d8 (S)	94 %		88-110	1		01/01/08 05:01	2037-26-5	
4-Bromofluorobenzene (S)	80 %		74-115	1		01/01/08 05:01	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		69-121	1		01/01/08 05:01	17060-07-0	



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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1103B75L Lab ID: 9210454003 Collected: 12/20/07 10:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	14.1 %		0.10	1		12/26/07 15:11		

Sample: T1103B90L Lab ID: 9210454004 Collected: 12/20/07 11:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.1 mg/kg		0.47	1	12/27/07 12:00	12/28/07 18:55	7440-38-2	
Barium	70.6 mg/kg		0.47	1	12/27/07 12:00	12/28/07 18:55	7440-39-3	
Cadmium	ND mg/kg		0.095	1	12/27/07 12:00	12/28/07 18:55	7440-43-9	
Chromium	22.1 mg/kg		0.47	1	12/27/07 12:00	12/28/07 18:55	7440-47-3	
Lead	19.0 mg/kg		0.47	1	12/27/07 12:00	12/28/07 18:55	7439-92-1	
Selenium	5.0 mg/kg		0.95	1	12/27/07 12:00	12/28/07 18:55	7782-49-2	
Silver	ND mg/kg		0.47	1	12/27/07 12:00	12/28/07 18:55	7440-22-4	

7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	0.23 mg/kg		0.025	5	12/27/07 10:27	12/27/07 15:13	7439-97-6	
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8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545

Acenaphthene	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	83-32-9	
Acenaphthylene	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	208-96-8	
Aniline	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	62-53-3	
Anthracene	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	120-12-7	
Benzo(a)anthracene	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	56-55-3	
Benzo(a)pyrene	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	207-08-9	
Benzoic acid	ND ug/kg		1880	1	12/22/07 00:00	12/28/07 07:17	65-85-0	
Benzyl alcohol	ND ug/kg		751	1	12/22/07 00:00	12/28/07 07:17	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	101-55-3	
Butylbenzylphthalate	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		751	1	12/22/07 00:00	12/28/07 07:17	59-50-7	
4-Chloroaniline	ND ug/kg		1880	1	12/22/07 00:00	12/28/07 07:17	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	108-60-1	
2-Chloronaphthalene	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	91-58-7	
2-Chlorophenol	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	7005-72-3	
Chrysene	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	53-70-3	
Dibenzofuran	ND ug/kg		375	1	12/22/07 00:00	12/28/07 07:17	132-64-9	



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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B90L Lab ID: 9210454004 Collected: 12/20/07 11:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
1,2-Dichlorobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	120-83-2	
Diethylphthalate	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	105-67-9	
Dimethylphthalate	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	131-11-3	
Di-n-butylphthalate	2430	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	751	1	12/22/07 00:00	12/28/07 07:17	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	606-20-2	
Di-n-octylphthalate	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	117-81-7	
Fluoranthene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	206-44-0	
Fluorene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	87-68-3	
Hexachlorobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	77-47-4	
Hexachloroethane	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	193-39-5	
Isophorone	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	78-59-1	
1-Methylnaphthalene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	90-12-0	
2-Methylnaphthalene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17		
Naphthalene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	91-20-3	
2-Nitroaniline	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	88-74-4	
3-Nitroaniline	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	99-09-2	
4-Nitroaniline	ND	ug/kg	751	1	12/22/07 00:00	12/28/07 07:17	100-01-6	
Nitrobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	98-95-3	
2-Nitrophenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	88-75-5	
4-Nitrophenol	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	86-30-6	
Pentachlorophenol	ND	ug/kg	1880	1	12/22/07 00:00	12/28/07 07:17	87-86-5	
Phenanthrene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	85-01-8	
Phenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	108-95-2	
Pyrene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	375	1	12/22/07 00:00	12/28/07 07:17	88-06-2	
Nitrobenzene-d5 (S)	54 %		10-120	1	12/22/07 00:00	12/28/07 07:17	4165-60-0	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1103B90L Lab ID: 9210454004 Collected: 12/20/07 11:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545

2-Fluorobiphenyl (S)	58 %		10-120	1	12/22/07 00:00	12/28/07 07:17	321-60-8	
Terphenyl-d14 (S)	71 %		10-116	1	12/22/07 00:00	12/28/07 07:17	1718-51-0	
Phenol-d6 (S)	59 %		10-120	1	12/22/07 00:00	12/28/07 07:17	13127-88-3	
2-Fluorophenol (S)	52 %		10-120	1	12/22/07 00:00	12/28/07 07:17	367-12-4	
2,4,6-Tribromophenol (S)	61 %		10-116	1	12/22/07 00:00	12/28/07 07:17	118-79-6	

8260 MSV 5030 Low Level Analytical Method: EPA 8260

Acetone	145 ug/kg		114	1		01/01/08 05:36	67-64-1	C9
Benzene	ND ug/kg		5.7	1		01/01/08 05:36	71-43-2	
Bromobenzene	ND ug/kg		5.7	1		01/01/08 05:36	108-86-1	
Bromochloromethane	ND ug/kg		5.7	1		01/01/08 05:36	74-97-5	
Bromodichloromethane	ND ug/kg		5.7	1		01/01/08 05:36	75-27-4	
Bromoform	ND ug/kg		5.7	1		01/01/08 05:36	75-25-2	
Bromomethane	ND ug/kg		11.4	1		01/01/08 05:36	74-83-9	
2-Butanone (MEK)	ND ug/kg		114	1		01/01/08 05:36	78-93-3	
n-Butylbenzene	ND ug/kg		5.7	1		01/01/08 05:36	104-51-8	
sec-Butylbenzene	ND ug/kg		5.7	1		01/01/08 05:36	135-98-8	
tert-Butylbenzene	ND ug/kg		5.7	1		01/01/08 05:36	98-06-6	
Carbon tetrachloride	ND ug/kg		5.7	1		01/01/08 05:36	56-23-5	
Chlorobenzene	ND ug/kg		5.7	1		01/01/08 05:36	108-90-7	
Chloroethane	ND ug/kg		11.4	1		01/01/08 05:36	75-00-3	
Chloroform	ND ug/kg		5.7	1		01/01/08 05:36	67-66-3	
Chloromethane	ND ug/kg		11.4	1		01/01/08 05:36	74-87-3	
2-Chlorotoluene	ND ug/kg		5.7	1		01/01/08 05:36	95-49-8	
4-Chlorotoluene	ND ug/kg		5.7	1		01/01/08 05:36	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		5.7	1		01/01/08 05:36	96-12-8	
Dibromochloromethane	ND ug/kg		5.7	1		01/01/08 05:36	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		5.7	1		01/01/08 05:36	106-93-4	
Dibromomethane	ND ug/kg		5.7	1		01/01/08 05:36	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		5.7	1		01/01/08 05:36	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		5.7	1		01/01/08 05:36	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		5.7	1		01/01/08 05:36	106-46-7	
Dichlorodifluoromethane	ND ug/kg		11.4	1		01/01/08 05:36	75-71-8	
1,1-Dichloroethane	ND ug/kg		5.7	1		01/01/08 05:36	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.7	1		01/01/08 05:36	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.7	1		01/01/08 05:36	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.7	1		01/01/08 05:36	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.7	1		01/01/08 05:36	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.7	1		01/01/08 05:36	78-87-5	
1,3-Dichloropropane	ND ug/kg		5.7	1		01/01/08 05:36	142-28-9	
2,2-Dichloropropane	ND ug/kg		5.7	1		01/01/08 05:36	594-20-7	
1,1-Dichloropropene	ND ug/kg		5.7	1		01/01/08 05:36	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		5.7	1		01/01/08 05:36	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.7	1		01/01/08 05:36	10061-02-6	
Diisopropyl ether	ND ug/kg		5.7	1		01/01/08 05:36	108-20-3	
Ethylbenzene	ND ug/kg		5.7	1		01/01/08 05:36	100-41-4	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B90L Lab ID: 9210454004 Collected: 12/20/07 11:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Hexachloro-1,3-butadiene	ND	ug/kg	5.7	1		01/01/08 05:36	87-68-3	
2-Hexanone	ND	ug/kg	56.9	1		01/01/08 05:36	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.7	1		01/01/08 05:36	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.7	1		01/01/08 05:36	99-87-6	
Methylene Chloride	ND	ug/kg	73.9	13		01/01/08 05:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	56.9	1		01/01/08 05:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.7	1		01/01/08 05:36	1634-04-4	
Naphthalene	ND	ug/kg	5.7	1		01/01/08 05:36	91-20-3	
n-Propylbenzene	ND	ug/kg	5.7	1		01/01/08 05:36	103-65-1	
Styrene	ND	ug/kg	5.7	1		01/01/08 05:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.7	1		01/01/08 05:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.7	1		01/01/08 05:36	79-34-5	
Tetrachloroethene	ND	ug/kg	5.7	1		01/01/08 05:36	127-18-4	
Toluene	9.2	ug/kg	5.7	1		01/01/08 05:36	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:36	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.7	1		01/01/08 05:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.7	1		01/01/08 05:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.7	1		01/01/08 05:36	79-00-5	
Trichloroethene	ND	ug/kg	5.7	1		01/01/08 05:36	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.7	1		01/01/08 05:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.7	1		01/01/08 05:36	96-18-4	
1,2,4-Trimethylbenzene	6.2	ug/kg	5.7	1		01/01/08 05:36	95-63-6	
1,3,5-Trimethylbenzene	7.7	ug/kg	5.7	1		01/01/08 05:36	108-67-8	
Vinyl acetate	ND	ug/kg	56.9	1		01/01/08 05:36	108-05-4	
Vinyl chloride	ND	ug/kg	11.4	1		01/01/08 05:36	75-01-4	
Xylene (Total)	14.3	ug/kg	11.4	1		01/01/08 05:36	1330-20-7	
m&p-Xylene	ND	ug/kg	11.4	1		01/01/08 05:36	1330-20-7	
o-Xylene	ND	ug/kg	5.7	1		01/01/08 05:36	95-47-6	
Dibromofluoromethane (S)	98 %		79-116	1		01/01/08 05:36	1868-53-7	
Toluene-d8 (S)	94 %		88-110	1		01/01/08 05:36	2037-26-5	
4-Bromofluorobenzene (S)	83 %		74-115	1		01/01/08 05:36	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		69-121	1		01/01/08 05:36	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture 12.1 % 0.10 1 12/26/07 15:12

Sample: T1103B100L Lab ID: 9210454005 Collected: 12/20/07 11:40 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Arsenic	2.0	mg/kg	0.55	1	12/27/07 12:00	12/28/07 19:00	7440-38-2	
Barium	80.8	mg/kg	0.55	1	12/27/07 12:00	12/28/07 19:00	7440-39-3	
Cadmium	ND	mg/kg	0.11	1	12/27/07 12:00	12/28/07 19:00	7440-43-9	

Date: 01/10/2008 11:53 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B100L Lab ID: 9210454005 Collected: 12/20/07 11:40 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Chromium	11.9 mg/kg		0.55	1	12/27/07 12:00	12/28/07 19:00	7440-47-3	
Lead	12.8 mg/kg		0.55	1	12/27/07 12:00	12/28/07 19:00	7439-92-1	
Selenium	4.9 mg/kg		1.1	1	12/27/07 12:00	12/28/07 19:00	7782-49-2	
Silver	ND mg/kg		0.55	1	12/27/07 12:00	12/28/07 19:00	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.040 mg/kg		0.0065	1	12/27/07 10:27	12/27/07 12:03	7439-97-6	
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	83-32-9	
Acenaphthylene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	208-96-8	
Aniline	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	62-53-3	
Anthracene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	120-12-7	
Benzo(a)anthracene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	56-55-3	
Benzo(a)pyrene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	207-08-9	
Benzoic acid	ND ug/kg		2080	1	12/22/07 00:00	12/28/07 04:30	65-85-0	
Benzyl alcohol	ND ug/kg		831	1	12/22/07 00:00	12/28/07 04:30	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	101-55-3	
Butylbenzylphthalate	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		831	1	12/22/07 00:00	12/28/07 04:30	59-50-7	
4-Chloroaniline	ND ug/kg		2080	1	12/22/07 00:00	12/28/07 04:30	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	108-60-1	
2-Chloronaphthalene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	91-58-7	
2-Chlorophenol	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	7005-72-3	
Chrysene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	53-70-3	
Dibenzofuran	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		2080	1	12/22/07 00:00	12/28/07 04:30	91-94-1	
2,4-Dichlorophenol	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	120-83-2	
Diethylphthalate	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	84-66-2	
2,4-Dimethylphenol	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	105-67-9	
Dimethylphthalate	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	131-11-3	
Di-n-butylphthalate	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		831	1	12/22/07 00:00	12/28/07 04:30	534-52-1	
2,4-Dinitrophenol	ND ug/kg		2080	1	12/22/07 00:00	12/28/07 04:30	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		416	1	12/22/07 00:00	12/28/07 04:30	121-14-2	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B100L Lab ID: 9210454005 Collected: 12/20/07 11:40 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
2,6-Dinitrotoluene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	606-20-2	
Di-n-octylphthalate	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	117-81-7	
Fluoranthene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	206-44-0	
Fluorene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	87-68-3	
Hexachlorobenzene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	77-47-4	
Hexachloroethane	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	193-39-5	
Isophorone	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	78-59-1	
1-Methylnaphthalene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	90-12-0	
2-Methylnaphthalene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30		
Naphthalene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	91-20-3	
2-Nitroaniline	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	88-74-4	
3-Nitroaniline	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	99-09-2	
4-Nitroaniline	ND	ug/kg	831	1	12/22/07 00:00	12/28/07 04:30	100-01-6	
Nitrobenzene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	98-95-3	
2-Nitrophenol	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	88-75-5	
4-Nitrophenol	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	86-30-6	
Pentachlorophenol	ND	ug/kg	2080	1	12/22/07 00:00	12/28/07 04:30	87-86-5	
Phenanthrene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	85-01-8	
Phenol	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	108-95-2	
Pyrene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	416	1	12/22/07 00:00	12/28/07 04:30	88-06-2	
Nitrobenzene-d5 (S)	42 %		10-120	1	12/22/07 00:00	12/28/07 04:30	4165-60-0	
2-Fluorobiphenyl (S)	41 %		10-120	1	12/22/07 00:00	12/28/07 04:30	321-60-8	
Terphenyl-d14 (S)	39 %		10-116	1	12/22/07 00:00	12/28/07 04:30	1718-51-0	
Phenol-d6 (S)	46 %		10-120	1	12/22/07 00:00	12/28/07 04:30	13127-88-3	
2-Fluorophenol (S)	44 %		10-120	1	12/22/07 00:00	12/28/07 04:30	367-12-4	
2,4,6-Tribromophenol (S)	48 %		10-116	1	12/22/07 00:00	12/28/07 04:30	118-79-6	

8260 MSV 5030 Low Level

Analytical Method: EPA 8260

Acetone	ND	ug/kg	126	1	01/01/08 04:44	67-64-1
Benzene	ND	ug/kg	6.3	1	01/01/08 04:44	71-43-2
Bromobenzene	ND	ug/kg	6.3	1	01/01/08 04:44	108-86-1
Bromochloromethane	ND	ug/kg	6.3	1	01/01/08 04:44	74-97-5
Bromodichloromethane	ND	ug/kg	6.3	1	01/01/08 04:44	75-27-4

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1103B100L Lab ID: 9210454005 Collected: 12/20/07 11:40 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Bromoform	ND	ug/kg	6.3	1		01/01/08 04:44	75-25-2	
Bromomethane	ND	ug/kg	12.6	1		01/01/08 04:44	74-83-9	
2-Butanone (MEK)	ND	ug/kg	126	1		01/01/08 04:44	78-93-3	
n-Butylbenzene	ND	ug/kg	6.3	1		01/01/08 04:44	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.3	1		01/01/08 04:44	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.3	1		01/01/08 04:44	98-06-6	
Carbon tetrachloride	ND	ug/kg	6.3	1		01/01/08 04:44	56-23-5	
Chlorobenzene	ND	ug/kg	6.3	1		01/01/08 04:44	108-90-7	
Chloroethane	ND	ug/kg	12.6	1		01/01/08 04:44	75-00-3	
Chloroform	ND	ug/kg	6.3	1		01/01/08 04:44	67-66-3	
Chloromethane	ND	ug/kg	12.6	1		01/01/08 04:44	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.3	1		01/01/08 04:44	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.3	1		01/01/08 04:44	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.3	1		01/01/08 04:44	96-12-8	
Dibromochloromethane	ND	ug/kg	6.3	1		01/01/08 04:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.3	1		01/01/08 04:44	106-93-4	
Dibromomethane	ND	ug/kg	6.3	1		01/01/08 04:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.3	1		01/01/08 04:44	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.3	1		01/01/08 04:44	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.3	1		01/01/08 04:44	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.6	1		01/01/08 04:44	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.3	1		01/01/08 04:44	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.3	1		01/01/08 04:44	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.3	1		01/01/08 04:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.3	1		01/01/08 04:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.3	1		01/01/08 04:44	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.3	1		01/01/08 04:44	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.3	1		01/01/08 04:44	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.3	1		01/01/08 04:44	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.3	1		01/01/08 04:44	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.3	1		01/01/08 04:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.3	1		01/01/08 04:44	10061-02-6	
Diisopropyl ether	ND	ug/kg	6.3	1		01/01/08 04:44	108-20-3	
Ethylbenzene	ND	ug/kg	6.3	1		01/01/08 04:44	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.3	1		01/01/08 04:44	87-68-3	
2-Hexanone	ND	ug/kg	63.0	1		01/01/08 04:44	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.3	1		01/01/08 04:44	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.3	1		01/01/08 04:44	99-87-6	
Methylene Chloride	ND	ug/kg	25.2	4		01/01/08 04:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	63.0	1		01/01/08 04:44	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.3	1		01/01/08 04:44	1634-04-4	
Naphthalene	ND	ug/kg	6.3	1		01/01/08 04:44	91-20-3	
n-Propylbenzene	ND	ug/kg	6.3	1		01/01/08 04:44	103-65-1	
Styrene	ND	ug/kg	6.3	1		01/01/08 04:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.3	1		01/01/08 04:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.3	1		01/01/08 04:44	79-34-5	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B100L Lab ID: 9210454005 Collected: 12/20/07 11:40 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Tetrachloroethene	ND	ug/kg	6.3	1		01/01/08 04:44	127-18-4	
Toluene	6.4	ug/kg	6.3	1		01/01/08 04:44	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.3	1		01/01/08 04:44	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.3	1		01/01/08 04:44	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.3	1		01/01/08 04:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.3	1		01/01/08 04:44	79-00-5	
Trichloroethene	ND	ug/kg	6.3	1		01/01/08 04:44	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.3	1		01/01/08 04:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.3	1		01/01/08 04:44	96-18-4	
1,2,4-Trimethylbenzene	14.3	ug/kg	6.3	1		01/01/08 04:44	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.3	1		01/01/08 04:44	108-67-8	
Vinyl acetate	ND	ug/kg	63.0	1		01/01/08 04:44	108-05-4	
Vinyl chloride	ND	ug/kg	12.6	1		01/01/08 04:44	75-01-4	
Xylene (Total)	17.8	ug/kg	12.6	1		01/01/08 04:44	1330-20-7	
m&p-Xylene	12.6	ug/kg	12.6	1		01/01/08 04:44	1330-20-7	
o-Xylene	ND	ug/kg	6.3	1		01/01/08 04:44	95-47-6	
Dibromofluoromethane (S)	110	%	79-116	1		01/01/08 04:44	1868-53-7	
Toluene-d8 (S)	94	%	88-110	1		01/01/08 04:44	2037-26-5	
4-Bromofluorobenzene (S)	82	%	74-115	1		01/01/08 04:44	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	69-121	1		01/01/08 04:44	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	20.6	%	0.10	1		12/26/07 16:08		

Sample: T1103B85LF Lab ID: 9210454006 Collected: 12/20/07 12:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Arsenic	ND	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:06	7440-38-2	
Barium	2.0	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:06	7440-39-3	
Cadmium	ND	mg/kg	0.096	1	12/27/07 12:00	12/28/07 19:06	7440-43-9	
Chromium	0.65	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:06	7440-47-3	
Lead	11.7	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:06	7439-92-1	
Selenium	ND	mg/kg	0.96	1	12/27/07 12:00	12/28/07 19:06	7782-49-2	
Silver	ND	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:06	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.0055	mg/kg	0.0044	1	12/27/07 10:27	12/27/07 12:05	7439-97-6	
8270 MSSV PFE		Analytical Method: EPA 8270 Preparation Method: EPA 3545						
Acenaphthene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	83-32-9	
Acenaphthylene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	208-96-8	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1103B85LF Lab ID: 9210454006 Collected: 12/20/07 12:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Aniline	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	62-53-3	
Anthracene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	120-12-7	
Benzo(a)anthracene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	56-55-3	
Benzo(a)pyrene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	207-08-9	
Benzoic acid	ND	ug/kg	9900	1	12/26/07 00:00	12/28/07 03:07	65-85-0	
Benzyl alcohol	ND	ug/kg	3960	1	12/26/07 00:00	12/28/07 03:07	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	101-55-3	
Butylbenzylphthalate	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	3960	1	12/26/07 00:00	12/28/07 03:07	59-50-7	
4-Chloroaniline	ND	ug/kg	9900	1	12/26/07 00:00	12/28/07 03:07	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	108-60-1	
2-Chloronaphthalene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	91-58-7	
2-Chlorophenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	7005-72-3	
Chrysene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	53-70-3	
Dibenzofuran	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	9900	1	12/26/07 00:00	12/28/07 03:07	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	120-83-2	
Diethylphthalate	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	105-67-9	
Dimethylphthalate	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	131-11-3	
Di-n-butylphthalate	408000	ug/kg	99000	50	12/26/07 00:00	12/29/07 03:17	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	3960	1	12/26/07 00:00	12/28/07 03:07	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	9900	1	12/26/07 00:00	12/28/07 03:07	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	606-20-2	
Di-n-octylphthalate	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	117-81-7	
Fluoranthene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	206-44-0	
Fluorene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	87-68-3	
Hexachlorobenzene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	77-47-4	
Hexachloroethane	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	193-39-5	
Isophorone	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	78-59-1	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B85LF Lab ID: 9210454006 Collected: 12/20/07 12:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
1-Methylnaphthalene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	90-12-0	
2-Methylnaphthalene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07		
Naphthalene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	91-20-3	
2-Nitroaniline	ND	ug/kg	9900	1	12/26/07 00:00	12/28/07 03:07	88-74-4	
3-Nitroaniline	ND	ug/kg	9900	1	12/26/07 00:00	12/28/07 03:07	99-09-2	
4-Nitroaniline	ND	ug/kg	3960	1	12/26/07 00:00	12/28/07 03:07	100-01-6	
Nitrobenzene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	98-95-3	
2-Nitrophenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	88-75-5	
4-Nitrophenol	ND	ug/kg	9900	1	12/26/07 00:00	12/28/07 03:07	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	86-30-6	
Pentachlorophenol	ND	ug/kg	9900	1	12/26/07 00:00	12/28/07 03:07	87-86-5	
Phenanthrene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	85-01-8	
Phenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	108-95-2	
Pyrene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 03:07	88-06-2	
Nitrobenzene-d5 (S)	43 %		10-120	1	12/26/07 00:00	12/28/07 03:07	4165-60-0	
2-Fluorobiphenyl (S)	44 %		10-120	1	12/26/07 00:00	12/28/07 03:07	321-60-8	
Terphenyl-d14 (S)	74 %		10-116	1	12/26/07 00:00	12/28/07 03:07	1718-51-0	
Phenol-d6 (S)	42 %		10-120	1	12/26/07 00:00	12/28/07 03:07	13127-88-3	
2-Fluorophenol (S)	38 %		10-120	1	12/26/07 00:00	12/28/07 03:07	367-12-4	
2,4,6-Tribromophenol (S)	40 %		10-116	1	12/26/07 00:00	12/28/07 03:07	118-79-6	

8260 MSV 5030 Low Level

Analytical Method: EPA 8260

Acetone	100	ug/kg	100	1	01/02/08 15:26	67-64-1	C9
Benzene	ND	ug/kg	5.0	1	01/02/08 15:26	71-43-2	
Bromobenzene	ND	ug/kg	5.0	1	01/02/08 15:26	108-86-1	
Bromochloromethane	ND	ug/kg	5.0	1	01/02/08 15:26	74-97-5	
Bromodichloromethane	ND	ug/kg	5.0	1	01/02/08 15:26	75-27-4	
Bromoform	ND	ug/kg	5.0	1	01/02/08 15:26	75-25-2	
Bromomethane	ND	ug/kg	10.0	1	01/02/08 15:26	74-83-9	
2-Butanone (MEK)	ND	ug/kg	100	1	01/02/08 15:26	78-93-3	
n-Butylbenzene	ND	ug/kg	5.0	1	01/02/08 15:26	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	1	01/02/08 15:26	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.0	1	01/02/08 15:26	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.0	1	01/02/08 15:26	56-23-5	
Chlorobenzene	ND	ug/kg	5.0	1	01/02/08 15:26	108-90-7	
Chloroethane	ND	ug/kg	10.0	1	01/02/08 15:26	75-00-3	
Chloroform	ND	ug/kg	5.0	1	01/02/08 15:26	67-66-3	
Chloromethane	ND	ug/kg	10.0	1	01/02/08 15:26	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.0	1	01/02/08 15:26	95-49-8	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B85LF Lab ID: 9210454006 Collected: 12/20/07 12:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
4-Chlorotoluene	ND	ug/kg	5.0	1		01/02/08 15:26	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	1		01/02/08 15:26	96-12-8	
Dibromochloromethane	ND	ug/kg	5.0	1		01/02/08 15:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1		01/02/08 15:26	106-93-4	
Dibromomethane	ND	ug/kg	5.0	1		01/02/08 15:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.0	1		01/02/08 15:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.0	1		01/02/08 15:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.0	1		01/02/08 15:26	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.0	1		01/02/08 15:26	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.0	1		01/02/08 15:26	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	1		01/02/08 15:26	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.0	1		01/02/08 15:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1		01/02/08 15:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1		01/02/08 15:26	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.0	1		01/02/08 15:26	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.0	1		01/02/08 15:26	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.0	1		01/02/08 15:26	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.0	1		01/02/08 15:26	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.0	1		01/02/08 15:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.0	1		01/02/08 15:26	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.0	1		01/02/08 15:26	108-20-3	
Ethylbenzene	ND	ug/kg	5.0	1		01/02/08 15:26	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	1		01/02/08 15:26	87-68-3	
2-Hexanone	ND	ug/kg	50.0	1		01/02/08 15:26	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1		01/02/08 15:26	98-82-8	
p-Isopropyltoluene	11.0	ug/kg	5.0	1		01/02/08 15:26	99-87-6	
Methylene Chloride	ND	ug/kg	15.0	3		01/02/08 15:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	50.0	1		01/02/08 15:26	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.0	1		01/02/08 15:26	1634-04-4	
Naphthalene	ND	ug/kg	5.0	1		01/02/08 15:26	91-20-3	
n-Propylbenzene	ND	ug/kg	5.0	1		01/02/08 15:26	103-65-1	
Styrene	ND	ug/kg	5.0	1		01/02/08 15:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	1		01/02/08 15:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1		01/02/08 15:26	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	1		01/02/08 15:26	127-18-4	
Toluene	ND	ug/kg	5.0	1		01/02/08 15:26	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	1		01/02/08 15:26	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	1		01/02/08 15:26	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.0	1		01/02/08 15:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.0	1		01/02/08 15:26	79-00-5	
Trichloroethene	ND	ug/kg	5.0	1		01/02/08 15:26	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	1		01/02/08 15:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.0	1		01/02/08 15:26	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	1		01/02/08 15:26	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	1		01/02/08 15:26	108-67-8	
Vinyl acetate	ND	ug/kg	50.0	1		01/02/08 15:26	108-05-4	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B85LF Lab ID: 9210454006 Collected: 12/20/07 12:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level Analytical Method: EPA 8260								
Vinyl chloride	ND	ug/kg	10.0	1		01/02/08 15:26	75-01-4	
Xylene (Total)	ND	ug/kg	10.0	1		01/02/08 15:26	1330-20-7	
m&p-Xylene	ND	ug/kg	10.0	1		01/02/08 15:26	1330-20-7	
o-Xylene	ND	ug/kg	5.0	1		01/02/08 15:26	95-47-6	
Dibromofluoromethane (S)	111	%	79-116	1		01/02/08 15:26	1868-53-7	
Toluene-d8 (S)	93	%	88-110	1		01/02/08 15:26	2037-26-5	
4-Bromofluorobenzene (S)	83	%	74-115	1		01/02/08 15:26	460-00-4	
1,2-Dichloroethane-d4 (S)	127	%	69-121	1		01/02/08 15:26	17060-07-0	S1

Sample: T11A03B10L Lab ID: 9210454007 Collected: 12/20/07 13:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	159	mg/kg	0.47	1	12/27/07 12:00	12/28/07 19:10	7440-38-2	
Barium	68.4	mg/kg	0.47	1	12/27/07 12:00	12/28/07 19:10	7440-39-3	
Cadmium	ND	mg/kg	0.094	1	12/27/07 12:00	12/28/07 19:10	7440-43-9	
Chromium	6.6	mg/kg	0.47	1	12/27/07 12:00	12/28/07 19:10	7440-47-3	
Lead	15.3	mg/kg	0.47	1	12/27/07 12:00	12/28/07 19:10	7439-92-1	
Selenium	6.5	mg/kg	0.94	1	12/27/07 12:00	12/28/07 19:10	7782-49-2	
Silver	ND	mg/kg	0.47	1	12/27/07 12:00	12/28/07 19:10	7440-22-4	

7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury 0.27 mg/kg 0.058 10 12/27/07 10:27 12/27/07 15:15 7439-97-6

8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545

Acenaphthene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	83-32-9	
Acenaphthylene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	208-96-8	
Aniline	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	62-53-3	
Anthracene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	120-12-7	
Benzo(a)anthracene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	56-55-3	
Benzo(a)pyrene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	207-08-9	
Benzoic acid	ND	ug/kg	1830	1	12/22/07 00:00	12/28/07 06:35	65-85-0	
Benzyl alcohol	ND	ug/kg	734	1	12/22/07 00:00	12/28/07 06:35	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	101-55-3	
Butylbenzylphthalate	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	734	1	12/22/07 00:00	12/28/07 06:35	59-50-7	
4-Chloroaniline	ND	ug/kg	1830	1	12/22/07 00:00	12/28/07 06:35	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	111-44-4	



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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T11A03B10L Lab ID: 9210454007 Collected: 12/20/07 13:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
bis(2-Chloroisopropyl) ether	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	108-60-1	
2-Chloronaphthalene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	91-58-7	
2-Chlorophenol	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	7005-72-3	
Chrysene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	53-70-3	
Dibenzofuran	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1830	1	12/22/07 00:00	12/28/07 06:35	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	120-83-2	
Diethylphthalate	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	105-67-9	
Dimethylphthalate	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	131-11-3	
Di-n-butylphthalate	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	734	1	12/22/07 00:00	12/28/07 06:35	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1830	1	12/22/07 00:00	12/28/07 06:35	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	606-20-2	
Di-n-octylphthalate	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	122-66-7	
bis(2-Ethylhexyl)phthalate	24100	ug/kg	3670	10	12/22/07 00:00	12/29/07 03:58	117-81-7	
Fluoranthene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	206-44-0	
Fluorene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	87-68-3	
Hexachlorobenzene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	77-47-4	
Hexachloroethane	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	193-39-5	
Isophorone	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	78-59-1	
1-Methylnaphthalene	374	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	90-12-0	
2-Methylnaphthalene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35		
Naphthalene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	91-20-3	
2-Nitroaniline	ND	ug/kg	1830	1	12/22/07 00:00	12/28/07 06:35	88-74-4	
3-Nitroaniline	ND	ug/kg	1830	1	12/22/07 00:00	12/28/07 06:35	99-09-2	
4-Nitroaniline	ND	ug/kg	734	1	12/22/07 00:00	12/28/07 06:35	100-01-6	
Nitrobenzene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	98-95-3	
2-Nitrophenol	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	88-75-5	
4-Nitrophenol	ND	ug/kg	1830	1	12/22/07 00:00	12/28/07 06:35	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	86-30-6	
Pentachlorophenol	ND	ug/kg	1830	1	12/22/07 00:00	12/28/07 06:35	87-86-5	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T11A03B10L Lab ID: 9210454007 Collected: 12/20/07 13:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Phenanthrene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	85-01-8	
Phenol	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	108-95-2	
Pyrene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	367	1	12/22/07 00:00	12/28/07 06:35	88-06-2	
Nitrobenzene-d5 (S)	46	%	10-120	1	12/22/07 00:00	12/28/07 06:35	4165-60-0	
2-Fluorobiphenyl (S)	56	%	10-120	1	12/22/07 00:00	12/28/07 06:35	321-60-8	
Terphenyl-d14 (S)	60	%	10-116	1	12/22/07 00:00	12/28/07 06:35	1718-51-0	
Phenol-d6 (S)	59	%	10-120	1	12/22/07 00:00	12/28/07 06:35	13127-88-3	
2-Fluorophenol (S)	54	%	10-120	1	12/22/07 00:00	12/28/07 06:35	367-12-4	
2,4,6-Tribromophenol (S)	63	%	10-116	1	12/22/07 00:00	12/28/07 06:35	118-79-6	
8260 MSV 5030 Low Level Analytical Method: EPA 8260								
Acetone	264	ug/kg	111	1		01/01/08 04:27	67-64-1	
Benzene	ND	ug/kg	5.6	1		01/01/08 04:27	71-43-2	
Bromobenzene	ND	ug/kg	5.6	1		01/01/08 04:27	108-86-1	
Bromochloromethane	ND	ug/kg	5.6	1		01/01/08 04:27	74-97-5	
Bromodichloromethane	ND	ug/kg	5.6	1		01/01/08 04:27	75-27-4	
Bromoform	ND	ug/kg	5.6	1		01/01/08 04:27	75-25-2	
Bromomethane	ND	ug/kg	11.1	1		01/01/08 04:27	74-83-9	
2-Butanone (MEK)	ND	ug/kg	111	1		01/01/08 04:27	78-93-3	
n-Butylbenzene	ND	ug/kg	5.6	1		01/01/08 04:27	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.6	1		01/01/08 04:27	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.6	1		01/01/08 04:27	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.6	1		01/01/08 04:27	56-23-5	
Chlorobenzene	ND	ug/kg	5.6	1		01/01/08 04:27	108-90-7	
Chloroethane	ND	ug/kg	11.1	1		01/01/08 04:27	75-00-3	
Chloroform	ND	ug/kg	5.6	1		01/01/08 04:27	67-66-3	
Chloromethane	ND	ug/kg	11.1	1		01/01/08 04:27	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.6	1		01/01/08 04:27	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.6	1		01/01/08 04:27	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.6	1		01/01/08 04:27	96-12-8	
Dibromochloromethane	ND	ug/kg	5.6	1		01/01/08 04:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.6	1		01/01/08 04:27	106-93-4	
Dibromomethane	ND	ug/kg	5.6	1		01/01/08 04:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.6	1		01/01/08 04:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.6	1		01/01/08 04:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.6	1		01/01/08 04:27	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.1	1		01/01/08 04:27	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.6	1		01/01/08 04:27	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.6	1		01/01/08 04:27	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.6	1		01/01/08 04:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.6	1		01/01/08 04:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.6	1		01/01/08 04:27	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.6	1		01/01/08 04:27	78-87-5	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T11A03B10L Lab ID: 9210454007 Collected: 12/20/07 13:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
1,3-Dichloropropane	ND	ug/kg	5.6	1		01/01/08 04:27	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.6	1		01/01/08 04:27	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.6	1		01/01/08 04:27	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.6	1		01/01/08 04:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.6	1		01/01/08 04:27	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.6	1		01/01/08 04:27	108-20-3	
Ethylbenzene	ND	ug/kg	5.6	1		01/01/08 04:27	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.6	1		01/01/08 04:27	87-68-3	
2-Hexanone	ND	ug/kg	55.6	1		01/01/08 04:27	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.6	1		01/01/08 04:27	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.6	1		01/01/08 04:27	99-87-6	
Methylene Chloride	ND	ug/kg	89.0	16		01/01/08 04:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	55.6	1		01/01/08 04:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.6	1		01/01/08 04:27	1634-04-4	
Naphthalene	9.0	ug/kg	5.6	1		01/01/08 04:27	91-20-3	
n-Propylbenzene	ND	ug/kg	5.6	1		01/01/08 04:27	103-65-1	
Styrene	ND	ug/kg	5.6	1		01/01/08 04:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.6	1		01/01/08 04:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.6	1		01/01/08 04:27	79-34-5	
Tetrachloroethene	ND	ug/kg	5.6	1		01/01/08 04:27	127-18-4	
Toluene	ND	ug/kg	5.6	1		01/01/08 04:27	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.6	1		01/01/08 04:27	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.6	1		01/01/08 04:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.6	1		01/01/08 04:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.6	1		01/01/08 04:27	79-00-5	
Trichloroethene	ND	ug/kg	5.6	1		01/01/08 04:27	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.6	1		01/01/08 04:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.6	1		01/01/08 04:27	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.6	1		01/01/08 04:27	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.6	1		01/01/08 04:27	108-67-8	
Vinyl acetate	ND	ug/kg	55.6	1		01/01/08 04:27	108-05-4	
Vinyl chloride	ND	ug/kg	11.1	1		01/01/08 04:27	75-01-4	
Xylene (Total)	ND	ug/kg	11.1	1		01/01/08 04:27	1330-20-7	
m&p-Xylene	ND	ug/kg	11.1	1		01/01/08 04:27	1330-20-7	
o-Xylene	ND	ug/kg	5.6	1		01/01/08 04:27	95-47-6	
Dibromofluoromethane (S)	143	%	79-116	1		01/01/08 04:27	1868-53-7	S1
Toluene-d8 (S)	99	%	88-110	1		01/01/08 04:27	2037-26-5	
4-Bromofluorobenzene (S)	78	%	74-115	1		01/01/08 04:27	460-00-4	
1,2-Dichloroethane-d4 (S)	175	%	69-121	1		01/01/08 04:27	17060-07-0	S1

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	10.1	%	0.10	1	12/26/07 16:08
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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T11A03B23L Lab ID: 9210454008 Collected: 12/20/07 13:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.8 mg/kg		0.44	1	12/27/07 12:00	12/28/07 19:24	7440-38-2	
Barium	77.6 mg/kg		0.44	1	12/27/07 12:00	12/28/07 19:24	7440-39-3	
Cadmium	ND mg/kg		0.089	1	12/27/07 12:00	12/28/07 19:24	7440-43-9	
Chromium	15.4 mg/kg		0.44	1	12/27/07 12:00	12/28/07 19:24	7440-47-3	
Lead	16.4 mg/kg		0.44	1	12/27/07 12:00	12/28/07 19:24	7439-92-1	
Selenium	5.5 mg/kg		0.89	1	12/27/07 12:00	12/28/07 19:24	7782-49-2	
Silver	ND mg/kg		0.44	1	12/27/07 12:00	12/28/07 19:24	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.11 mg/kg		0.0072	1	12/27/07 10:27	12/27/07 12:17	7439-97-6	
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	83-32-9	
Acenaphthylene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	208-96-8	
Aniline	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	62-53-3	
Anthracene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	120-12-7	
Benzo(a)anthracene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	56-55-3	
Benzo(a)pyrene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	207-08-9	
Benzoic acid	ND ug/kg		2050	1	12/22/07 00:00	12/28/07 06:56	65-85-0	
Benzyl alcohol	ND ug/kg		821	1	12/22/07 00:00	12/28/07 06:56	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	101-55-3	
Butylbenzylphthalate	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		821	1	12/22/07 00:00	12/28/07 06:56	59-50-7	
4-Chloroaniline	ND ug/kg		2050	1	12/22/07 00:00	12/28/07 06:56	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	108-60-1	
2-Chloronaphthalene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	91-58-7	
2-Chlorophenol	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	7005-72-3	
Chrysene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	53-70-3	
Dibenzofuran	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		2050	1	12/22/07 00:00	12/28/07 06:56	91-94-1	
2,4-Dichlorophenol	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	120-83-2	
Diethylphthalate	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	84-66-2	
2,4-Dimethylphenol	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	105-67-9	
Dimethylphthalate	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	131-11-3	
Di-n-butylphthalate	ND ug/kg		411	1	12/22/07 00:00	12/28/07 06:56	84-74-2	



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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T11A03B23L Lab ID: 9210454008 Collected: 12/20/07 13:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
4,6-Dinitro-2-methylphenol	ND	ug/kg	821	1	12/22/07 00:00	12/28/07 06:56	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	606-20-2	
Di-n-octylphthalate	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	117-81-7	
Fluoranthene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	206-44-0	
Fluorene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	87-68-3	
Hexachlorobenzene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	77-47-4	
Hexachloroethane	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	193-39-5	
Isophorone	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	78-59-1	
1-Methylnaphthalene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	90-12-0	
2-Methylnaphthalene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56		
Naphthalene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	91-20-3	
2-Nitroaniline	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	88-74-4	
3-Nitroaniline	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	99-09-2	
4-Nitroaniline	ND	ug/kg	821	1	12/22/07 00:00	12/28/07 06:56	100-01-6	
Nitrobenzene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	98-95-3	
2-Nitrophenol	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	88-75-5	
4-Nitrophenol	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	86-30-6	
Pentachlorophenol	ND	ug/kg	2050	1	12/22/07 00:00	12/28/07 06:56	87-86-5	
Phenanthrene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	85-01-8	
Phenol	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	108-95-2	
Pyrene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	411	1	12/22/07 00:00	12/28/07 06:56	88-06-2	
Nitrobenzene-d5 (S)	50 %		10-120	1	12/22/07 00:00	12/28/07 06:56	4165-60-0	
2-Fluorobiphenyl (S)	55 %		10-120	1	12/22/07 00:00	12/28/07 06:56	321-60-8	
Terphenyl-d14 (S)	68 %		10-116	1	12/22/07 00:00	12/28/07 06:56	1718-51-0	
Phenol-d6 (S)	40 %		10-120	1	12/22/07 00:00	12/28/07 06:56	13127-88-3	
2-Fluorophenol (S)	22 %		10-120	1	12/22/07 00:00	12/28/07 06:56	367-12-4	
2,4,6-Tribromophenol (S)	55 %		10-116	1	12/22/07 00:00	12/28/07 06:56	118-79-6	

8260 MSV 5030 Low Level

Analytical Method: EPA 8260

Acetone	ND	ug/kg	124	1	01/01/08 01:51	67-64-1
Benzene	ND	ug/kg	6.2	1	01/01/08 01:51	71-43-2

Date: 01/10/2008 11:53 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T11A03B23L Lab ID: 9210454008 Collected: 12/20/07 13:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Bromobenzene	ND	ug/kg	6.2	1		01/01/08 01:51	108-86-1	
Bromochloromethane	ND	ug/kg	6.2	1		01/01/08 01:51	74-97-5	
Bromodichloromethane	ND	ug/kg	6.2	1		01/01/08 01:51	75-27-4	
Bromoform	ND	ug/kg	6.2	1		01/01/08 01:51	75-25-2	
Bromomethane	ND	ug/kg	12.4	1		01/01/08 01:51	74-83-9	
2-Butanone (MEK)	ND	ug/kg	124	1		01/01/08 01:51	78-93-3	
n-Butylbenzene	ND	ug/kg	6.2	1		01/01/08 01:51	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.2	1		01/01/08 01:51	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.2	1		01/01/08 01:51	98-06-6	
Carbon tetrachloride	ND	ug/kg	6.2	1		01/01/08 01:51	56-23-5	
Chlorobenzene	ND	ug/kg	6.2	1		01/01/08 01:51	108-90-7	
Chloroethane	ND	ug/kg	12.4	1		01/01/08 01:51	75-00-3	
Chloroform	ND	ug/kg	6.2	1		01/01/08 01:51	67-66-3	
Chloromethane	ND	ug/kg	12.4	1		01/01/08 01:51	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.2	1		01/01/08 01:51	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.2	1		01/01/08 01:51	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.2	1		01/01/08 01:51	96-12-8	
Dibromochloromethane	ND	ug/kg	6.2	1		01/01/08 01:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.2	1		01/01/08 01:51	106-93-4	
Dibromomethane	ND	ug/kg	6.2	1		01/01/08 01:51	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.2	1		01/01/08 01:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.2	1		01/01/08 01:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.2	1		01/01/08 01:51	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.4	1		01/01/08 01:51	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.2	1		01/01/08 01:51	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.2	1		01/01/08 01:51	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.2	1		01/01/08 01:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.2	1		01/01/08 01:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.2	1		01/01/08 01:51	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.2	1		01/01/08 01:51	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.2	1		01/01/08 01:51	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.2	1		01/01/08 01:51	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.2	1		01/01/08 01:51	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.2	1		01/01/08 01:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.2	1		01/01/08 01:51	10061-02-6	
Diisopropyl ether	ND	ug/kg	6.2	1		01/01/08 01:51	108-20-3	
Ethylbenzene	ND	ug/kg	6.2	1		01/01/08 01:51	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.2	1		01/01/08 01:51	87-68-3	
2-Hexanone	ND	ug/kg	62.2	1		01/01/08 01:51	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.2	1		01/01/08 01:51	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.2	1		01/01/08 01:51	99-87-6	
Methylene Chloride	ND	ug/kg	56.0	9		01/01/08 01:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	62.2	1		01/01/08 01:51	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.2	1		01/01/08 01:51	1634-04-4	
Naphthalene	ND	ug/kg	6.2	1		01/01/08 01:51	91-20-3	
n-Propylbenzene	ND	ug/kg	6.2	1		01/01/08 01:51	103-65-1	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T11A03B23L Lab ID: 9210454008 Collected: 12/20/07 13:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Styrene	ND	ug/kg	6.2	1		01/01/08 01:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.2	1		01/01/08 01:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.2	1		01/01/08 01:51	79-34-5	
Tetrachloroethene	ND	ug/kg	6.2	1		01/01/08 01:51	127-18-4	
Toluene	10.2	ug/kg	6.2	1		01/01/08 01:51	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.2	1		01/01/08 01:51	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.2	1		01/01/08 01:51	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.2	1		01/01/08 01:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.2	1		01/01/08 01:51	79-00-5	
Trichloroethene	ND	ug/kg	6.2	1		01/01/08 01:51	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.2	1		01/01/08 01:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.2	1		01/01/08 01:51	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.2	1		01/01/08 01:51	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.2	1		01/01/08 01:51	108-67-8	
Vinyl acetate	ND	ug/kg	62.2	1		01/01/08 01:51	108-05-4	
Vinyl chloride	ND	ug/kg	12.4	1		01/01/08 01:51	75-01-4	
Xylene (Total)	15.4	ug/kg	12.4	1		01/01/08 01:51	1330-20-7	
m&p-Xylene	ND	ug/kg	12.4	1		01/01/08 01:51	1330-20-7	
o-Xylene	ND	ug/kg	6.2	1		01/01/08 01:51	95-47-6	
Dibromofluoromethane (S)	115	%	79-116	1		01/01/08 01:51	1868-53-7	
Toluene-d8 (S)	91	%	88-110	1		01/01/08 01:51	2037-26-5	
4-Bromofluorobenzene (S)	79	%	74-115	1		01/01/08 01:51	460-00-4	
1,2-Dichloroethane-d4 (S)	128	%	69-121	1		01/01/08 01:51	17060-07-0	S2

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture 19.6 % 0.10 1 12/26/07 16:09

Sample: T1403B25L Lab ID: 9210454009 Collected: 12/20/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Arsenic	2.0	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:37	7440-38-2	
Barium	79.2	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:37	7440-39-3	
Cadmium	ND	mg/kg	0.095	1	12/27/07 12:00	12/28/07 19:37	7440-43-9	
Chromium	9.7	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:37	7440-47-3	
Lead	18.9	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:37	7439-92-1	
Selenium	5.6	mg/kg	0.95	1	12/27/07 12:00	12/28/07 19:37	7782-49-2	
Silver	ND	mg/kg	0.48	1	12/27/07 12:00	12/28/07 19:37	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.32	mg/kg	0.050	10	12/27/07 10:27	12/27/07 15:18	7439-97-6	



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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1403B25L Lab ID: 9210454009 Collected: 12/20/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	83-32-9	
Acenaphthylene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	208-96-8	
Aniline	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	62-53-3	
Anthracene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	120-12-7	
Benzo(a)anthracene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	56-55-3	
Benzo(a)pyrene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	207-08-9	
Benzoic acid	ND	ug/kg	1890	1	12/22/07 00:00	12/28/07 04:51	65-85-0	
Benzyl alcohol	ND	ug/kg	755	1	12/22/07 00:00	12/28/07 04:51	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	101-55-3	
Butylbenzylphthalate	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	755	1	12/22/07 00:00	12/28/07 04:51	59-50-7	
4-Chloroaniline	ND	ug/kg	1890	1	12/22/07 00:00	12/28/07 04:51	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	108-60-1	
2-Chloronaphthalene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	91-58-7	
2-Chlorophenol	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	7005-72-3	
Chrysene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	53-70-3	
Dibenzofuran	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1890	1	12/22/07 00:00	12/28/07 04:51	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	120-83-2	
Diethylphthalate	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	105-67-9	
Dimethylphthalate	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	131-11-3	
Di-n-butylphthalate	1470	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	755	1	12/22/07 00:00	12/28/07 04:51	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1890	1	12/22/07 00:00	12/28/07 04:51	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	606-20-2	
Di-n-octylphthalate	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	122-66-7	
bis(2-Ethylhexyl)phthalate	25300	ug/kg	3780	10	12/22/07 00:00	12/29/07 04:19	117-81-7	
Fluoranthene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	206-44-0	
Fluorene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	87-68-3	
Hexachlorobenzene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	77-47-4	
Hexachloroethane	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	67-72-1	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1403B25L Lab ID: 9210454009 Collected: 12/20/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Indeno(1,2,3-cd)pyrene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	193-39-5	
Isophorone	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	78-59-1	
1-Methylnaphthalene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	90-12-0	
2-Methylnaphthalene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51		
Naphthalene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	91-20-3	
2-Nitroaniline	ND	ug/kg	1890	1	12/22/07 00:00	12/28/07 04:51	88-74-4	
3-Nitroaniline	ND	ug/kg	1890	1	12/22/07 00:00	12/28/07 04:51	99-09-2	
4-Nitroaniline	ND	ug/kg	755	1	12/22/07 00:00	12/28/07 04:51	100-01-6	
Nitrobenzene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	98-95-3	
2-Nitrophenol	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	88-75-5	
4-Nitrophenol	ND	ug/kg	1890	1	12/22/07 00:00	12/28/07 04:51	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	86-30-6	
Pentachlorophenol	ND	ug/kg	1890	1	12/22/07 00:00	12/28/07 04:51	87-86-5	
Phenanthrene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	85-01-8	
Phenol	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	108-95-2	
Pyrene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	378	1	12/22/07 00:00	12/28/07 04:51	88-06-2	
Nitrobenzene-d5 (S)	46 %		10-120	1	12/22/07 00:00	12/28/07 04:51	4165-60-0	
2-Fluorobiphenyl (S)	47 %		10-120	1	12/22/07 00:00	12/28/07 04:51	321-60-8	
Terphenyl-d14 (S)	50 %		10-116	1	12/22/07 00:00	12/28/07 04:51	1718-51-0	
Phenol-d6 (S)	52 %		10-120	1	12/22/07 00:00	12/28/07 04:51	13127-88-3	
2-Fluorophenol (S)	47 %		10-120	1	12/22/07 00:00	12/28/07 04:51	367-12-4	
2,4,6-Tribromophenol (S)	58 %		10-116	1	12/22/07 00:00	12/28/07 04:51	118-79-6	
8260 MSV 5030 Low Level Analytical Method: EPA 8260								
Acetone	ND	ug/kg	114	1		01/01/08 04:09	67-64-1	
Benzene	ND	ug/kg	5.7	1		01/01/08 04:09	71-43-2	
Bromobenzene	ND	ug/kg	5.7	1		01/01/08 04:09	108-86-1	
Bromochloromethane	ND	ug/kg	5.7	1		01/01/08 04:09	74-97-5	
Bromodichloromethane	ND	ug/kg	5.7	1		01/01/08 04:09	75-27-4	
Bromoform	ND	ug/kg	5.7	1		01/01/08 04:09	75-25-2	
Bromomethane	ND	ug/kg	11.4	1		01/01/08 04:09	74-83-9	
2-Butanone (MEK)	ND	ug/kg	114	1		01/01/08 04:09	78-93-3	
n-Butylbenzene	ND	ug/kg	5.7	1		01/01/08 04:09	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.7	1		01/01/08 04:09	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.7	1		01/01/08 04:09	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.7	1		01/01/08 04:09	56-23-5	
Chlorobenzene	ND	ug/kg	5.7	1		01/01/08 04:09	108-90-7	
Chloroethane	ND	ug/kg	11.4	1		01/01/08 04:09	75-00-3	
Chloroform	ND	ug/kg	5.7	1		01/01/08 04:09	67-66-3	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1403B25L Lab ID: 9210454009 Collected: 12/20/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Chloromethane	ND	ug/kg	11.4	1		01/01/08 04:09	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.7	1		01/01/08 04:09	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.7	1		01/01/08 04:09	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.7	1		01/01/08 04:09	96-12-8	
Dibromochloromethane	ND	ug/kg	5.7	1		01/01/08 04:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.7	1		01/01/08 04:09	106-93-4	
Dibromomethane	ND	ug/kg	5.7	1		01/01/08 04:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.7	1		01/01/08 04:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.7	1		01/01/08 04:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.7	1		01/01/08 04:09	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.4	1		01/01/08 04:09	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.7	1		01/01/08 04:09	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.7	1		01/01/08 04:09	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.7	1		01/01/08 04:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.7	1		01/01/08 04:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.7	1		01/01/08 04:09	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.7	1		01/01/08 04:09	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.7	1		01/01/08 04:09	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.7	1		01/01/08 04:09	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.7	1		01/01/08 04:09	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.7	1		01/01/08 04:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.7	1		01/01/08 04:09	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.7	1		01/01/08 04:09	108-20-3	
Ethylbenzene	ND	ug/kg	5.7	1		01/01/08 04:09	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.7	1		01/01/08 04:09	87-68-3	
2-Hexanone	ND	ug/kg	57.2	1		01/01/08 04:09	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.7	1		01/01/08 04:09	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.7	1		01/01/08 04:09	99-87-6	
Methylene Chloride	ND	ug/kg	57.2	10		01/01/08 04:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	57.2	1		01/01/08 04:09	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.7	1		01/01/08 04:09	1634-04-4	
Naphthalene	ND	ug/kg	5.7	1		01/01/08 04:09	91-20-3	
n-Propylbenzene	ND	ug/kg	5.7	1		01/01/08 04:09	103-65-1	
Styrene	ND	ug/kg	5.7	1		01/01/08 04:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.7	1		01/01/08 04:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.7	1		01/01/08 04:09	79-34-5	
Tetrachloroethene	ND	ug/kg	5.7	1		01/01/08 04:09	127-18-4	
Toluene	7.5	ug/kg	5.7	1		01/01/08 04:09	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.7	1		01/01/08 04:09	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.7	1		01/01/08 04:09	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.7	1		01/01/08 04:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.7	1		01/01/08 04:09	79-00-5	
Trichloroethene	ND	ug/kg	5.7	1		01/01/08 04:09	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.7	1		01/01/08 04:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.7	1		01/01/08 04:09	96-18-4	
1,2,4-Trimethylbenzene	6.3	ug/kg	5.7	1		01/01/08 04:09	95-63-6	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1403B25L Lab ID: 9210454009 Collected: 12/20/07 16:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
1,3,5-Trimethylbenzene	ND	ug/kg	5.7	1		01/01/08 04:09	108-67-8	
Vinyl acetate	ND	ug/kg	57.2	1		01/01/08 04:09	108-05-4	
Vinyl chloride	ND	ug/kg	11.4	1		01/01/08 04:09	75-01-4	
Xylene (Total)	11.8	ug/kg	11.4	1		01/01/08 04:09	1330-20-7	
m&p-Xylene	ND	ug/kg	11.4	1		01/01/08 04:09	1330-20-7	
o-Xylene	ND	ug/kg	5.7	1		01/01/08 04:09	95-47-6	
Dibromofluoromethane (S)	99 %		79-116	1		01/01/08 04:09	1868-53-7	
Toluene-d8 (S)	96 %		88-110	1		01/01/08 04:09	2037-26-5	
4-Bromofluorobenzene (S)	82 %		74-115	1		01/01/08 04:09	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		69-121	1		01/01/08 04:09	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	12.6 %		0.10	1		12/26/07 16:09		

Sample: T1503B25L Lab ID: 9210454010 Collected: 12/20/07 16:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Arsenic	2.6	mg/kg	0.50	1	12/27/07 12:00	12/28/07 19:57	7440-38-2	
Barium	71.0	mg/kg	0.50	1	12/27/07 12:00	12/28/07 19:57	7440-39-3	
Cadmium	ND	mg/kg	0.10	1	12/27/07 12:00	12/28/07 19:57	7440-43-9	
Chromium	9.6	mg/kg	0.50	1	12/27/07 12:00	12/28/07 19:57	7440-47-3	
Lead	17.0	mg/kg	0.50	1	12/27/07 12:00	12/28/07 19:57	7439-92-1	
Selenium	5.6	mg/kg	1.0	1	12/27/07 12:00	12/28/07 19:57	7782-49-2	
Silver	ND	mg/kg	0.50	1	12/27/07 12:00	12/28/07 19:57	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.12	mg/kg	0.0063	1	12/27/07 10:27	12/27/07 12:24	7439-97-6	
8270 MSSV PFE		Analytical Method: EPA 8270 Preparation Method: EPA 3545						
Acenaphthene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	83-32-9	
Acenaphthylene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	208-96-8	
Aniline	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	62-53-3	
Anthracene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	120-12-7	
Benzo(a)anthracene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	56-55-3	
Benzo(a)pyrene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	207-08-9	
Benzoic acid	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	65-85-0	
Benzyl alcohol	ND	ug/kg	779	1	12/22/07 00:00	12/28/07 03:28	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	101-55-3	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1503B25L Lab ID: 9210454010 Collected: 12/20/07 16:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Butylbenzylphthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	779	1	12/22/07 00:00	12/28/07 03:28	59-50-7	
4-Chloroaniline	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	108-60-1	
2-Chloronaphthalene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	91-58-7	
2-Chlorophenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	7005-72-3	
Chrysene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	53-70-3	
Dibenzofuran	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	120-83-2	
Diethylphthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	105-67-9	
Dimethylphthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	131-11-3	
Di-n-butylphthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	779	1	12/22/07 00:00	12/28/07 03:28	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	606-20-2	
Di-n-octylphthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	117-81-7	
Fluoranthene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	206-44-0	
Fluorene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	87-68-3	
Hexachlorobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	77-47-4	
Hexachloroethane	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	193-39-5	
Isophorone	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	78-59-1	
1-Methylnaphthalene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	90-12-0	
2-Methylnaphthalene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28		
Naphthalene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	91-20-3	
2-Nitroaniline	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	88-74-4	
3-Nitroaniline	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	99-09-2	
4-Nitroaniline	ND	ug/kg	779	1	12/22/07 00:00	12/28/07 03:28	100-01-6	
Nitrobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	98-95-3	
2-Nitrophenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	88-75-5	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1503B25L Lab ID: 9210454010 Collected: 12/20/07 16:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
4-Nitrophenol	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	86-30-6	
Pentachlorophenol	ND	ug/kg	1950	1	12/22/07 00:00	12/28/07 03:28	87-86-5	
Phenanthrene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	85-01-8	
Phenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	108-95-2	
Pyrene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	389	1	12/22/07 00:00	12/28/07 03:28	88-06-2	
Nitrobenzene-d5 (S)	31 %		10-120	1	12/22/07 00:00	12/28/07 03:28	4165-60-0	
2-Fluorobiphenyl (S)	38 %		10-120	1	12/22/07 00:00	12/28/07 03:28	321-60-8	
Terphenyl-d14 (S)	47 %		10-116	1	12/22/07 00:00	12/28/07 03:28	1718-51-0	
Phenol-d6 (S)	33 %		10-120	1	12/22/07 00:00	12/28/07 03:28	13127-88-3	
2-Fluorophenol (S)	23 %		10-120	1	12/22/07 00:00	12/28/07 03:28	367-12-4	
2,4,6-Tribromophenol (S)	43 %		10-116	1	12/22/07 00:00	12/28/07 03:28	118-79-6	

8260 MSV 5030 Low Level

Analytical Method: EPA 8260

Acetone	ND	ug/kg	118	1	01/01/08 03:18	67-64-1	
Benzene	ND	ug/kg	5.9	1	01/01/08 03:18	71-43-2	
Bromobenzene	ND	ug/kg	5.9	1	01/01/08 03:18	108-86-1	
Bromochloromethane	ND	ug/kg	5.9	1	01/01/08 03:18	74-97-5	
Bromodichloromethane	ND	ug/kg	5.9	1	01/01/08 03:18	75-27-4	
Bromoform	ND	ug/kg	5.9	1	01/01/08 03:18	75-25-2	
Bromomethane	ND	ug/kg	11.8	1	01/01/08 03:18	74-83-9	
2-Butanone (MEK)	ND	ug/kg	118	1	01/01/08 03:18	78-93-3	
n-Butylbenzene	ND	ug/kg	5.9	1	01/01/08 03:18	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.9	1	01/01/08 03:18	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.9	1	01/01/08 03:18	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.9	1	01/01/08 03:18	56-23-5	
Chlorobenzene	ND	ug/kg	5.9	1	01/01/08 03:18	108-90-7	
Chloroethane	ND	ug/kg	11.8	1	01/01/08 03:18	75-00-3	
Chloroform	ND	ug/kg	5.9	1	01/01/08 03:18	67-66-3	
Chloromethane	ND	ug/kg	11.8	1	01/01/08 03:18	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.9	1	01/01/08 03:18	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.9	1	01/01/08 03:18	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.9	1	01/01/08 03:18	96-12-8	
Dibromochloromethane	ND	ug/kg	5.9	1	01/01/08 03:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.9	1	01/01/08 03:18	106-93-4	
Dibromomethane	ND	ug/kg	5.9	1	01/01/08 03:18	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.9	1	01/01/08 03:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.9	1	01/01/08 03:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.9	1	01/01/08 03:18	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.8	1	01/01/08 03:18	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.9	1	01/01/08 03:18	75-34-3	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1503B25L Lab ID: 9210454010 Collected: 12/20/07 16:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
1,2-Dichloroethane	ND	ug/kg	5.9	1		01/01/08 03:18	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.9	1		01/01/08 03:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.9	1		01/01/08 03:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.9	1		01/01/08 03:18	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.9	1		01/01/08 03:18	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.9	1		01/01/08 03:18	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.9	1		01/01/08 03:18	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.9	1		01/01/08 03:18	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.9	1		01/01/08 03:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.9	1		01/01/08 03:18	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.9	1		01/01/08 03:18	108-20-3	
Ethylbenzene	ND	ug/kg	5.9	1		01/01/08 03:18	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.9	1		01/01/08 03:18	87-68-3	
2-Hexanone	ND	ug/kg	59.0	1		01/01/08 03:18	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.9	1		01/01/08 03:18	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.9	1		01/01/08 03:18	99-87-6	
Methylene Chloride	ND	ug/kg	41.3	7		01/01/08 03:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	59.0	1		01/01/08 03:18	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.9	1		01/01/08 03:18	1634-04-4	
Naphthalene	ND	ug/kg	5.9	1		01/01/08 03:18	91-20-3	
n-Propylbenzene	ND	ug/kg	5.9	1		01/01/08 03:18	103-65-1	
Styrene	ND	ug/kg	5.9	1		01/01/08 03:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.9	1		01/01/08 03:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.9	1		01/01/08 03:18	79-34-5	
Tetrachloroethene	ND	ug/kg	5.9	1		01/01/08 03:18	127-18-4	
Toluene	ND	ug/kg	5.9	1		01/01/08 03:18	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.9	1		01/01/08 03:18	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.9	1		01/01/08 03:18	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.9	1		01/01/08 03:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.9	1		01/01/08 03:18	79-00-5	
Trichloroethene	ND	ug/kg	5.9	1		01/01/08 03:18	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.9	1		01/01/08 03:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.9	1		01/01/08 03:18	96-18-4	
1,2,4-Trimethylbenzene	13.8	ug/kg	5.9	1		01/01/08 03:18	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.9	1		01/01/08 03:18	108-67-8	
Vinyl acetate	ND	ug/kg	59.0	1		01/01/08 03:18	108-05-4	
Vinyl chloride	ND	ug/kg	11.8	1		01/01/08 03:18	75-01-4	
Xylene (Total)	23.0	ug/kg	11.8	1		01/01/08 03:18	1330-20-7	
m&p-Xylene	16.8	ug/kg	11.8	1		01/01/08 03:18	1330-20-7	
o-Xylene	6.2	ug/kg	5.9	1		01/01/08 03:18	95-47-6	
Dibromofluoromethane (S)	98 %		79-116	1		01/01/08 03:18	1868-53-7	
Toluene-d8 (S)	94 %		88-110	1		01/01/08 03:18	2037-26-5	
4-Bromofluorobenzene (S)	82 %		74-115	1		01/01/08 03:18	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		69-121	1		01/01/08 03:18	17060-07-0	



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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1503B25L Lab ID: 9210454010 Collected: 12/20/07 16:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	15.3 %		0.10	1		12/26/07 16:09		

Sample: T1603B25L Lab ID: 9210454011 Collected: 12/20/07 17:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	2.0 mg/kg		0.57	1	12/27/07 12:00	12/28/07 20:03	7440-38-2	
Barium	59.7 mg/kg		0.57	1	12/27/07 12:00	12/28/07 20:03	7440-39-3	
Cadmium	ND mg/kg		0.11	1	12/27/07 12:00	12/28/07 20:03	7440-43-9	
Chromium	10.8 mg/kg		0.57	1	12/27/07 12:00	12/28/07 20:03	7440-47-3	
Lead	10.8 mg/kg		0.57	1	12/27/07 12:00	12/28/07 20:03	7439-92-1	
Selenium	4.5 mg/kg		1.1	1	12/27/07 12:00	12/28/07 20:03	7782-49-2	
Silver	ND mg/kg		0.57	1	12/27/07 12:00	12/28/07 20:03	7440-22-4	

7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury 0.050 mg/kg 0.0062 1 12/27/07 10:27 12/27/07 12:26 7439-97-6

8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545

Acenaphthene	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	83-32-9
Acenaphthylene	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	208-96-8
Aniline	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	62-53-3
Anthracene	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	120-12-7
Benzo(a)anthracene	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	56-55-3
Benzo(a)pyrene	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	50-32-8
Benzo(b)fluoranthene	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	205-99-2
Benzo(g,h,i)perylene	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	191-24-2
Benzo(k)fluoranthene	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	207-08-9
Benzoic acid	ND ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	65-85-0
Benzyl alcohol	ND ug/kg	791	1	12/22/07 00:00	12/28/07 03:49	100-51-6
4-Bromophenylphenyl ether	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	101-55-3
Butylbenzylphthalate	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	85-68-7
4-Chloro-3-methylphenol	ND ug/kg	791	1	12/22/07 00:00	12/28/07 03:49	59-50-7
4-Chloroaniline	ND ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	106-47-8
bis(2-Chloroethoxy)methane	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	111-91-1
bis(2-Chloroethyl) ether	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	111-44-4
bis(2-Chloroisopropyl) ether	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	108-60-1
2-Chloronaphthalene	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	91-58-7
2-Chlorophenol	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	95-57-8
4-Chlorophenylphenyl ether	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	7005-72-3
Chrysene	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	218-01-9
Dibenz(a,h)anthracene	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	53-70-3
Dibenzofuran	ND ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	132-64-9

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1603B25L Lab ID: 9210454011 Collected: 12/20/07 17:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
1,2-Dichlorobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	120-83-2	
Diethylphthalate	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	105-67-9	
Dimethylphthalate	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	131-11-3	
Di-n-butylphthalate	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	791	1	12/22/07 00:00	12/28/07 03:49	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	606-20-2	
Di-n-octylphthalate	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	117-81-7	
Fluoranthene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	206-44-0	
Fluorene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	87-68-3	
Hexachlorobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	77-47-4	
Hexachloroethane	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	193-39-5	
Isophorone	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	78-59-1	
1-Methylnaphthalene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	90-12-0	
2-Methylnaphthalene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49		
Naphthalene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	91-20-3	
2-Nitroaniline	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	88-74-4	
3-Nitroaniline	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	99-09-2	
4-Nitroaniline	ND	ug/kg	791	1	12/22/07 00:00	12/28/07 03:49	100-01-6	
Nitrobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	98-95-3	
2-Nitrophenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	88-75-5	
4-Nitrophenol	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	86-30-6	
Pentachlorophenol	ND	ug/kg	1980	1	12/22/07 00:00	12/28/07 03:49	87-86-5	
Phenanthrene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	85-01-8	
Phenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	108-95-2	
Pyrene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	396	1	12/22/07 00:00	12/28/07 03:49	88-06-2	
Nitrobenzene-d5 (S)	36 %		10-120	1	12/22/07 00:00	12/28/07 03:49	4165-60-0	

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(704)875-9092

ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1603B25L Lab ID: 9210454011 Collected: 12/20/07 17:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
2-Fluorobiphenyl (S)	38 %		10-120	1	12/22/07 00:00	12/28/07 03:49	321-60-8	
Terphenyl-d14 (S)	41 %		10-116	1	12/22/07 00:00	12/28/07 03:49	1718-51-0	
Phenol-d6 (S)	37 %		10-120	1	12/22/07 00:00	12/28/07 03:49	13127-88-3	
2-Fluorophenol (S)	24 %		10-120	1	12/22/07 00:00	12/28/07 03:49	367-12-4	
2,4,6-Tribromophenol (S)	45 %		10-116	1	12/22/07 00:00	12/28/07 03:49	118-79-6	
8260 MSV 5030 Low Level Analytical Method: EPA 8260								
Acetone	169 ug/kg		120	1		01/01/08 02:26	67-64-1	C9
Benzene	ND ug/kg		6.0	1		01/01/08 02:26	71-43-2	
Bromobenzene	ND ug/kg		6.0	1		01/01/08 02:26	108-86-1	
Bromochloromethane	ND ug/kg		6.0	1		01/01/08 02:26	74-97-5	
Bromodichloromethane	ND ug/kg		6.0	1		01/01/08 02:26	75-27-4	
Bromoform	ND ug/kg		6.0	1		01/01/08 02:26	75-25-2	
Bromomethane	ND ug/kg		12.0	1		01/01/08 02:26	74-83-9	
2-Butanone (MEK)	ND ug/kg		120	1		01/01/08 02:26	78-93-3	
n-Butylbenzene	ND ug/kg		6.0	1		01/01/08 02:26	104-51-8	
sec-Butylbenzene	ND ug/kg		6.0	1		01/01/08 02:26	135-98-8	
tert-Butylbenzene	ND ug/kg		6.0	1		01/01/08 02:26	98-06-6	
Carbon tetrachloride	ND ug/kg		6.0	1		01/01/08 02:26	56-23-5	
Chlorobenzene	ND ug/kg		6.0	1		01/01/08 02:26	108-90-7	
Chloroethane	ND ug/kg		12.0	1		01/01/08 02:26	75-00-3	
Chloroform	ND ug/kg		6.0	1		01/01/08 02:26	67-66-3	
Chloromethane	ND ug/kg		12.0	1		01/01/08 02:26	74-87-3	
2-Chlorotoluene	ND ug/kg		6.0	1		01/01/08 02:26	95-49-8	
4-Chlorotoluene	ND ug/kg		6.0	1		01/01/08 02:26	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		6.0	1		01/01/08 02:26	96-12-8	
Dibromochloromethane	ND ug/kg		6.0	1		01/01/08 02:26	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		6.0	1		01/01/08 02:26	106-93-4	
Dibromomethane	ND ug/kg		6.0	1		01/01/08 02:26	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		6.0	1		01/01/08 02:26	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		6.0	1		01/01/08 02:26	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		6.0	1		01/01/08 02:26	106-46-7	
Dichlorodifluoromethane	ND ug/kg		12.0	1		01/01/08 02:26	75-71-8	
1,1-Dichloroethane	ND ug/kg		6.0	1		01/01/08 02:26	75-34-3	
1,2-Dichloroethane	ND ug/kg		6.0	1		01/01/08 02:26	107-06-2	
1,1-Dichloroethene	ND ug/kg		6.0	1		01/01/08 02:26	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		6.0	1		01/01/08 02:26	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		6.0	1		01/01/08 02:26	156-60-5	
1,2-Dichloropropane	ND ug/kg		6.0	1		01/01/08 02:26	78-87-5	
1,3-Dichloropropane	ND ug/kg		6.0	1		01/01/08 02:26	142-28-9	
2,2-Dichloropropane	ND ug/kg		6.0	1		01/01/08 02:26	594-20-7	
1,1-Dichloropropene	ND ug/kg		6.0	1		01/01/08 02:26	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		6.0	1		01/01/08 02:26	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		6.0	1		01/01/08 02:26	10061-02-6	
Diisopropyl ether	ND ug/kg		6.0	1		01/01/08 02:26	108-20-3	
Ethylbenzene	ND ug/kg		6.0	1		01/01/08 02:26	100-41-4	

Date: 01/10/2008 11:53 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1603B25L Lab ID: 9210454011 Collected: 12/20/07 17:00 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Hexachloro-1,3-butadiene	ND	ug/kg	6.0	1		01/01/08 02:26	87-68-3	
2-Hexanone	ND	ug/kg	59.9	1		01/01/08 02:26	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.0	1		01/01/08 02:26	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.0	1		01/01/08 02:26	99-87-6	
Methylene Chloride	ND	ug/kg	36.0	6		01/01/08 02:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	59.9	1		01/01/08 02:26	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.0	1		01/01/08 02:26	1634-04-4	
Naphthalene	ND	ug/kg	6.0	1		01/01/08 02:26	91-20-3	
n-Propylbenzene	ND	ug/kg	6.0	1		01/01/08 02:26	103-65-1	
Styrene	ND	ug/kg	6.0	1		01/01/08 02:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.0	1		01/01/08 02:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.0	1		01/01/08 02:26	79-34-5	
Tetrachloroethene	ND	ug/kg	6.0	1		01/01/08 02:26	127-18-4	
Toluene	14.7	ug/kg	6.0	1		01/01/08 02:26	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.0	1		01/01/08 02:26	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.0	1		01/01/08 02:26	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.0	1		01/01/08 02:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.0	1		01/01/08 02:26	79-00-5	
Trichloroethene	ND	ug/kg	6.0	1		01/01/08 02:26	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.0	1		01/01/08 02:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.0	1		01/01/08 02:26	96-18-4	
1,2,4-Trimethylbenzene	12.7	ug/kg	6.0	1		01/01/08 02:26	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.0	1		01/01/08 02:26	108-67-8	
Vinyl acetate	ND	ug/kg	59.9	1		01/01/08 02:26	108-05-4	
Vinyl chloride	ND	ug/kg	12.0	1		01/01/08 02:26	75-01-4	
Xylene (Total)	28.7	ug/kg	12.0	1		01/01/08 02:26	1330-20-7	
m&p-Xylene	20.8	ug/kg	12.0	1		01/01/08 02:26	1330-20-7	
o-Xylene	7.9	ug/kg	6.0	1		01/01/08 02:26	95-47-6	
Dibromofluoromethane (S)	108	%	79-116	1		01/01/08 02:26	1868-53-7	
Toluene-d8 (S)	89	%	88-110	1		01/01/08 02:26	2037-26-5	
4-Bromofluorobenzene (S)	71	%	74-115	1		01/01/08 02:26	460-00-4	S2
1,2-Dichloroethane-d4 (S)	113	%	69-121	1		01/01/08 02:26	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture 16.6 % 0.10 1 12/26/07 16:09

Sample: T1110B10L Lab ID: 9210454012 Collected: 12/20/07 10:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Arsenic	1.5	mg/kg	0.48	1	12/27/07 12:00	12/28/07 20:08	7440-38-2	
Barium	90.5	mg/kg	0.48	1	12/27/07 12:00	12/28/07 20:08	7440-39-3	
Cadmium	ND	mg/kg	0.097	1	12/27/07 12:00	12/28/07 20:08	7440-43-9	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1110B10L Lab ID: 9210454012 Collected: 12/20/07 10:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Chromium	13.8 mg/kg		0.48	1	12/27/07 12:00	12/28/07 20:08	7440-47-3	
Lead	15.1 mg/kg		0.48	1	12/27/07 12:00	12/28/07 20:08	7439-92-1	
Selenium	6.0 mg/kg		0.97	1	12/27/07 12:00	12/28/07 20:08	7782-49-2	
Silver	ND mg/kg		0.48	1	12/27/07 12:00	12/28/07 20:08	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	0.20 mg/kg		0.013	2	12/27/07 10:27	12/27/07 15:20	7439-97-6	
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Acenaphthene	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	83-32-9	
Acenaphthylene	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	208-96-8	
Aniline	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	62-53-3	
Anthracene	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	120-12-7	
Benzo(a)anthracene	1260 ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	56-55-3	
Benzo(a)pyrene	839 ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	50-32-8	
Benzo(b)fluoranthene	689 ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	191-24-2	
Benzo(k)fluoranthene	806 ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	207-08-9	
Benzoic acid	ND ug/kg		1980	1	12/26/07 00:00	12/28/07 05:12	65-85-0	
Benzyl alcohol	ND ug/kg		791	1	12/26/07 00:00	12/28/07 05:12	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	101-55-3	
Butylbenzylphthalate	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		791	1	12/26/07 00:00	12/28/07 05:12	59-50-7	
4-Chloroaniline	ND ug/kg		1980	1	12/26/07 00:00	12/28/07 05:12	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	108-60-1	
2-Chloronaphthalene	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	91-58-7	
2-Chlorophenol	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	7005-72-3	
Chrysene	1190 ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	53-70-3	
Dibenzofuran	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		1980	1	12/26/07 00:00	12/28/07 05:12	91-94-1	
2,4-Dichlorophenol	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	120-83-2	
Diethylphthalate	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	84-66-2	
2,4-Dimethylphenol	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	105-67-9	
Dimethylphthalate	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	131-11-3	
Di-n-butylphthalate	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		791	1	12/26/07 00:00	12/28/07 05:12	534-52-1	
2,4-Dinitrophenol	ND ug/kg		1980	1	12/26/07 00:00	12/28/07 05:12	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		395	1	12/26/07 00:00	12/28/07 05:12	121-14-2	





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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1110B10L Lab ID: 9210454012 Collected: 12/20/07 10:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
2,6-Dinitrotoluene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	606-20-2	
Di-n-octylphthalate	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	117-81-7	
Fluoranthene	2170	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	206-44-0	
Fluorene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	87-68-3	
Hexachlorobenzene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	77-47-4	
Hexachloroethane	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	193-39-5	
Isophorone	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	78-59-1	
1-Methylnaphthalene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	90-12-0	
2-Methylnaphthalene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12		
Naphthalene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	91-20-3	
2-Nitroaniline	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	88-74-4	
3-Nitroaniline	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	99-09-2	
4-Nitroaniline	ND	ug/kg	791	1	12/26/07 00:00	12/28/07 05:12	100-01-6	
Nitrobenzene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	98-95-3	
2-Nitrophenol	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	88-75-5	
4-Nitrophenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	86-30-6	
Pentachlorophenol	ND	ug/kg	1980	1	12/26/07 00:00	12/28/07 05:12	87-86-5	
Phenanthrene	1040	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	85-01-8	
Phenol	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	108-95-2	
Pyrene	1980	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	395	1	12/26/07 00:00	12/28/07 05:12	88-06-2	
Nitrobenzene-d5 (S)	53	%	10-120	1	12/26/07 00:00	12/28/07 05:12	4165-60-0	
2-Fluorobiphenyl (S)	45	%	10-120	1	12/26/07 00:00	12/28/07 05:12	321-60-8	
Terphenyl-d14 (S)	54	%	10-116	1	12/26/07 00:00	12/28/07 05:12	1718-51-0	
Phenol-d6 (S)	52	%	10-120	1	12/26/07 00:00	12/28/07 05:12	13127-88-3	
2-Fluorophenol (S)	45	%	10-120	1	12/26/07 00:00	12/28/07 05:12	367-12-4	
2,4,6-Tribromophenol (S)	70	%	10-116	1	12/26/07 00:00	12/28/07 05:12	118-79-6	

8260 MSV 5030 Low Level

Analytical Method: EPA 8260

Acetone	154	ug/kg	120	1	01/01/08 03:35	67-64-1	C9
Benzene	ND	ug/kg	6.0	1	01/01/08 03:35	71-43-2	
Bromobenzene	ND	ug/kg	6.0	1	01/01/08 03:35	108-86-1	
Bromochloromethane	ND	ug/kg	6.0	1	01/01/08 03:35	74-97-5	
Bromodichloromethane	ND	ug/kg	6.0	1	01/01/08 03:35	75-27-4	

Date: 01/10/2008 11:53 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1110B10L Lab ID: 9210454012 Collected: 12/20/07 10:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Bromoform	ND	ug/kg	6.0	1		01/01/08 03:35	75-25-2	
Bromomethane	ND	ug/kg	12.0	1		01/01/08 03:35	74-83-9	
2-Butanone (MEK)	ND	ug/kg	120	1		01/01/08 03:35	78-93-3	
n-Butylbenzene	ND	ug/kg	6.0	1		01/01/08 03:35	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.0	1		01/01/08 03:35	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.0	1		01/01/08 03:35	98-06-6	
Carbon tetrachloride	ND	ug/kg	6.0	1		01/01/08 03:35	56-23-5	
Chlorobenzene	ND	ug/kg	6.0	1		01/01/08 03:35	108-90-7	
Chloroethane	ND	ug/kg	12.0	1		01/01/08 03:35	75-00-3	
Chloroform	ND	ug/kg	6.0	1		01/01/08 03:35	67-66-3	
Chloromethane	ND	ug/kg	12.0	1		01/01/08 03:35	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.0	1		01/01/08 03:35	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.0	1		01/01/08 03:35	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.0	1		01/01/08 03:35	96-12-8	
Dibromochloromethane	ND	ug/kg	6.0	1		01/01/08 03:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.0	1		01/01/08 03:35	106-93-4	
Dibromomethane	ND	ug/kg	6.0	1		01/01/08 03:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.0	1		01/01/08 03:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.0	1		01/01/08 03:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.0	1		01/01/08 03:35	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.0	1		01/01/08 03:35	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.0	1		01/01/08 03:35	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.0	1		01/01/08 03:35	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.0	1		01/01/08 03:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.0	1		01/01/08 03:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.0	1		01/01/08 03:35	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.0	1		01/01/08 03:35	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.0	1		01/01/08 03:35	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.0	1		01/01/08 03:35	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.0	1		01/01/08 03:35	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.0	1		01/01/08 03:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.0	1		01/01/08 03:35	10061-02-6	
Diisopropyl ether	ND	ug/kg	6.0	1		01/01/08 03:35	108-20-3	
Ethylbenzene	ND	ug/kg	6.0	1		01/01/08 03:35	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.0	1		01/01/08 03:35	87-68-3	
2-Hexanone	ND	ug/kg	59.9	1		01/01/08 03:35	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.0	1		01/01/08 03:35	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.0	1		01/01/08 03:35	99-87-6	
Methylene Chloride	ND	ug/kg	24.0	4		01/01/08 03:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	59.9	1		01/01/08 03:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.0	1		01/01/08 03:35	1634-04-4	
Naphthalene	ND	ug/kg	6.0	1		01/01/08 03:35	91-20-3	
n-Propylbenzene	ND	ug/kg	6.0	1		01/01/08 03:35	103-65-1	
Styrene	ND	ug/kg	6.0	1		01/01/08 03:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.0	1		01/01/08 03:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.0	1		01/01/08 03:35	79-34-5	

Date: 01/10/2008 11:53 AM

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1110B10L Lab ID: 9210454012 Collected: 12/20/07 10:10 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
Tetrachloroethene	ND	ug/kg	6.0	1		01/01/08 03:35	127-18-4	
Toluene	ND	ug/kg	6.0	1		01/01/08 03:35	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.0	1		01/01/08 03:35	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.0	1		01/01/08 03:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.0	1		01/01/08 03:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.0	1		01/01/08 03:35	79-00-5	
Trichloroethene	ND	ug/kg	6.0	1		01/01/08 03:35	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.0	1		01/01/08 03:35	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.0	1		01/01/08 03:35	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.0	1		01/01/08 03:35	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.0	1		01/01/08 03:35	108-67-8	
Vinyl acetate	ND	ug/kg	59.9	1		01/01/08 03:35	108-05-4	
Vinyl chloride	ND	ug/kg	12.0	1		01/01/08 03:35	75-01-4	
Xylene (Total)	ND	ug/kg	12.0	1		01/01/08 03:35	1330-20-7	
m&p-Xylene	ND	ug/kg	12.0	1		01/01/08 03:35	1330-20-7	
o-Xylene	ND	ug/kg	6.0	1		01/01/08 03:35	95-47-6	
Dibromofluoromethane (S)	99 %		79-116	1		01/01/08 03:35	1868-53-7	
Toluene-d8 (S)	96 %		88-110	1		01/01/08 03:35	2037-26-5	
4-Bromofluorobenzene (S)	83 %		74-115	1		01/01/08 03:35	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		69-121	1		01/01/08 03:35	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	16.5 %	0.10	1	12/26/07 16:10
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Sample: T1103B102L Lab ID: 9210454013 Collected: 12/20/07 11:45 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Arsenic	1.8	mg/kg	0.53	1	12/27/07 12:00	12/28/07 20:14	7440-38-2	
Barium	72.2	mg/kg	0.53	1	12/27/07 12:00	12/28/07 20:14	7440-39-3	
Cadmium	ND	mg/kg	0.11	1	12/27/07 12:00	12/28/07 20:14	7440-43-9	
Chromium	11.3	mg/kg	0.53	1	12/27/07 12:00	12/28/07 20:14	7440-47-3	
Lead	9.7	mg/kg	0.53	1	12/27/07 12:00	12/28/07 20:14	7439-92-1	
Selenium	5.6	mg/kg	1.1	1	12/27/07 12:00	12/28/07 20:14	7782-49-2	
Silver	ND	mg/kg	0.53	1	12/27/07 12:00	12/28/07 20:14	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.034	mg/kg	0.0067	1	12/27/07 10:27	12/27/07 12:31	7439-97-6	
8270 MSSV PFE		Analytical Method: EPA 8270 Preparation Method: EPA 3545						
Acenaphthene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	83-32-9	
Acenaphthylene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	208-96-8	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1103B102L Lab ID: 9210454013 Collected: 12/20/07 11:45 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
Aniline	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	62-53-3	
Anthracene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	120-12-7	
Benzo(a)anthracene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	56-55-3	
Benzo(a)pyrene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	207-08-9	
Benzoic acid	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	65-85-0	
Benzyl alcohol	ND	ug/kg	822	1	12/26/07 00:00	12/28/07 05:33	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	101-55-3	
Butylbenzylphthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	822	1	12/26/07 00:00	12/28/07 05:33	59-50-7	
4-Chloroaniline	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	108-60-1	
2-Chloronaphthalene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	91-58-7	
2-Chlorophenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	7005-72-3	
Chrysene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	53-70-3	
Dibenzofuran	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	120-83-2	
Diethylphthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	105-67-9	
Dimethylphthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	131-11-3	
Di-n-butylphthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	822	1	12/26/07 00:00	12/28/07 05:33	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	606-20-2	
Di-n-octylphthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	117-81-7	
Fluoranthene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	206-44-0	
Fluorene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	87-68-3	
Hexachlorobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	77-47-4	
Hexachloroethane	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	193-39-5	
Isophorone	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	78-59-1	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B102L Lab ID: 9210454013 Collected: 12/20/07 11:45 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
1-Methylnaphthalene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	90-12-0	
2-Methylnaphthalene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33		
Naphthalene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	91-20-3	
2-Nitroaniline	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	88-74-4	
3-Nitroaniline	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	99-09-2	
4-Nitroaniline	ND	ug/kg	822	1	12/26/07 00:00	12/28/07 05:33	100-01-6	
Nitrobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	98-95-3	
2-Nitrophenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	88-75-5	
4-Nitrophenol	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	86-30-6	
Pentachlorophenol	ND	ug/kg	2060	1	12/26/07 00:00	12/28/07 05:33	87-86-5	
Phenanthrene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	85-01-8	
Phenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	108-95-2	
Pyrene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	411	1	12/26/07 00:00	12/28/07 05:33	88-06-2	
Nitrobenzene-d5 (S)	43	%	10-120	1	12/26/07 00:00	12/28/07 05:33	4165-60-0	
2-Fluorobiphenyl (S)	48	%	10-120	1	12/26/07 00:00	12/28/07 05:33	321-60-8	
Terphenyl-d14 (S)	51	%	10-116	1	12/26/07 00:00	12/28/07 05:33	1718-51-0	
Phenol-d6 (S)	50	%	10-120	1	12/26/07 00:00	12/28/07 05:33	13127-88-3	
2-Fluorophenol (S)	41	%	10-120	1	12/26/07 00:00	12/28/07 05:33	367-12-4	
2,4,6-Tribromophenol (S)	62	%	10-116	1	12/26/07 00:00	12/28/07 05:33	118-79-6	
8260 MSV 5030 Low Level Analytical Method: EPA 8260								
Acetone	244	ug/kg	125	1		01/01/08 03:00	67-64-1	C9
Benzene	ND	ug/kg	6.2	1		01/01/08 03:00	71-43-2	
Bromobenzene	ND	ug/kg	6.2	1		01/01/08 03:00	108-86-1	
Bromochloromethane	ND	ug/kg	6.2	1		01/01/08 03:00	74-97-5	
Bromodichloromethane	ND	ug/kg	6.2	1		01/01/08 03:00	75-27-4	
Bromoform	ND	ug/kg	6.2	1		01/01/08 03:00	75-25-2	
Bromomethane	ND	ug/kg	12.5	1		01/01/08 03:00	74-83-9	
2-Butanone (MEK)	ND	ug/kg	125	1		01/01/08 03:00	78-93-3	
n-Butylbenzene	ND	ug/kg	6.2	1		01/01/08 03:00	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.2	1		01/01/08 03:00	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.2	1		01/01/08 03:00	98-06-6	
Carbon tetrachloride	ND	ug/kg	6.2	1		01/01/08 03:00	56-23-5	
Chlorobenzene	ND	ug/kg	6.2	1		01/01/08 03:00	108-90-7	
Chloroethane	ND	ug/kg	12.5	1		01/01/08 03:00	75-00-3	
Chloroform	ND	ug/kg	6.2	1		01/01/08 03:00	67-66-3	
Chloromethane	ND	ug/kg	12.5	1		01/01/08 03:00	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.2	1		01/01/08 03:00	95-49-8	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B102L Lab ID: 9210454013 Collected: 12/20/07 11:45 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
4-Chlorotoluene	ND	ug/kg	6.2	1		01/01/08 03:00	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.2	1		01/01/08 03:00	96-12-8	
Dibromochloromethane	ND	ug/kg	6.2	1		01/01/08 03:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.2	1		01/01/08 03:00	106-93-4	
Dibromomethane	ND	ug/kg	6.2	1		01/01/08 03:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.2	1		01/01/08 03:00	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.2	1		01/01/08 03:00	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.2	1		01/01/08 03:00	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.5	1		01/01/08 03:00	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.2	1		01/01/08 03:00	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.2	1		01/01/08 03:00	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.2	1		01/01/08 03:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.2	1		01/01/08 03:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.2	1		01/01/08 03:00	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.2	1		01/01/08 03:00	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.2	1		01/01/08 03:00	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.2	1		01/01/08 03:00	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.2	1		01/01/08 03:00	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.2	1		01/01/08 03:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.2	1		01/01/08 03:00	10061-02-6	
Diisopropyl ether	ND	ug/kg	6.2	1		01/01/08 03:00	108-20-3	
Ethylbenzene	ND	ug/kg	6.2	1		01/01/08 03:00	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.2	1		01/01/08 03:00	87-68-3	
2-Hexanone	ND	ug/kg	62.3	1		01/01/08 03:00	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.2	1		01/01/08 03:00	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.2	1		01/01/08 03:00	99-87-6	
Methylene Chloride	ND	ug/kg	62.3	10		01/01/08 03:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	62.3	1		01/01/08 03:00	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.2	1		01/01/08 03:00	1634-04-4	
Naphthalene	ND	ug/kg	6.2	1		01/01/08 03:00	91-20-3	
n-Propylbenzene	ND	ug/kg	6.2	1		01/01/08 03:00	103-65-1	
Styrene	ND	ug/kg	6.2	1		01/01/08 03:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.2	1		01/01/08 03:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.2	1		01/01/08 03:00	79-34-5	
Tetrachloroethene	ND	ug/kg	6.2	1		01/01/08 03:00	127-18-4	
Toluene	6.9	ug/kg	6.2	1		01/01/08 03:00	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.2	1		01/01/08 03:00	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.2	1		01/01/08 03:00	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.2	1		01/01/08 03:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.2	1		01/01/08 03:00	79-00-5	
Trichloroethene	ND	ug/kg	6.2	1		01/01/08 03:00	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.2	1		01/01/08 03:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.2	1		01/01/08 03:00	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.2	1		01/01/08 03:00	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.2	1		01/01/08 03:00	108-67-8	
Vinyl acetate	ND	ug/kg	62.3	1		01/01/08 03:00	108-05-4	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1103B102L Lab ID: 9210454013 Collected: 12/20/07 11:45 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level Analytical Method: EPA 8260								
Vinyl chloride	ND	ug/kg	12.5	1		01/01/08 03:00	75-01-4	
Xylene (Total)	ND	ug/kg	12.5	1		01/01/08 03:00	1330-20-7	
m&p-Xylene	ND	ug/kg	12.5	1		01/01/08 03:00	1330-20-7	
o-Xylene	ND	ug/kg	6.2	1		01/01/08 03:00	95-47-6	
Dibromofluoromethane (S)	94	%	79-116	1		01/01/08 03:00	1868-53-7	
Toluene-d8 (S)	96	%	88-110	1		01/01/08 03:00	2037-26-5	
4-Bromofluorobenzene (S)	93	%	74-115	1		01/01/08 03:00	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	69-121	1		01/01/08 03:00	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	19.7	%	0.10	1		12/26/07 16:10		
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Sample: T1103B24L Lab ID: 9210454014 Collected: 12/20/07 13:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.8	mg/kg	0.46	1	12/27/07 12:00	12/28/07 20:20	7440-38-2	
Barium	77.8	mg/kg	0.46	1	12/27/07 12:00	12/28/07 20:20	7440-39-3	
Cadmium	ND	mg/kg	0.092	1	12/27/07 12:00	12/28/07 20:20	7440-43-9	
Chromium	13.6	mg/kg	0.46	1	12/27/07 12:00	12/28/07 20:20	7440-47-3	
Lead	17.2	mg/kg	0.46	1	12/27/07 12:00	12/28/07 20:20	7439-92-1	
Selenium	5.5	mg/kg	0.92	1	12/27/07 12:00	12/28/07 20:20	7782-49-2	
Silver	ND	mg/kg	0.46	1	12/27/07 12:00	12/28/07 20:20	7440-22-4	

7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	0.11	mg/kg	0.0071	1	12/27/07 10:27	12/27/07 12:34	7439-97-6	
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8270 MSSV PFE

Analytical Method: EPA 8270 Preparation Method: EPA 3545

Acenaphthene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	83-32-9	
Acenaphthylene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	208-96-8	
Aniline	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	62-53-3	
Anthracene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	120-12-7	
Benzo(a)anthracene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	56-55-3	
Benzo(a)pyrene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	207-08-9	
Benzoic acid	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	65-85-0	
Benzyl alcohol	ND	ug/kg	811	1	12/26/07 00:00	12/28/07 04:09	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	101-55-3	
Butylbenzylphthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	811	1	12/26/07 00:00	12/28/07 04:09	59-50-7	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B24L Lab ID: 9210454014 Collected: 12/20/07 13:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
4-Chloroaniline	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	108-60-1	
2-Chloronaphthalene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	91-58-7	
2-Chlorophenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	7005-72-3	
Chrysene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	53-70-3	
Dibenzofuran	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	120-83-2	
Diethylphthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	105-67-9	
Dimethylphthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	131-11-3	
Di-n-butylphthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	811	1	12/26/07 00:00	12/28/07 04:09	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	606-20-2	
Di-n-octylphthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	117-84-0	
1,2-Diphenylhydrazine	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	122-66-7	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	117-81-7	
Fluoranthene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	206-44-0	
Fluorene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	87-68-3	
Hexachlorobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	77-47-4	
Hexachloroethane	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	193-39-5	
Isophorone	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	78-59-1	
1-Methylnaphthalene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	90-12-0	
2-Methylnaphthalene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09		
Naphthalene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	91-20-3	
2-Nitroaniline	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	88-74-4	
3-Nitroaniline	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	99-09-2	
4-Nitroaniline	ND	ug/kg	811	1	12/26/07 00:00	12/28/07 04:09	100-01-6	
Nitrobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	98-95-3	
2-Nitrophenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	88-75-5	
4-Nitrophenol	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	62-75-9	

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ANALYTICAL RESULTS

Project: ECUSTA/123445

Pace Project No.: 9210454

Sample: T1103B24L Lab ID: 9210454014 Collected: 12/20/07 13:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PFE Analytical Method: EPA 8270 Preparation Method: EPA 3545								
N-Nitroso-di-n-propylamine	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	86-30-6	
Pentachlorophenol	ND	ug/kg	2030	1	12/26/07 00:00	12/28/07 04:09	87-86-5	
Phenanthrene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	85-01-8	
Phenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	108-95-2	
Pyrene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	406	1	12/26/07 00:00	12/28/07 04:09	88-06-2	
Nitrobenzene-d5 (S)	42	%	10-120	1	12/26/07 00:00	12/28/07 04:09	4165-60-0	
2-Fluorobiphenyl (S)	36	%	10-120	1	12/26/07 00:00	12/28/07 04:09	321-60-8	
Terphenyl-d14 (S)	45	%	10-116	1	12/26/07 00:00	12/28/07 04:09	1718-51-0	
Phenol-d6 (S)	39	%	10-120	1	12/26/07 00:00	12/28/07 04:09	13127-88-3	
2-Fluorophenol (S)	28	%	10-120	1	12/26/07 00:00	12/28/07 04:09	367-12-4	
2,4,6-Tribromophenol (S)	46	%	10-116	1	12/26/07 00:00	12/28/07 04:09	118-79-6	

8260 MSV 5030 Low Level

Analytical Method: EPA 8260

Acetone	169	ug/kg	123	1		01/01/08 03:52	67-64-1	C9
Benzene	ND	ug/kg	6.1	1		01/01/08 03:52	71-43-2	
Bromobenzene	ND	ug/kg	6.1	1		01/01/08 03:52	108-86-1	
Bromochloromethane	ND	ug/kg	6.1	1		01/01/08 03:52	74-97-5	
Bromodichloromethane	ND	ug/kg	6.1	1		01/01/08 03:52	75-27-4	
Bromoform	ND	ug/kg	6.1	1		01/01/08 03:52	75-25-2	
Bromomethane	ND	ug/kg	12.3	1		01/01/08 03:52	74-83-9	
2-Butanone (MEK)	ND	ug/kg	123	1		01/01/08 03:52	78-93-3	
n-Butylbenzene	ND	ug/kg	6.1	1		01/01/08 03:52	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.1	1		01/01/08 03:52	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.1	1		01/01/08 03:52	98-06-6	
Carbon tetrachloride	ND	ug/kg	6.1	1		01/01/08 03:52	56-23-5	
Chlorobenzene	ND	ug/kg	6.1	1		01/01/08 03:52	108-90-7	
Chloroethane	ND	ug/kg	12.3	1		01/01/08 03:52	75-00-3	
Chloroform	ND	ug/kg	6.1	1		01/01/08 03:52	67-66-3	
Chloromethane	ND	ug/kg	12.3	1		01/01/08 03:52	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.1	1		01/01/08 03:52	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.1	1		01/01/08 03:52	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.1	1		01/01/08 03:52	96-12-8	
Dibromochloromethane	ND	ug/kg	6.1	1		01/01/08 03:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.1	1		01/01/08 03:52	106-93-4	
Dibromomethane	ND	ug/kg	6.1	1		01/01/08 03:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.1	1		01/01/08 03:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.1	1		01/01/08 03:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.1	1		01/01/08 03:52	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.3	1		01/01/08 03:52	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.1	1		01/01/08 03:52	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.1	1		01/01/08 03:52	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.1	1		01/01/08 03:52	75-35-4	

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ANALYTICAL RESULTS

Project: ECUSTA/123445
Pace Project No.: 9210454

Sample: T1103B24L Lab ID: 9210454014 Collected: 12/20/07 13:30 Received: 12/21/07 13:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Low Level		Analytical Method: EPA 8260						
cis-1,2-Dichloroethene	ND	ug/kg	6.1	1		01/01/08 03:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.1	1		01/01/08 03:52	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.1	1		01/01/08 03:52	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.1	1		01/01/08 03:52	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.1	1		01/01/08 03:52	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.1	1		01/01/08 03:52	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.1	1		01/01/08 03:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.1	1		01/01/08 03:52	10061-02-6	
Diisopropyl ether	ND	ug/kg	6.1	1		01/01/08 03:52	108-20-3	
Ethylbenzene	ND	ug/kg	6.1	1		01/01/08 03:52	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.1	1		01/01/08 03:52	87-68-3	
2-Hexanone	ND	ug/kg	61.5	1		01/01/08 03:52	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.1	1		01/01/08 03:52	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.1	1		01/01/08 03:52	99-87-6	
Methylene Chloride	ND	ug/kg	36.9	6		01/01/08 03:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	61.5	1		01/01/08 03:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.1	1		01/01/08 03:52	1634-04-4	
Naphthalene	ND	ug/kg	6.1	1		01/01/08 03:52	91-20-3	
n-Propylbenzene	ND	ug/kg	6.1	1		01/01/08 03:52	103-65-1	
Styrene	ND	ug/kg	6.1	1		01/01/08 03:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.1	1		01/01/08 03:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.1	1		01/01/08 03:52	79-34-5	
Tetrachloroethene	ND	ug/kg	6.1	1		01/01/08 03:52	127-18-4	
Toluene	8.6	ug/kg	6.1	1		01/01/08 03:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.1	1		01/01/08 03:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.1	1		01/01/08 03:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.1	1		01/01/08 03:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.1	1		01/01/08 03:52	79-00-5	
Trichloroethene	ND	ug/kg	6.1	1		01/01/08 03:52	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.1	1		01/01/08 03:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.1	1		01/01/08 03:52	96-18-4	
1,2,4-Trimethylbenzene	6.6	ug/kg	6.1	1		01/01/08 03:52	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.1	1		01/01/08 03:52	108-67-8	
Vinyl acetate	ND	ug/kg	61.5	1		01/01/08 03:52	108-05-4	
Vinyl chloride	ND	ug/kg	12.3	1		01/01/08 03:52	75-01-4	
Xylene (Total)	14.5	ug/kg	12.3	1		01/01/08 03:52	1330-20-7	
m&p-Xylene	ND	ug/kg	12.3	1		01/01/08 03:52	1330-20-7	
o-Xylene	ND	ug/kg	6.1	1		01/01/08 03:52	95-47-6	
Dibromofluoromethane (S)	101 %		79-116	1		01/01/08 03:52	1868-53-7	
Toluene-d8 (S)	95 %		88-110	1		01/01/08 03:52	2037-26-5	
4-Bromofluorobenzene (S)	77 %		74-115	1		01/01/08 03:52	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		69-121	1		01/01/08 03:52	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture

18.7 %

0.10 1

12/26/07 16:10

Date: 01/10/2008 11:53 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: OEXT/2048 Analysis Method: EPA 8270
QC Batch Method: EPA 3545 Analysis Description: 8270 Solid MSSV
Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011

METHOD BLANK: 57686

Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	330	
1,2-Dichlorobenzene	ug/kg	ND	330	
1,2-Diphenylhydrazine	ug/kg	ND	330	
1,3-Dichlorobenzene	ug/kg	ND	330	
1,4-Dichlorobenzene	ug/kg	ND	330	
1-Methylnaphthalene	ug/kg	ND	330	
2,4,5-Trichlorophenol	ug/kg	ND	330	
2,4,6-Trichlorophenol	ug/kg	ND	330	
2,4-Dichlorophenol	ug/kg	ND	330	
2,4-Dimethylphenol	ug/kg	ND	330	
2,4-Dinitrophenol	ug/kg	ND	1650	
2,4-Dinitrotoluene	ug/kg	ND	330	
2,6-Dinitrotoluene	ug/kg	ND	330	
2-Chloronaphthalene	ug/kg	ND	330	
2-Chlorophenol	ug/kg	ND	330	
2-Methylnaphthalene	ug/kg	ND	330	
2-Methylphenol(o-Cresol)	ug/kg	ND	330	
2-Nitroaniline	ug/kg	ND	1650	
2-Nitrophenol	ug/kg	ND	330	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	330	
3,3'-Dichlorobenzidine	ug/kg	ND	1650	
3-Nitroaniline	ug/kg	ND	1650	
4,6-Dinitro-2-methylphenol	ug/kg	ND	660	
4-Bromophenylphenyl ether	ug/kg	ND	330	
4-Chloro-3-methylphenol	ug/kg	ND	660	
4-Chloroaniline	ug/kg	ND	1650	
4-Chlorophenylphenyl ether	ug/kg	ND	330	
4-Nitroaniline	ug/kg	ND	660	
4-Nitrophenol	ug/kg	ND	1650	
Acenaphthene	ug/kg	ND	330	
Acenaphthylene	ug/kg	ND	330	
Aniline	ug/kg	ND	330	
Anthracene	ug/kg	ND	330	
Benzo(a)anthracene	ug/kg	ND	330	
Benzo(a)pyrene	ug/kg	ND	330	
Benzo(b)fluoranthene	ug/kg	ND	330	
Benzo(g,h,i)perylene	ug/kg	ND	330	
Benzo(k)fluoranthene	ug/kg	ND	330	
Benzoic acid	ug/kg	ND	1650	
Benzyl alcohol	ug/kg	ND	660	
bis(2-Chloroethoxy)methane	ug/kg	ND	330	

Date: 01/10/2008 11:53 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

METHOD BLANK: 57686

Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
bis(2-Chloroethyl) ether	ug/kg	ND	330	
bis(2-Chloroisopropyl) ether	ug/kg	ND	330	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	
Butylbenzylphthalate	ug/kg	ND	330	
Chrysene	ug/kg	ND	330	
Di-n-butylphthalate	ug/kg	ND	330	
Di-n-octylphthalate	ug/kg	ND	330	
Dibenz(a,h)anthracene	ug/kg	ND	330	
Dibenzofuran	ug/kg	ND	330	
Diethylphthalate	ug/kg	ND	330	
Dimethylphthalate	ug/kg	ND	330	
Fluoranthene	ug/kg	ND	330	
Fluorene	ug/kg	ND	330	
Hexachloro-1,3-butadiene	ug/kg	ND	330	
Hexachlorobenzene	ug/kg	ND	330	
Hexachlorocyclopentadiene	ug/kg	ND	330	
Hexachloroethane	ug/kg	ND	330	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	
Isophorone	ug/kg	ND	330	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	
N-Nitrosodimethylamine	ug/kg	ND	330	
N-Nitrosodiphenylamine	ug/kg	ND	330	
Naphthalene	ug/kg	ND	330	
Nitrobenzene	ug/kg	ND	330	
Pentachlorophenol	ug/kg	ND	1650	
Phenanthrene	ug/kg	ND	330	
Phenol	ug/kg	ND	330	
Pyrene	ug/kg	ND	330	
2,4,6-Tribromophenol (S)	%	76	10-116	
2-Fluorobiphenyl (S)	%	65	10-120	
2-Fluorophenol (S)	%	64	10-120	
Nitrobenzene-d5 (S)	%	62	10-120	
Phenol-d6 (S)	%	63	10-120	
Terphenyl-d14 (S)	%	76	10-116	

LABORATORY CONTROL SAMPLE: 57687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1670	1180	71	21-102	
1,2-Dichlorobenzene	ug/kg	1670	1120	67	32-120	
1,2-Diphenylhydrazine	ug/kg	1670	1430	86	31-101	
1,3-Dichlorobenzene	ug/kg	1670	1100	66	29-120	
1,4-Dichlorobenzene	ug/kg	1670	1090	66	32-120	
1-Methylnaphthalene	ug/kg	1670	1340	81	29-108	

Date: 01/10/2008 11:53 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

LABORATORY CONTROL SAMPLE: 57687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-Trichlorophenol	ug/kg	1670	1500	90	41-112	
2,4,6-Trichlorophenol	ug/kg	1670	1480	89	35-116	
2,4-Dichlorophenol	ug/kg	1670	1400	84	25-110	
2,4-Dimethylphenol	ug/kg	1670	1300	78	31-101	
2,4-Dinitrophenol	ug/kg	1670	1170J	70	10-128	
2,4-Dinitrotoluene	ug/kg	1670	1520	91	43-120	
2,6-Dinitrotoluene	ug/kg	1670	1250	75	39-120	
2-Chloronaphthalene	ug/kg	1670	1340	80	40-109	
2-Chlorophenol	ug/kg	1670	1210	73	28-102	
2-Methylnaphthalene	ug/kg	1670	1330	80	30-104	
2-Methylphenol(o-Cresol)	ug/kg	1670	1250	75	31-101	
2-Nitroaniline	ug/kg	1670	1430J	86	39-109	
2-Nitrophenol	ug/kg	1670	1350	81	22-104	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	1390	83	30-112	
3,3'-Dichlorobenzidine	ug/kg	1670	1270J	76	10-120	
3-Nitroaniline	ug/kg	1670	1740	104	16-141	
4,6-Dinitro-2-methylphenol	ug/kg	1670	1330	80	28-119	
4-Bromophenylphenyl ether	ug/kg	1670	1370	82	35-119	
4-Chloro-3-methylphenol	ug/kg	1670	1540	92	28-116	
4-Chloroaniline	ug/kg	1670	1660	100	26-135	
4-Chlorophenylphenyl ether	ug/kg	1670	1510	91	44-112	
4-Nitroaniline	ug/kg	1670	1610	96	15-155	
4-Nitrophenol	ug/kg	1670	1170J	70	25-119	
Acenaphthene	ug/kg	1670	1460	88	38-109	
Acenaphthylene	ug/kg	1670	1520	91	38-109	
Aniline	ug/kg	1670	1370	82	44-135	
Anthracene	ug/kg	1670	1250	75	45-114	
Benzo(a)anthracene	ug/kg	1670	1470	88	45-109	
Benzo(a)pyrene	ug/kg	1670	1460	88	47-117	
Benzo(b)fluoranthene	ug/kg	1670	1170	70	32-113	
Benzo(g,h,i)perylene	ug/kg	1670	1450	87	10-149	
Benzo(k)fluoranthene	ug/kg	1670	1340	81	41-104	
Benzoic acid	ug/kg	1670	445J	27	10-120	
Benzyl alcohol	ug/kg	1670	1220	73	24-115	
bis(2-Chloroethoxy)methane	ug/kg	1670	1440	86	23-110	
bis(2-Chloroethyl) ether	ug/kg	1670	1270	76	23-106	
bis(2-Chloroisopropyl) ether	ug/kg	1670	1280	77	17-110	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1440	87	30-130	
Butylbenzylphthalate	ug/kg	1670	1390	83	35-122	
Chrysene	ug/kg	1670	1510	91	35-116	
Di-n-butylphthalate	ug/kg	1670	1330	80	40-118	
Di-n-octylphthalate	ug/kg	1670	1440	86	34-127	
Dibenz(a,h)anthracene	ug/kg	1670	1360	82	13-139	
Dibenzofuran	ug/kg	1670	1330	80	45-109	
Diethylphthalate	ug/kg	1670	1520	91	45-110	
Dimethylphthalate	ug/kg	1670	1460	87	44-108	
Fluoranthene	ug/kg	1670	1360	81	43-110	
Fluorene	ug/kg	1670	1480	89	40-111	



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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

LABORATORY CONTROL SAMPLE: 57687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	1670	1180	71	13-106	
Hexachlorobenzene	ug/kg	1670	1260	76	31-126	
Hexachlorocyclopentadiene	ug/kg	1670	1200	72	10-136	
Hexachloroethane	ug/kg	1670	1090	65	26-120	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1360	82	17-135	
Isophorone	ug/kg	1670	1640	98	13-179	
N-Nitroso-di-n-propylamine	ug/kg	1670	1420	85	26-115	
N-Nitrosodimethylamine	ug/kg	1670	1360	82	30-150	
N-Nitrosodiphenylamine	ug/kg	1670	1370	82	40-128	
Naphthalene	ug/kg	1670	1350	81	26-120	
Nitrobenzene	ug/kg	1670	1200	72	21-106	
Pentachlorophenol	ug/kg	1670	1250J	75	17-140	
Phenanthrene	ug/kg	1670	1430	86	45-110	
Phenol	ug/kg	1670	1250	75	29-105	
Pyrene	ug/kg	1670	1450	87	38-114	
2,4,6-Tribromophenol (S)	%			83	10-116	
2-Fluorobiphenyl (S)	%			90	10-120	
2-Fluorophenol (S)	%			77	10-120	
Nitrobenzene-d5 (S)	%			80	10-120	
Phenol-d6 (S)	%			77	10-120	
Terphenyl-d14 (S)	%			90	10-116	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 57688

57689

Parameter	Units	929958001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2,4-Trichlorobenzene	ug/kg	ND	2020	2020	1590J	1570J	79	78	10-120		
1,4-Dichlorobenzene	ug/kg	ND	2020	2020	1630J	1610J	81	80	10-120		
2,4-Dinitrotoluene	ug/kg	ND	2020	2020	1050J	1000J	52	50	21-109		
2-Chlorophenol	ug/kg	ND	2020	2020	1810J	1780J	90	88	10-120		
4-Chloro-3-methylphenol	ug/kg	ND	2020	2020	1880J	1560J	93	77	10-111		
4-Nitrophenol	ug/kg	ND	2020	2020	2150J	1970J	107	98	10-121		
Acenaphthene	ug/kg	ND	2020	2020	2040	2160	101	107	17-104	6 M0	
N-Nitroso-di-n-propylamine	ug/kg	ND	2020	2020	1940J	1920J	96	95	10-107		
Pentachlorophenol	ug/kg	ND	2020	2020	2320J	2300J	115	114	10-145		
Phenol	ug/kg	ND	2020	2020	1680J	1800J	83	89	10-120		
Pyrene	ug/kg	ND	2020	2020	3690	4340	157	190	13-114	16 M0	
2,4,6-Tribromophenol (S)	%						91	87	10-116		
2-Fluorobiphenyl (S)	%						105	98	10-120		
2-Fluorophenol (S)	%						95	88	10-120		
Nitrobenzene-d5 (S)	%						87	81	10-120		
Phenol-d6 (S)	%						90	83	10-120		
Terphenyl-d14 (S)	%						130	125	10-116	S0	



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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: PMST/1342 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004

SAMPLE DUPLICATE: 57890

Parameter	Units	9210451001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	32.3	36.1	11	



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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

QC Batch:	PMST/1343	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	9210454005, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014		

SAMPLE DUPLICATE: 57886

Parameter	Units	9210454005 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	20.6	19.3	7	



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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: MPRP/1660 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454006, 9210454007

METHOD BLANK: 58041

Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454006, 9210454007

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Arsenic	mg/kg	ND	0.50	
Barium	mg/kg	ND	0.50	
Cadmium	mg/kg	ND	0.10	
Chromium	mg/kg	ND	0.50	
Lead	mg/kg	ND	0.50	
Selenium	mg/kg	ND	1.0	
Silver	mg/kg	ND	0.50	

LABORATORY CONTROL SAMPLE: 58042

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	52.0	104	80-120	
Barium	mg/kg	50	48.7	97	80-120	
Cadmium	mg/kg	50	51.2	102	80-120	
Chromium	mg/kg	50	50.2	100	80-120	
Lead	mg/kg	50	51.3	103	80-120	
Selenium	mg/kg	50	50.5	101	80-120	
Silver	mg/kg	25	25.1	100	80-120	

MATRIX SPIKE SAMPLE: 58043

Parameter	Units	9210451001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	2.8	73.8	69.7	91	75-125	
Barium	mg/kg	58.4	73.8	137	106	75-125	
Cadmium	mg/kg	ND	73.8	68.2	93	75-125	
Chromium	mg/kg	12.8	73.8	81.8	93	75-125	
Lead	mg/kg	15.7	73.8	83.3	92	75-125	
Selenium	mg/kg	3.4	73.8	65.9	85	75-125	
Silver	mg/kg	ND	36.9	33.1	90	75-125	

SAMPLE DUPLICATE: 58044

Parameter	Units	9210451002 Result	Dup Result	RPD	Qualifiers
Arsenic	mg/kg	2.4	2.9	21	D6
Barium	mg/kg	98.8	71.9	31	D6
Cadmium	mg/kg	ND	ND		
Chromium	mg/kg	15.4	10.8	35	D6
Lead	mg/kg	8.4	8.8	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

SAMPLE DUPLICATE: 58044

Parameter	Units	9210451002 Result	Dup Result	RPD	Qualifiers
Selenium	mg/kg	7.0	6.5	8	
Silver	mg/kg	ND	ND		



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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: MPRP/1661 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 9210454008, 9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014

METHOD BLANK: 58045

Associated Lab Samples: 9210454008, 9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Arsenic	mg/kg	ND	0.50	
Barium	mg/kg	ND	0.50	
Cadmium	mg/kg	ND	0.10	
Chromium	mg/kg	ND	0.50	
Lead	mg/kg	ND	0.50	
Selenium	mg/kg	ND	1.0	
Silver	mg/kg	ND	0.50	

LABORATORY CONTROL SAMPLE: 58046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	52.7	105	80-120	
Barium	mg/kg	50	49.4	99	80-120	
Cadmium	mg/kg	50	52.1	104	80-120	
Chromium	mg/kg	50	51.3	103	80-120	
Lead	mg/kg	50	52.3	105	80-120	
Selenium	mg/kg	50	50.8	102	80-120	
Silver	mg/kg	25	25.6	102	80-120	

MATRIX SPIKE SAMPLE: 58047

Parameter	Units	9210454008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	1.8	67.6	64.0	92	75-125	
Barium	mg/kg	77.6	67.6	123	66	75-125	M3
Cadmium	mg/kg	ND	67.6	65.2	98	75-125	
Chromium	mg/kg	15.4	67.6	79.8	95	75-125	
Lead	mg/kg	16.4	67.6	81.4	96	75-125	
Selenium	mg/kg	5.5	67.6	64.2	87	75-125	
Silver	mg/kg	ND	33.8	32.7	97	75-125	

SAMPLE DUPLICATE: 58048

Parameter	Units	9210454009 Result	Dup Result	RPD	Qualifiers
Arsenic	mg/kg	2.0	2.1	7	
Barium	mg/kg	79.2	74.0	7	
Cadmium	mg/kg	ND	ND		
Chromium	mg/kg	9.7	9.5	2	
Lead	mg/kg	18.9	20.3	7	

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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

SAMPLE DUPLICATE: 58048

Parameter	Units	9210454009 Result	Dup Result	RPD	Qualifiers
Selenium	mg/kg	5.6	5.6	1	
Silver	mg/kg	ND	ND		



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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

QC Batch: MERP/1248 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454006, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014

METHOD BLANK: 58061

Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454006, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Mercury	mg/kg	ND	0.0050	

LABORATORY CONTROL SAMPLE: 58062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.067	0.072	108	80-120	

MATRIX SPIKE SAMPLE: 58063

Parameter	Units	9210451010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.15	.09	0.22	72	75-125	M0

SAMPLE DUPLICATE: 58064

Parameter	Units	9210451011 Result	Dup Result	RPD	Qualifiers
Mercury	mg/kg	0.058	0.028	69	R1



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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: OEXT/2067 Analysis Method: EPA 8270
QC Batch Method: EPA 3545 Analysis Description: 8270 Solid MSSV
Associated Lab Samples: 9210454006, 9210454012, 9210454013, 9210454014

METHOD BLANK: 58084

Associated Lab Samples: 9210454006, 9210454012, 9210454013, 9210454014

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	330	
1,2-Dichlorobenzene	ug/kg	ND	330	
1,2-Diphenylhydrazine	ug/kg	ND	330	
1,3-Dichlorobenzene	ug/kg	ND	330	
1,4-Dichlorobenzene	ug/kg	ND	330	
1-Methylnaphthalene	ug/kg	ND	330	
2,4,5-Trichlorophenol	ug/kg	ND	330	
2,4,6-Trichlorophenol	ug/kg	ND	330	
2,4-Dichlorophenol	ug/kg	ND	330	
2,4-Dimethylphenol	ug/kg	ND	330	
2,4-Dinitrophenol	ug/kg	ND	1650	
2,4-Dinitrotoluene	ug/kg	ND	330	
2,6-Dinitrotoluene	ug/kg	ND	330	
2-Chloronaphthalene	ug/kg	ND	330	
2-Chlorophenol	ug/kg	ND	330	
2-Methylnaphthalene	ug/kg	ND	330	
2-Methylphenol(o-Cresol)	ug/kg	ND	330	
2-Nitroaniline	ug/kg	ND	1650	
2-Nitrophenol	ug/kg	ND	330	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	330	
3,3'-Dichlorobenzidine	ug/kg	ND	1650	
3-Nitroaniline	ug/kg	ND	1650	
4,6-Dinitro-2-methylphenol	ug/kg	ND	660	
4-Bromophenylphenyl ether	ug/kg	ND	330	
4-Chloro-3-methylphenol	ug/kg	ND	660	
4-Chloroaniline	ug/kg	ND	1650	
4-Chlorophenylphenyl ether	ug/kg	ND	330	
4-Nitroaniline	ug/kg	ND	660	
4-Nitrophenol	ug/kg	ND	1650	
Acenaphthene	ug/kg	ND	330	
Acenaphthylene	ug/kg	ND	330	
Aniline	ug/kg	ND	330	
Anthracene	ug/kg	ND	330	
Benzo(a)anthracene	ug/kg	ND	330	
Benzo(a)pyrene	ug/kg	ND	330	
Benzo(b)fluoranthene	ug/kg	ND	330	
Benzo(g,h,i)perylene	ug/kg	ND	330	
Benzo(k)fluoranthene	ug/kg	ND	330	
Benzoic acid	ug/kg	ND	1650	
Benzyl alcohol	ug/kg	ND	660	
bis(2-Chloroethoxy)methane	ug/kg	ND	330	
bis(2-Chloroethyl) ether	ug/kg	ND	330	
bis(2-Chloroisopropyl) ether	ug/kg	ND	330	

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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

METHOD BLANK: 58084

Associated Lab Samples: 9210454006, 9210454012, 9210454013, 9210454014

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	
Butylbenzylphthalate	ug/kg	ND	330	
Chrysene	ug/kg	ND	330	
Di-n-butylphthalate	ug/kg	ND	330	
Di-n-octylphthalate	ug/kg	ND	330	
Dibenz(a,h)anthracene	ug/kg	ND	330	
Dibenzofuran	ug/kg	ND	330	
Diethylphthalate	ug/kg	ND	330	
Dimethylphthalate	ug/kg	ND	330	
Fluoranthene	ug/kg	ND	330	
Fluorene	ug/kg	ND	330	
Hexachloro-1,3-butadiene	ug/kg	ND	330	
Hexachlorobenzene	ug/kg	ND	330	
Hexachlorocyclopentadiene	ug/kg	ND	330	
Hexachloroethane	ug/kg	ND	330	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	
Isophorone	ug/kg	ND	330	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	
N-Nitrosodimethylamine	ug/kg	ND	330	
N-Nitrosodiphenylamine	ug/kg	ND	330	
Naphthalene	ug/kg	ND	330	
Nitrobenzene	ug/kg	ND	330	
Pentachlorophenol	ug/kg	ND	1650	
Phenanthrene	ug/kg	ND	330	
Phenol	ug/kg	ND	330	
Pyrene	ug/kg	ND	330	
2,4,6-Tribromophenol (S)	%	87	10-116	
2-Fluorobiphenyl (S)	%	75	10-120	
2-Fluorophenol (S)	%	63	10-120	
Nitrobenzene-d5 (S)	%	69	10-120	
Phenol-d6 (S)	%	66	10-120	
Terphenyl-d14 (S)	%	86	10-116	

LABORATORY CONTROL SAMPLE: 58085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1670	959	58	21-102	
1,2-Dichlorobenzene	ug/kg	1670	849	51	32-120	
1,2-Diphenylhydrazine	ug/kg	1670	1180	71	31-101	
1,3-Dichlorobenzene	ug/kg	1670	829	50	29-120	
1,4-Dichlorobenzene	ug/kg	1670	836	50	32-120	
1-Methylnaphthalene	ug/kg	1670	1480	89	29-108	
2,4,5-Trichlorophenol	ug/kg	1670	1230	74	41-112	
2,4,6-Trichlorophenol	ug/kg	1670	1260	75	35-116	
2,4-Dichlorophenol	ug/kg	1670	1110	67	25-110	

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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

LABORATORY CONTROL SAMPLE: 58085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dimethylphenol	ug/kg	1670	1140	68	31-101	
2,4-Dinitrophenol	ug/kg	1670	923J	55	10-128	
2,4-Dinitrotoluene	ug/kg	1670	1220	73	43-120	
2,6-Dinitrotoluene	ug/kg	1670	1090	65	39-120	
2-Chloronaphthalene	ug/kg	1670	1110	67	40-109	
2-Chlorophenol	ug/kg	1670	959	58	28-102	
2-Methylnaphthalene	ug/kg	1670	1090	65	30-104	
2-Methylphenol(o-Cresol)	ug/kg	1670	991	59	31-101	
2-Nitroaniline	ug/kg	1670	1290J	77	39-109	
2-Nitrophenol	ug/kg	1670	1100	66	22-104	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	1100	66	30-112	
3,3'-Dichlorobenzidine	ug/kg	1670	1010J	61	10-120	
3-Nitroaniline	ug/kg	1670	1370J	82	16-141	
4,6-Dinitro-2-methylphenol	ug/kg	1670	1110	66	28-119	
4-Bromophenylphenyl ether	ug/kg	1670	1130	68	35-119	
4-Chloro-3-methylphenol	ug/kg	1670	1210	73	28-116	
4-Chloroaniline	ug/kg	1670	1910	115	26-135	
4-Chlorophenylphenyl ether	ug/kg	1670	1170	70	44-112	
4-Nitroaniline	ug/kg	1670	1450	87	15-155	
4-Nitrophenol	ug/kg	1670	964J	58	25-119	
Acenaphthene	ug/kg	1670	1210	73	38-109	
Acenaphthylene	ug/kg	1670	1280	77	38-109	
Aniline	ug/kg	1670	1060	64	44-135	
Anthracene	ug/kg	1670	1250	75	45-114	
Benzo(a)anthracene	ug/kg	1670	1240	74	45-109	
Benzo(a)pyrene	ug/kg	1670	1240	74	47-117	
Benzo(b)fluoranthene	ug/kg	1670	1090	66	32-113	
Benzo(g,h,i)perylene	ug/kg	1670	1210	73	10-149	
Benzo(k)fluoranthene	ug/kg	1670	1030	62	41-104	
Benzoic acid	ug/kg	1670	463J	28	10-120	
Benzyl alcohol	ug/kg	1670	958	57	24-115	
bis(2-Chloroethoxy)methane	ug/kg	1670	1140	68	23-110	
bis(2-Chloroethyl) ether	ug/kg	1670	983	59	23-106	
bis(2-Chloroisopropyl) ether	ug/kg	1670	972	58	17-110	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1210	73	30-130	
Butylbenzylphthalate	ug/kg	1670	1180	71	35-122	
Chrysene	ug/kg	1670	1240	74	35-116	
Di-n-butylphthalate	ug/kg	1670	1150	69	40-118	
Di-n-octylphthalate	ug/kg	1670	1200	72	34-127	
Dibenz(a,h)anthracene	ug/kg	1670	1160	70	13-139	
Dibenzofuran	ug/kg	1670	1190	72	45-109	
Diethylphthalate	ug/kg	1670	1320	79	45-110	
Dimethylphthalate	ug/kg	1670	1280	77	44-108	
Fluoranthene	ug/kg	1670	1200	72	43-110	
Fluorene	ug/kg	1670	1300	78	40-111	
Hexachloro-1,3-butadiene	ug/kg	1670	952	57	13-106	
Hexachlorobenzene	ug/kg	1670	1050	63	31-126	
Hexachlorocyclopentadiene	ug/kg	1670	920	55	10-136	

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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

LABORATORY CONTROL SAMPLE: 58085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachloroethane	ug/kg	1670	800	48	26-120	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1180	71	17-135	
Isophorone	ug/kg	1670	1340	80	13-179	
N-Nitroso-di-n-propylamine	ug/kg	1670	1110	67	26-115	
N-Nitrosodimethylamine	ug/kg	1670	1100	66	30-150	
N-Nitrosodiphenylamine	ug/kg	1670	1160	69	40-128	
Naphthalene	ug/kg	1670	1090	65	26-120	
Nitrobenzene	ug/kg	1670	970	58	21-106	
Pentachlorophenol	ug/kg	1670	1100J	66	17-140	
Phenanthrene	ug/kg	1670	1200	72	45-110	
Phenol	ug/kg	1670	992	60	29-105	
Pyrene	ug/kg	1670	1260	76	38-114	
2,4,6-Tribromophenol (S)	%			80	10-116	
2-Fluorobiphenyl (S)	%			76	10-120	
2-Fluorophenol (S)	%			61	10-120	
Nitrobenzene-d5 (S)	%			67	10-120	
Phenol-d6 (S)	%			63	10-120	
Terphenyl-d14 (S)	%			79	10-116	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 58086

58087

Parameter	Units	9210236009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2,4-Trichlorobenzene	ug/kg	ND	2390	2390	772	761	32	32	10-120	1	
1,4-Dichlorobenzene	ug/kg	ND	2390	2390	900	753	38	32	10-120	18	
2,4-Dinitrotoluene	ug/kg	ND	2390	2390	756	970	32	41	21-109	25	
2-Chlorophenol	ug/kg	ND	2390	2390	909	954	38	40	10-120	5	
4-Chloro-3-methylphenol	ug/kg	ND	2390	2390	850J	862J	36	36	10-111		
4-Nitrophenol	ug/kg	ND	2390	2390	719J	861J	30	36	10-121		
Acenaphthene	ug/kg	ND	2390	2390	851	1010	36	42	17-104	17	
N-Nitroso-di-n-propylamine	ug/kg	ND	2390	2390	759	765	32	32	10-107	.7	
Pentachlorophenol	ug/kg	ND	2390	2390	484J	743J	20	31	10-145		
Phenol	ug/kg	ND	2390	2390	893	944	37	40	10-120	6	
Pyrene	ug/kg	ND	2390	2390	1090	1160	46	49	13-114	7	
2,4,6-Tribromophenol (S)	%						27	32	10-116		
2-Fluorobiphenyl (S)	%						40	43	10-120		
2-Fluorophenol (S)	%						36	35	10-120		
Nitrobenzene-d5 (S)	%						37	37	10-120		
Phenol-d6 (S)	%						36	36	10-120		
Terphenyl-d14 (S)	%						46	45	10-116		



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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

QC Batch: MSV/2196 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5030 Low
Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454006, 9210454007, 9210454008,
9210454009, 9210454010, 9210454011, 9210454012, 9210454013

METHOD BLANK: 59522

Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454006, 9210454007, 9210454008,
9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	
1,1,1-Trichloroethane	ug/kg	ND	5.0	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	
1,1,2-Trichloroethane	ug/kg	ND	5.0	
1,1-Dichloroethane	ug/kg	ND	5.0	
1,1-Dichloroethene	ug/kg	ND	5.0	
1,1-Dichloropropene	ug/kg	ND	5.0	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	
1,2,3-Trichloropropane	ug/kg	ND	5.0	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.0	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	
1,2-Dichlorobenzene	ug/kg	ND	5.0	
1,2-Dichloroethane	ug/kg	ND	5.0	
1,2-Dichloropropane	ug/kg	ND	5.0	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	
1,3-Dichlorobenzene	ug/kg	ND	5.0	
1,3-Dichloropropane	ug/kg	ND	5.0	
1,4-Dichlorobenzene	ug/kg	ND	5.0	
2,2-Dichloropropane	ug/kg	ND	5.0	
2-Butanone (MEK)	ug/kg	ND	100	
2-Chlorotoluene	ug/kg	ND	5.0	
2-Hexanone	ug/kg	ND	50.0	
4-Chlorotoluene	ug/kg	ND	5.0	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	50.0	
Acetone	ug/kg	ND	100	
Benzene	ug/kg	ND	5.0	
Bromobenzene	ug/kg	ND	5.0	
Bromochloromethane	ug/kg	ND	5.0	
Bromodichloromethane	ug/kg	ND	5.0	
Bromoform	ug/kg	ND	5.0	
Bromomethane	ug/kg	ND	10.0	
Carbon tetrachloride	ug/kg	ND	5.0	
Chlorobenzene	ug/kg	ND	5.0	
Chloroethane	ug/kg	ND	10.0	
Chloroform	ug/kg	ND	5.0	
Chloromethane	ug/kg	ND	10.0	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	
Dibromochloromethane	ug/kg	ND	5.0	

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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

METHOD BLANK: 59522

Associated Lab Samples: 9210454001, 9210454002, 9210454003, 9210454004, 9210454005, 9210454006, 9210454007, 9210454008, 9210454009, 9210454010, 9210454011, 9210454012, 9210454013, 9210454014

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Dibromomethane	ug/kg	ND	5.0	
Dichlorodifluoromethane	ug/kg	ND	10.0	
Diisopropyl ether	ug/kg	ND	5.0	
Ethylbenzene	ug/kg	ND	5.0	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	
m&p-Xylene	ug/kg	ND	10.0	
Methyl-tert-butyl ether	ug/kg	ND	5.0	
Methylene Chloride	ug/kg	ND	5.0	
n-Butylbenzene	ug/kg	ND	5.0	
n-Propylbenzene	ug/kg	ND	5.0	
Naphthalene	ug/kg	ND	5.0	
o-Xylene	ug/kg	ND	5.0	
p-Isopropyltoluene	ug/kg	ND	5.0	
sec-Butylbenzene	ug/kg	ND	5.0	
Styrene	ug/kg	ND	5.0	
tert-Butylbenzene	ug/kg	ND	5.0	
Tetrachloroethene	ug/kg	ND	5.0	
Toluene	ug/kg	ND	5.0	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	
Trichloroethene	ug/kg	ND	5.0	
Trichlorofluoromethane	ug/kg	ND	5.0	
Vinyl acetate	ug/kg	ND	50.0	
Vinyl chloride	ug/kg	ND	10.0	
Xylene (Total)	ug/kg	ND	10.0	
1,2-Dichloroethane-d4 (S)	%	99	69-121	
4-Bromofluorobenzene (S)	%	95	74-115	
Dibromofluoromethane (S)	%	99	79-116	
Toluene-d8 (S)	%	100	88-110	

LABORATORY CONTROL SAMPLE: 59523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	50	49.6	99	75-137	
1,1,1-Trichloroethane	ug/kg	50	52.7	105	70-140	
1,1,2,2-Tetrachloroethane	ug/kg	50	45.9	92	74-133	
1,1,2-Trichloroethane	ug/kg	50	49.2	98	79-129	
1,1-Dichloroethane	ug/kg	50	52.2	104	72-139	
1,1-Dichloroethene	ug/kg	50	52.2	104	69-154	
1,1-Dichloropropene	ug/kg	50	52.1	104	74-138	
1,2,3-Trichlorobenzene	ug/kg	50	41.7	83	71-150	
1,2,3-Trichloropropane	ug/kg	50	46.2	92	74-135	
1,2,4-Trichlorobenzene	ug/kg	50	39.6	79	68-150	



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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

LABORATORY CONTROL SAMPLE: 59523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	50	49.2	98	70-130	
1,2-Dibromo-3-chloropropane	ug/kg	50	46.6	93	65-146	
1,2-Dibromoethane (EDB)	ug/kg	50	48.1	96	77-136	
1,2-Dichlorobenzene	ug/kg	50	47.3	95	75-141	
1,2-Dichloroethane	ug/kg	50	52.4	105	74-134	
1,2-Dichloropropane	ug/kg	50	51.1	102	77-138	
1,3,5-Trimethylbenzene	ug/kg	50	48.2	96	65-128	
1,3-Dichlorobenzene	ug/kg	50	44.7	89	76-133	
1,3-Dichloropropane	ug/kg	50	47.7	95	79-132	
1,4-Dichlorobenzene	ug/kg	50	44.1	88	75-137	
2,2-Dichloropropane	ug/kg	50	49.8	100	73-137	
2-Butanone (MEK)	ug/kg	100	109	109	61-138	
2-Chlorotoluene	ug/kg	50	48.9	98	73-138	
2-Hexanone	ug/kg	100	99.5	99	58-159	
4-Chlorotoluene	ug/kg	50	47.8	96	75-136	
4-Methyl-2-pentanone (MIBK)	ug/kg	100	99.7	100	74-139	
Acetone	ug/kg	100	105	105	58-150	
Benzene	ug/kg	50	50.3	101	71-140	
Bromobenzene	ug/kg	50	47.9	96	72-144	
Bromochloromethane	ug/kg	50	51.3	103	78-133	
Bromodichloromethane	ug/kg	50	52.7	105	78-133	
Bromoform	ug/kg	50	49.0	98	74-132	
Bromomethane	ug/kg	50	45.8	92	63-184	
Carbon tetrachloride	ug/kg	50	51.5	103	73-143	
Chlorobenzene	ug/kg	50	49.3	99	77-137	
Chloroethane	ug/kg	50	52.3	105	68-146	
Chloroform	ug/kg	50	56.5	113	75-137	
Chloromethane	ug/kg	50	52.6	105	54-143	
cis-1,2-Dichloroethene	ug/kg	50	48.3	97	71-143	
cis-1,3-Dichloropropene	ug/kg	50	50.1	100	76-133	
Dibromochloromethane	ug/kg	50	49.8	100	77-131	
Dibromomethane	ug/kg	50	49.6	99	63-184	
Dichlorodifluoromethane	ug/kg	50	52.4	105	36-173	
Diisopropyl ether	ug/kg	50	55.7	111	68-144	
Ethylbenzene	ug/kg	50	48.4	97	69-141	
Hexachloro-1,3-butadiene	ug/kg	50	46.7	93	70-152	
Isopropylbenzene (Cumene)	ug/kg	50	47.5	95	77-143	
m&p-Xylene	ug/kg	100	95.2	95	72-138	
Methyl-tert-butyl ether	ug/kg	50	52.7	105	2-138	
Methylene Chloride	ug/kg	50	51.5	103	69-136	
n-Butylbenzene	ug/kg	50	47.2	94	65-128	
n-Propylbenzene	ug/kg	50	46.9	94	72-139	
Naphthalene	ug/kg	50	49.2	98	61-138	
o-Xylene	ug/kg	50	47.5	95	74-137	
p-Isopropyltoluene	ug/kg	50	48.1	96	66-128	
sec-Butylbenzene	ug/kg	50	47.0	94	72-140	
Styrene	ug/kg	50	47.1	94	76-137	
tert-Butylbenzene	ug/kg	50	48.1	96	68-141	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ECUSTA/123445

Pace Project No.: 9210454

LABORATORY CONTROL SAMPLE: 59523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/kg	50	46.4	93	72-136	
Toluene	ug/kg	50	49.7	99	69-139	
trans-1,2-Dichloroethene	ug/kg	50	52.2	104	72-144	
trans-1,3-Dichloropropene	ug/kg	50	50.1	100	73-135	
Trichloroethene	ug/kg	50	50.4	101	75-136	
Trichlorofluoromethane	ug/kg	50	55.1	110	69-144	
Vinyl acetate	ug/kg	100	43.2J	43	50-150 LO	
Vinyl chloride	ug/kg	50	56.1	112	61-145	
Xylene (Total)	ug/kg	150	143	95	73-138	
1,2-Dichloroethane-d4 (S)	%			102	69-121	
4-Bromofluorobenzene (S)	%			98	74-115	
Dibromofluoromethane (S)	%			105	79-116	
Toluene-d8 (S)	%			99	88-110	

SAMPLE DUPLICATE: 59524

Parameter	Units	9210454008 Result	Dup Result	RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND	0	
1,1,1-Trichloroethane	ug/kg	ND	ND	0	
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND	0	
1,1,2-Trichloroethane	ug/kg	ND	ND	0	
1,1-Dichloroethane	ug/kg	ND	ND	0	
1,1-Dichloroethene	ug/kg	ND	ND	0	
1,1-Dichloropropene	ug/kg	ND	ND	0	
1,2,3-Trichlorobenzene	ug/kg	ND	ND	0	
1,2,3-Trichloropropane	ug/kg	ND	ND	0	
1,2,4-Trichlorobenzene	ug/kg	ND	ND	0	
1,2,4-Trimethylbenzene	ug/kg	ND	6.6	17	
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND	0	
1,2-Dibromoethane (EDB)	ug/kg	ND	ND	0	
1,2-Dichlorobenzene	ug/kg	ND	ND	0	
1,2-Dichloroethane	ug/kg	ND	ND	0	
1,2-Dichloropropane	ug/kg	ND	ND	0	
1,3,5-Trimethylbenzene	ug/kg	ND	ND	200	
1,3-Dichlorobenzene	ug/kg	ND	ND	0	
1,3-Dichloropropane	ug/kg	ND	ND	0	
1,4-Dichlorobenzene	ug/kg	ND	ND	0	
2,2-Dichloropropane	ug/kg	ND	ND	0	
2-Butanone (MEK)	ug/kg	ND	ND	0	
2-Chlorotoluene	ug/kg	ND	ND	0	
2-Hexanone	ug/kg	ND	ND	0	
4-Chlorotoluene	ug/kg	ND	ND	0	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	0	
Acetone	ug/kg	ND	226	61	C9,R3
Benzene	ug/kg	ND	ND	200	
Bromobenzene	ug/kg	ND	ND	0	
Bromochloromethane	ug/kg	ND	ND	0	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ECUSTA/123445
Pace Project No.: 9210454

SAMPLE DUPLICATE: 59524

Parameter	Units	9210454008 Result	Dup Result	RPD	Qualifiers
Bromodichloromethane	ug/kg	ND	ND	0	
Bromoform	ug/kg	ND	ND	0	
Bromomethane	ug/kg	ND	ND	0	
Carbon tetrachloride	ug/kg	ND	ND	0	
Chlorobenzene	ug/kg	ND	ND	0	
Chloroethane	ug/kg	ND	ND	0	
Chloroform	ug/kg	ND	ND	0	
Chloromethane	ug/kg	ND	ND	0	
cis-1,2-Dichloroethene	ug/kg	ND	ND	0	
cis-1,3-Dichloropropene	ug/kg	ND	ND	0	
Dibromochloromethane	ug/kg	ND	ND	0	
Dibromomethane	ug/kg	ND	ND	0	
Dichlorodifluoromethane	ug/kg	ND	ND	0	
Diisopropyl ether	ug/kg	ND	ND	0	
Ethylbenzene	ug/kg	ND	3.4J	4	
Hexachloro-1,3-butadiene	ug/kg	ND	ND	0	
Isopropylbenzene (Cumene)	ug/kg	ND	ND	0	
m&p-Xylene	ug/kg	ND	11.6J	8	
Methyl-tert-butyl ether	ug/kg	ND	ND	0	
Methylene Chloride	ug/kg	ND	42.9J	3	
n-Butylbenzene	ug/kg	ND	ND	0	
n-Propylbenzene	ug/kg	ND	ND	0	
Naphthalene	ug/kg	ND	13.3	116 R3	
o-Xylene	ug/kg	ND	5.4J	17	
p-Isopropyltoluene	ug/kg	ND	ND	0	
sec-Butylbenzene	ug/kg	ND	ND	0	
Styrene	ug/kg	ND	ND	0	
tert-Butylbenzene	ug/kg	ND	ND	0	
Tetrachloroethene	ug/kg	ND	ND	0	
Toluene	ug/kg	10.2	10.2	.2	
trans-1,2-Dichloroethene	ug/kg	ND	ND	0	
trans-1,3-Dichloropropene	ug/kg	ND	ND	0	
Trichloroethene	ug/kg	ND	ND	0	
Trichlorofluoromethane	ug/kg	ND	ND	0	
Vinyl acetate	ug/kg	ND	ND	0	
Vinyl chloride	ug/kg	ND	ND	0	
Xylene (Total)	ug/kg	15.4	17.1	10	
1,2-Dichloroethane-d4 (S)	%	128	182	35 S2	
4-Bromofluorobenzene (S)	%	79	77	2	
Dibromofluoromethane (S)	%	115	140	19 S2	
Toluene-d8 (S)	%	91	92	.8	



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QUALIFIERS

Project: ECUSTA/123445
Pace Project No.: 9210454

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-A Pace Analytical Services - Asheville
PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

C9 Common Laboratory Contaminant.
D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
M0 Matrix spike recovery was outside laboratory control limits.
M3 Matrix spike recovery was outside laboratory control limits due to matrix interferences.
R1 RPD value was outside control limits.
R3 RPD value was outside control limits due to uncertainty of values at or near the PRL.
S0 Surrogate recovery outside laboratory control limits.
S1 Surrogate recovery outside laboratory control limits (confirmed by re-analysis).
S2 Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

Appendix E

Drainage Ditches Photos



Photo 1: East Drainage Ditch



Photo 2: East Drainage Ditch



Photo 3: East Drainage Ditch near Olin Area.



Photo 4: East Drainage Ditch showing 48" Storm Bypass Pipe @ Olin Area.



Photo 5: East Drainage Ditch



Photo 6: East Drainage Ditch near Clarifiers.



Photo 7: East Drainage Ditch near Clarifiers.



Photo 8: East Drainage Ditch near Drum Storage & Junction Box.



Photo 9: South Drainage Ditch Looking West.



Photo 10: South Drainage Ditch Looking West.



Photo 11: South Drainage Ditch near Clarifiers.



Photo 12: South Drainage Ditch Road to Discharge



Photo 13: South Drainage Ditch near Clarifiers.



Photo 14: South Drainage Ditch Culvert.



Photo 15: South Drainage Ditch near Clarifiers Looking South.



Photo 16: South Drainage Ditch near Parshall Flume Looking North.



Photo 17: South Drainage Ditch Looking at Parshall Flume.



Photo 18: South Drainage Ditch Looking at Parshall Flume.