PHASE II
ENVIRONMENTAL SITE ASSESSMENT

R&C and C&R Realty Trust Property
Former Bird Property
Marshall and Prentice Streets
Holliston, Massachusetts

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1.0 INTRODUCTION

Coler & Colantonio, Inc. was retained by Green View Realty, LLC to conduct a ASTM Phase I Environmental Site Assessment (ESA) and a Phase II ESA for the Former Bird Property located off of Marshall and Prentice Streets in Holliston, Massachusetts (the Site). See Figure 1-Locus Map for a map showing the location of the 53 acre property. The ASTM Phase I ESA was completed in conjunction with this Phase II ESA in order to better understand historic activities and present conditions on the property for due diligence purposes.

The Site MADEP Release Tracking Number (RTN) 2-60 is out of compliance with the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000 and remains listed as a US EPA - CERCLIS site. The review of the FirstSearch database that was completed in the ASTM Phase I ESA suggests that the CERCLIS status of the site may have been closed, presumably because the MADEP is adequately regulating the Site as a State Lead Site. However, this closure is not definite since the property remains listed on the United States Environmental Protection Agency (US EPA) database for CERCLIS Sites. Similarly, the Site is listed as a Tier IA Site and a draft Public Involvement Plan (PIP) Site. MADEP compliance fees and state liens also remain outstanding. Additional regulatory reports will be necessary to address the various concerns at the property, however discussions with the MADEP suggest that a variety of alternative regulatory closure approaches are feasible at the property.

Assessment was performed by a variety of consultants during prior response actions, however the majority of these assessments were focused on the nature and extent of chlorinated solvents, a type of volatile organic compound (VOC), and the source of the chlorinated solvents impacting private water supply wells. The most comprehensive of these assessments is a Phase II Comprehensive Site Assessment (CSA) completed by Wehran Engineering Corporation (Wehran) in June of 1992 for the MADEP. Wehran's 1992 Phase II CSA was the result of an intensive subsurface investigation over a two-year period.

This Phase II ESA incorporates the findings from Wehran's soil boring and monitoring well sampling, as well as the findings of other subsequent reports. Due to the limited chemical parameters analyzed at the site prior to this Phase II ESA, Coler & Colantonio, Inc. has sampled a wide variety of media for a wide variety of potential contaminants. These included metals, cyanide, pesticides, herbicides, polychlorinated biphenyls (PCBs), VOCs, semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPHs), and extractable petroleum hydrocarbons (EPHs) with target analytes.

1.1 Areas of Concern

The ASTM Phase I ESA concluded that a variety of recognized environmental conditions (RECs) were present at the subject property. Based on the observations made during the ASTM Phase I ESA, Coler & Colantonio, Inc. subdivided the property into eight Areas of Concern (AOCs). The location of each AOC is shown on Figure 2 Site Plan – Areas

of Concern. Sampling of soil, groundwater, sediment, and surface water was conducted during this Phase II ESA within each AOC to address these recognized environmental conditions. The sampling and analytical data completed during this Phase II ESA has been implemented to determine if contaminants are present in the soil, groundwater, surface water, and sediments.

In addition to the investigation of specific AOCs discussed below, the ASTM Phase I ESA recommended that groundwater sampling be completed from select wells throughout the property for a variety of the more soluble parameters. This sampling was completed and results of this analysis are included in Section 5.2.2 of this Phase II ESA.

AOC-1 Eastern Groundwater

Multiple rounds of historical groundwater, surface water, soil gas, and sediment sampling has documented the presence of trichloroethylene (TCE) and 1, 2-dichloroethylene (DCE) principally in shallow and deep groundwater located under the eastern portion of the property. Shallow and deep wells have historically been sampled in this area and the extent of the chlorinated solvents in both shallow and deep groundwater was estimated in the Phase II CSA that was prepared by Wehran in June of 1992. TCE and DCE have also been detected in wells downgradient from the Site, including abutting residential water supply wells, which were abandoned by May 1992 and replaced by municipal water supplies, excepting one residence that purchased a treatment system from the MADEP.

IT's (formerly Werhan) Draft Phase III Remedial Action Plan and the Draft Class C Response Action Outcome Statement prepared for MADEP RTN 2-60 determined that no further remedial action was necessary and selected monitoring alternative as a Temporary Solution for a Class C RAO as the most appropriate approach to this AOC. Nonetheless, the "Draft" status of these reports, the duration of time since groundwater sampling was last conducted coupled with the potential development of the property require that this AOC be further investigated.

This Phase II ESA includes analytical data from well sampling that Coler & Colantonio, Inc. conducted in September of 2002 and the Fall of 2004. This analysis for Volatile Organic Compounds (VOCs) has been tabulated with VOC data from prior sampling to provide a better understanding of the fate and transport of these chlorinated solvents. In addition, multiple parameters were analyzed in this AOC to better determine if other potential contaminants have impacted the groundwater; these concerns are addressed in AOC - 3.

AOC-2 Access Road Loop Area

The entire Access Road Loop Area represents an AOC because of the presence of a variety of apparent surface debris including: tanks, scrap metal, compressed gas cylinders, wood, pipes, tires, and crushed empty drums. Historic documents identified the estimated land filling of over 40,000 cubic yards of construction debris in this area. The MA DEP and US EPA removed hundreds of drums from this area, which typically contained a liquid asphalt like material, presumably roofing tar.

Approximately 210,000 tires were also removed from the Site. Historic limited analysis detected trace levels of VOCs, elevated levels of SVOCs, and low levels of metals. An extensive subsurface investigation in this area including test pits to better understand the nature and extent of materials that were used as fill was completed as part of this Phase II. The investigation included sampling of the landfill soils, as well as surface water and sediment sampling in the adjacent Western Wetlands Area. Although no wells are directly located in this area, monitoring wells proximal to this area were sampled for various parameters.

AOC-3 Debris Field - Marshall Street

A debris field which stretches approximately 400 feet in length is located 20 feet to the west of Marshall Street. The surface grade in this area varies significantly due to prior disposal of construction debris. Debris distributed in this area includes: empty steel tanks, compressed gas cylinders, brick, cages, wood, pipes, and half a dozen rusty 55 gallon drums containing such items as electrical parts and scrap metal. Historic investigations in this area have focused on chlorinated compounds (VOCs) and metals in the groundwater. Although these investigations identified chlorinated compounds in the groundwater, minimal other concerns were documented. Test pits previously excavated in this area encountered demolition debris to varying depths, based on the height of the mounds from the former filling. It is difficult to determine the actual depth below grade of this material.

As part of this Phase II ESA Coler & Colantonio, Inc. has completed additional soil sampling, test pits, and groundwater sampling of existing monitoring wells in AOC – 3 for a wide variety of parameters.

AOC-4 Western Wetlands Debris Field

A debris field principally consisting of demolition debris and general refuse was observed to extend as far as 200 feet to the south of the access road along the northwest property line. Minimal assessment has been completed in this area, prior to Coler & Colantonio, Inc.'s involvement with the Site. Several soil samples were collected from this area for a variety of analytical parameters to determine if contaminants are present in this fill material.

AOC-5 Central Wetlands Fill

During Coler & Colantonio, Inc.'s site visit construction debris was observed approximately 100 feet south of the access road. Some surficial debris was also noted to the north of the access road. Aerial photographs of the Site from 1973 showed substantial gravel mining operations being conducted approximately half way between the western property line and the Access Road Loop Area. The operations extended approximately 200 feet to the south and approximately 250 feet to the north of the existing access road. The central portion of this mined area has been filled and the access road splits this area. South of the access road, construction debris has been used to fill this area that terminates in a small area of open water at least three feet deep. North of the access road are wetlands that are typically less than two feet in depth. Historically a limited number of groundwater and soil (test pits) sampling was

completed in this area and samples were analyzed for metals and VOCs with low levels detected. Coler & Colantonio, Inc. completed soil, sediment, and surface water sampling in this area and submitted multiple samples for analysis of a variety of parameters.

AOC-6 Access Road

During Coler & Colantonio, Inc.'s site visits lesser volumes of debris were observed scattered within 50 feet of either side of the access road. The nature of the debris varied significantly, but appeared to be consistent with the material historically discarded at the property. Historic assessments along the access road have been conducted, however not all recognized environmental conditions have been investigated nor have all potential contaminants been analyzed. As part of this Phase II ESA, Coler & Colantonio, Inc. collected soil samples from the larger or more suspect areas when observed. Samples were analyzed for a variety of parameters dependent upon the nature of material.

AOC-7 Eastern Pond Area Drums

Approximately one dozen empty drums were observed about 50 feet north of the access road, and 100 feet northeast of the pond. These drums appear to have been placed at this location during prior response actions. Coler & Colantonio, Inc. collected soil and groundwater samples from this area, and analyzed samples for a variety of potential contaminants with emphasis on the petroleum and PCB type parameters.

AOC-8 Automobile Gasoline Tanks

A pile of empty crushed automobile gasoline tanks were encountered amongst a rock pile. These tanks were observed approximately 100 feet from the access road bordering the wetlands to the south of the Access Road Loop Area. Coler & Colantonio, Inc. collected soil samples from this area and samples were submitted for analysis of petroleum type constituents, specifically gasoline (VOCs).

2.0 SITE DESCRIPTION

The approximately 53 acre Site is located to the west of Marshall Street and to the South of Prentice Street in Holliston, Massachusetts. A more thorough description of site characteristics is included in the ASTM Phase I ESA; this section of this Phase II ESA is limited to topographic, geologic, and hydrogeologic characterizations.

The western most portion of the property consists of hummocky wetlands, which cover approximately one third of the property. Except for the elevated fill area, which is covered in tall grasses, the remaining eastern two thirds of the Site is forested. A hill (drumlin) is located in the approximate center of the property and rises approximately 60 feet in elevation. A small pond approximately 100 by 150 feet is located to the northwest of the access road; hummocky topography from prior aggregate mining surrounds the pond. On the western portion of the property the access road bisect wetlands;

approximately nine acres of wetlands exist south of the road and four acres are present north of the road. Elevated elongated ridge like features or glacial kames are present in the wetlands on both sides of the access road.

2.1 Site Geology

Wehran Engineering Corporation (Wehran) completed an intensive geologic and hydrogeologic investigation, which is summarized in the 1992 Phase II Comprehensive Site Assessment (CSA). The subsurface investigations completed during Coler & Colantonio, Inc.'s Phase II ESA confirmed surficial data gathered during their investigation. However it was not within the scope of this investigation to reevaluate deeper bedrock information and hydrogeologic information. Therefore the data gathered by Wehran and, to a lesser extent, subsequent investigations are incorporated into the Site Geology and Site Hydrogeology portions of this report.

The highest point on-site, at 366 feet above sea level, is located at the northern most point of the property that lies along the Holliston-Hopkinton town line. This point is the top of a glacial drumlin, which slopes to the southwest, dropping approximately 86 feet to an elevation of 280 feet above sea level over an approximate distance of 525 feet. The low elevation land consists of hummocky wetlands with glaciofluvial deposits (eskers or kames) traversing the wetlands that cover the western third of the property. The southern slope of the drumlin drops approximately 56 feet to an elevation of 310 feet above sea level over a distance of 500 feet before becoming an undulating surface varying in elevation between 290 and 310 feet above sea level. Glacial erratic boulders, ranging in size from two feet to twenty feet in height, are scattered about the southern portion of the property, as well as along the eastern slope of the drumlin. The eastern slope of the drumlin drops approximately 76 feet to 290 feet above sea level over a distance of 500 feet. The eastern portion of the Site varies in elevation from 260 to 280 feet above sea level. A large percentage of the eastern portion of the Site shows evidence of reworking as a result of prior excavation for aggregate, resulting in sharp irregular changes in elevation.

Overburden soils at the property are typically poorly to moderately sorted, moderately compacted, light brown to olive, sands and gravel with little to no silt or clay. Occasional boulders have been observed within the sands and gravels. Sediment deposits in the wetlands are relatively thin in nature ranging between 0.25 and 2.0 feet in thickness and are composed of poorly sorted sand, silt, clay and organic matter. Over 40 feet of overburden was observed in the western portion of the property, with less than ten feet near the drumlin and typical thickness of around 20 feet in the eastern portion of the property.

Granite bedrock was observed in the eastern portion of the property from depths between three and 18 feet below surface grade (bsg) with corresponding elevations between 240 feet and 265 feet mean sea level (msl). This data was accumulated from multiple bedrock wells completed by Wehran Environmental in 1991, that extended to a maximum depth of 104 feet. Bedrock at the property is classified by the United States Geologic Survey

(USGS) (Zen, 1983) as Milford Granite. The Milford Granite is Precambrian (Proterozoic) in age and composed of biotite granite (light gray to grayish pink biotite granite). Mafic phases of granodiorites and gneissic granites are also observed in the Milford Granite. The Milford Granite classification matches the well logs prepared by Wehran.

Vertical fractures were occasionally observed within the bedrock, but no fractures were noted beyond 35 feet bsg. Water bearing seams were also observed at varying elevations from 188 feet msl to 260 feet msl. Otherwise the granite bedrock was competent at depths beyond 35 feet. Weathered bedrock was typically less than five feet in thickness and was more prevalent along the eastern property line abutting Marshall Street.

2.2 Site Hydrogeology

The drumlin located in the approximate center of the property is a surface water and groundwater divide. Surface water and groundwater to the west of the drumlin flow into the on-site wetlands. Surface water and groundwater to the east of the drumlin flow to Cedar Swamp, located approximately 1,000 feet southeast of the Site. Surface water in Cedar Swamp eventually flows south to Hopping Brook, which then flows to the Charles River.

The groundwater flow direction, hydraulic gradients, hydraulic conductivities, etc. were determined by Wehran in the 1992 Phase II Comprehensive Site Assessment in order to better determine the source of the chlorinated solvents in the shallow (overburden) and the deep (bedrock) aquifers. These investigations determined that the estimated hydraulic conductivities of overburden in the eastern portion of the property varied between 10^{-2} cm/sec east of the pond to 10^{-4} cm/sec west of the pond, 10^{-4} cm/sec in the fractured bedrock and 10^{-7} cm/sec to 10^{-8} cm/sec for competent bedrock. These ranges were used to calculate groundwater flow rates at 9 feet per day for the overburden located east of the pond and 125 feet per day for the overburden located west of the pond. Groundwater flow rates ranged between 0.7 feet per day in the competent bedrock to 10 feet per day in the fractured bedrock located near Marshall Street.

3.0 METHODOLOGIES

From October 2004 through December 2004, Coler & Colantonio, Inc. conducted an environmental investigation at the Former Bird Property to address the potential for contaminants to be present within the eight Areas of Concern (AOC) identified in the Phase I Environmental Site Assessment (ESA). This investigation included the excavation of 20 test pits as well as the advancement of four hand augers or hand borings, the sampling of eight existing groundwater monitoring wells, and the collection of five surface water samples and seven sediment samples. An additional five groundwater monitoring wells were sampled by Coler & Colantonio, Inc. in September of 2002. The methodologies utilized by Coler & Colantonio, Inc. to collect all samples are described within this section.

All sampling methodologies were completed using dedicated Nitrile® gloves. Gloves were changed between each procedure and sample collection was completed using new gloves at each sampling location and media. Sample collection, and field extraction where applicable for laboratory analysis, was completed in accordance with the appropriate methodology (specifically field extraction EPA Method 5035 for VOCs). If multiple analyses were required, the following order of collection was implemented: VOCs, Method 5035, VPH, EPH, and others. All preserved samples were placed directly into laboratory containers. Aqueous samples submitted for analysis of dissolved metals were placed in unpreserved amber containers, placed on ice and transported to the laboratory for filtering.

3.1 Test Pit Excavation & Soil Sampling

Test pits were excavated utilizing an excavator to reach depths ranging between one and 18 feet below surface grade (bsg). Additional soil samples were collected at depths of 0.5 to 1.5 feet bsg using hand shovels and/or GeoProbe type large bore sampling equipment. Soils encountered during excavation were initially inspected for visual and olfactory evidence of contamination. Samples were then screened for total organic vapors (TOVs) using a photoionization detector (PID) calibrated to read as benzene in accordance with the Massachusetts Department of Environmental Protection (MADEP) "Jar Headspace Analytical Screening Procedure". Soil samples were also submitted for laboratory analysis using MADEP and EPA protocols for preservation of soil samples. Following sample collection, all excavations were backfilled to surface grade using the materials originally removed from the excavations. Groundwater was not encountered in any of these activities therefore no groundwater samples were collected from the test pits.

3.2 Groundwater Sampling

Groundwater sampling was conducted in accordance with the appropriate MADEP Active Policy: *Standard Reference for Monitoring Wells* WSC #310-91 (July 1994). Prior to well purging, the depth to the groundwater and depth to the bottom of the well was measured using an electronic water level meter – interface probe. The probe was slowly lowered into each monitoring well to determine the depth to groundwater and if free phase product (light non-aqueous phase Liquid (LNAPL)) was present.

Groundwater sampling was conducted after each monitoring well was purged of at least three times the water volume of each well, or after the water in the well was removed, and the well was purged dry three times, excepting one well Monitoring Well, WE-9D, where the three well volumes (approximately 7.5 gallons per well volume) was not achieved due to the depth of the well. In total 15 gallons or approximately two well volumes was removed from this well prior to sampling. Wells were purged using a peristaltic, pump, or dedicated bailers. During purging, the intake of the pump was adjusted to create a surge block in order to remove any sediments or colloids in the monitoring wells. Sampling of all monitoring wells was completed using dedicated (disposable) polyethylene bailers. Bailers were lowered slowly into the well to minimize

the disturbance of the groundwater and any potential sediment during groundwater sample collection. Samples were transferred directly from the bailers into appropriate laboratory grade containers.

3.3 Sediment Sampling

Initially, sediments were sampled using 1 ¼ inch cellulose acetate butyrate sediment samplers. Sediment samples were advanced manually to a depth of approximately one half to one foot in depth below the surface or the sediments or to obstruction. The shallow depth (0.1 - 1.0 feet) and loose nature of the sediments did not allow for recovery of the samples, therefore samples were collected by hand from multiple locations within a few feet of each other. Nonetheless, since the standing water over the sediments was shallow (<1.5 feet in all locations) it was possible to collect sediments by hand utilizing PVC & Nitrile® gloves and placing the samples directly into sample containers. Sediments samples were initially screened for visual and olfactory evidence of contaminants. The area of the sample with the greatest likelihood of impact was then submitted for analysis. No evidence of impact was observed in any of the samples collected, therefore all samples were collected from surficial sediments to a depth of four-inches below the top of the sediment. If necessary, sediment samples were decanted to appropriate water percentages by the laboratory.

3.4 Surface Water Sampling

All surface water samples were collected using a laboratory grade, pre-cleaned sample container that was gently lowered directly into the surface water. Surface water samples were collected from within three inches of the surface. Where field preservation was necessary, samples were preserved after collection.

3.5 Sample Handling & Preservation

All samples collected for laboratory analysis were placed in pre-cleaned amber laboratory grade glassware with Teflon lined covers or VOA vials. The samples were then stored on ice and delivered to the laboratory under standard Chain of Custody protocols. Samples were preserved in the field in accordance with US EPA and MADEP protocol, dependent on the select analytical parameters. The laboratory filtered water samples were submitted for metals analysis within the appropriate (typically 24 hour) holding time. Sediment sample collection for laboratory analysis of VOCs was completed in accordance with *Preservation Techniques for Volatile Organic Compound Soil Sample Analysis*, WSC#99-415 (April 1999) USEPA Method 5035 methanol field extraction.

3.6 Laboratory Analysis

A Massachusetts certified laboratory (GeoLabs, Inc. of Braintree, MA) conducted laboratory analysis in accordance with US EPA SW 846 or MADEP methodologies where applicable. A variety of analytical parameters were analyzed on appropriate samples, specific analysis was based on field screening and results of prior sampling. All

analysis was conducted as per US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846 1986, 1994, 1997 Third Edition, as appropriate. Appropriate MADEP methodologies were implemented for analysis of petroleum constituents (Extractable Petroleum Hydrocarbons, in accordance with Implementation of MADEP VPH/EPH Approach Policy #WSC-02-411). Select analysis included:

Volatile Organic Compounds	Method 8260
Semi-Volatile Analysis Base Neutral Extractable	Method 8270
Total Petroleum Hydrocarbons	Method 8100
Extractable Petroleum Hydrocarbons with target PAHs	MADEP Method EPH
Polychlorinated Biphenyls	Method 608/8082 Arochlor
Pesticides	Method 8081
Herbicides	Method 8151
RCRA 8 Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver)	Method 3050, 6010, & 7471
Dissolved Metals (antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, vanadium, zinc)	Method 245.1, 3010, & 6010
Cyanide	Method 9012 & 9013
pH	Method 150.1
Flashpoint	Method 1010
Reactivity	Method 7.3.3.2 & 7.3.4.2
Asbestos	Method 600/R-93/116

4.0 APPLICABLE REGULATORY STANDARDS/BENCHMARKS

Diverse laboratory analysis was completed on a variety of environmental media, including: soils, groundwater, surface water, and sediments. Each media has distinct regulatory standards to evaluate potential risk to human health or organisms. In this report we refer to three different thresholds levels or standards for soils and groundwater significant to human health that the MADEP has promulgated: 1) Reportable Concentrations, above which require notification of a release: 2) Cleanup Standards below which concentrations represent a condition of "No Significant Risk", and; 3) Upper Concentration Limits (UCLs) which if exceeded indicate the potential for significant risk of harm to public welfare and the environment. Similar standards are not available for sediments or surface waters.

Standards for surface water and sediments are based on benchmark screening values that indicate a level below which no effects are expected on the majority of sediment-dwelling organisms and above which more assessment is warranted. These screening values are not meant to evaluate risk to human health. Coler & Colantonio, Inc. is not aware of any standards for sediments or surface water that evaluate risk to human heath. Although not completely appropriate, tables and text compare sampling data from sediment values and surface water values to MADEP Reportable Concentrations and Cleanup Standards for comparative purposes only.

4.1 Reportable Concentrations

Laboratory analytical data is compared to Reportable Concentrations (RCs) for comparative purposes. The Site was previously issued a Release Tracking Number (RTN) as a "Transition Site". During that period RTNs were issued for the entire property, and not a specific reportable condition. Analytical data for soils is compared to RC S-1, the most conservative (health protective) standard, because portions of the property are within 500 feet of a residential dwelling and within the boundaries of a groundwater resource area. The RC S-2 is applicable for the portion of the property that is not within 500 feet of a residential dwelling and outside the boundaries of a groundwater resource area. For groundwater, the RC GW-1 is applicable to limited portions of the property within the current or potential drinking water source area.

4.2 DEP Method 1 Cleanup Standards

The attached tables list the applicable MADEP Method 1 Cleanup Standards for comparative purposes, the specific categories listed were identified using the following rationale.

4.2.1 Groundwater

The classifications for groundwater are listed in 310 CMR 40.0932. Groundwater is categorized based upon its current and/or future use as drinking water (GW-1), its potential to act as a source of volatile material to indoor air (GW-2), and its potential to discharge material to surface water (GW-3). Groundwater may be, at the same time, GW-1, GW-2 and GW-3 as these exposures are not mutually exclusive.

Review of the MADEP Priority Resources Map for this area, included in this report as Figure 3, revealed that a narrow portion of the property along Marshall Street is located in a DEP-Approved Zone II. Therefore, groundwater within this portion of the property is classified as GW-1, as defined in 310 CMR 40.0933. The remainder of the property is not located within a DEP-Approved Zone II, a public water supply, a non-community water supply Interim Wellhead Protection Area, or Zone A of a Class A Surface Water Body. Therefore these areas would not be classified as GW-1 unless a private water supply is located within 500 feet.

Groundwater is classified as GW-2 at the property where the depth to groundwater is less than 15 feet within 30 feet of an occupied building. The GW-2 category is applicable for these portions of the property. The area of the Site for which the GW-2 category is applicable will increase proportional assuming future development of the property.

The GW-3 standard is applicable for all groundwater in the Commonwealth; therefore the GW-3 category will also be used for comparative purposes.

4.2.2 Soil

The criteria for determining which soil category or categories are applicable to the Site are identified in section 310 CMR 40.0933(4) of the MCP. Soil at a given site is

classified as S-1, S-2, or S-3, based upon the potential for exposure to the impacted soils. Category S-1 is associated with the highest potential for exposure and Category S-3 is associated with the lowest potential for exposure. Soil cleanup objectives are also based on groundwater categories. However, because institutional controls (Activity and Use Limitations) would be required for all soil cleanup standards, other than the S-1 standard, the S-1 soil criteria is currently applicable. Since the groundwater is classified as GW-1, GW-2, and GW-3 in certain areas of the property, the soils at the Site are compared to the S-1/GW-1, S-1/GW-2 and S-1/GW-3 Method 1 Cleanup Standards. Comparisons to the Method 1 GW-1 and GW-2 cleanup standards was done for conservative (health protective) purpose even though these standards are not applicable throughout the property.

4.3 Ecological Screening Values

4.3.1 Sediments

The MADEP has promulgated Threshold Effect Concentrations, (TECs) which were developed as "benchmark screening values", for freshwater sediments to evaluate risks to benthos organisms. Summary tables are compared to the MADEP TECs *Technical Update Freshwater Screening Benchmarks for Use Under the Massachusetts Contingency Plan* where available. The TEC screening levels are intended to identify contaminant concentrations below which harmful effects on sediment-dwelling organisms are not expected. TEC Screening Levels are levels at which additional assessment is warranted specifically, a Stage II environmental risk assessment and are not intended to evaluate risk to human health. The MADEP Method 1 Cleanup Standards for soils are listed in the tables for sediments for comparative purposes. These soil standards are established for exposure to soils and are not intended for evaluation of human risks to sediments. Therefore these Cleanup Standards are not applicable for sediments because human exposure to sediment is inherently different (less for sediments) than soils. Since no other standards are provided for sediments, these values are considered conservative (health protective) for evaluation of human risk yet not appropriate for ecological concerns.

4.3.2 Surface Water

Surface water data is compared to four different benchmark values. Three of these values, referred to as Ecotox Thresholds (ET), were obtained from the US EPA Publication 9345.0-12FSI, EDO Update Intermittent Bulletin, dated January 1996. The fourth benchmark value, the Criterion Continuous Concentration (CCC), was obtained from the US EPA National Recommended Water Quality Criteria – Correction (EPA 822-Z-99-001) dated April 1999. ETs are defined as "*media specific contaminant concentrations above which there is sufficient concern regarding adverse ecological effects to warrant further investigation.*" The CCC is defined as "*the highest concentration of a material in surface water to which an aquatic community can be exposed indefinitely without resulting in an unacceptable effect*." We have compared surface water analytical data to Freshwater US EPA chronic ambient water criteria (AWQC), US EPA-derived final chronic values (FCVs), values calculated from the Great Lakes Water Quality Initiative Tier II methodology, and CCCs for freshwater.

The MADEP Method 1 Cleanup Standards for groundwater are listed in the tables for surface water for comparative purposes. MADEP Method 1 GW-1 and GW-2 cleanup standards are established for human exposure to groundwater and not intended for evaluation of human exposure to surface water. The MADEP Method 1 GW-3 Cleanup Standard evaluates groundwater impact to surface water but also allows for dilution. Therefore these Cleanup Standards are not applicable for human exposure to surface water but remain useful for comparative purposes.

5.0 DATA REVIEW

Coler & Colantonio, Inc. has collected a total of 44 samples, including 20 soil samples, 11 groundwater samples, five surface water, seven sediment samples and one sample of building siding. Samples were located at various locations throughout the Former Bird Property and analyzed for a wide variety of analytical parameters.

5.1 Field Data Review

During sampling, samples from all media were field screened for potential contaminants. Soil and sediment descriptions were made in the field and soil samples were screened with a photoionization detector (PID). Elevated levels (>5 ppmv) of contaminants were not detected by field screening, therefore Head Space testing was not typically performed. All soil data accumulated in the field is included in the Test Pit Logs Appendix B. Overall field screening, including visual and olfactory observations, did not detect any evidence of contaminants, however asphalt shingles and paper were observed in multiple test pits in AOC-2 Access Road Loop. These materials are indicative of elevated semivolatile compounds (SVOCs) including polyaromatic hydrocarbons (PAHs).

Test pits were excavated to a depth where native soils were encountered at all locations. Fill material was encountered to a maximum depth of 16 feet below surface grade (bsg) and varied in composition. The majority of fill material was construction debris and tires and in various locations was visually burnt with observed odors indicative of such. In addition a variety of crushed empty drums and tanks, not typical of construction debris, were observed. Similarly, a variety of metal objects (pipes, rebar, structural steel, miscellaneous materials from heating systems, etc.) were observed within the fill. Test Pit, TP – 110, was advanced at the edge of the northwest side of the access road. Native soils were observed under the access road but within a few feet to the east of the access road fill was observed to a depth of twelve feet. Native soils were typically brown colored fine to coarse sand and gravel, layers of well-sorted sand were observed in many of the test pits and minimal percentages of fines (silt and clay) were noted. Glacial erratic boulders were observed on the surface in the upland areas, yet none were observed during the test pit excavations.

5.2 Analytical Data Review

The analytical parameters selected for each sample were chosen based on analytical data that has previously been collected, previous site reconnaissance observations, and field screening data. The vast majority of samples were submitted for multiple analytical parameters in order to better understand the nature and extent of potential contaminants at the property. The results of this sampling are summarized within this section and have been derived from the data presented in Tables 1 - 9. Test pit and sampling locations are shown on Figure 2. Complete Laboratory Analytical Results are included in Appendix C. (Monitoring wells WE-91-1S, WE-2S, WE-6S, WE-6D, WE-8S, and WE-9D are identified as 1S, 2S, 6S, 6D, 8S, and 9D in the Laboratory Analytical Results.)

5.2.1 Soil Samples

Twenty soil samples from test pits and four samples collected by hand were submitted for various types of analysis. Results of these analyses are summarized in Tables 1 through 4.

Total Petroleum Hydrocarbon (TPH) analysis was performed on samples HA-2 (0-1'), HA-4 (0-1.5'), TP-101 (0-2'), TP-102 (0-2'), TP-102 (3'), TP-103 (1-12'), TP-104 (0-12'), TP-105 (0-14'), TP-106 (0-4'), TP-107 (0-2'), TP-108 (0-2'), TP-109 (0-2'), TP-110 (0-12'), TP-111 (0-4'), TP-113 (0-6'), TP-114 (0-3'), TP-115 (0-1'), TP-116 (0-1'), TP-117 (0-1'), TP-118 (0-3'), TP-119 (0-1'), and TP-120 (0-2'). Samples from TP-101 (0-2'), TP-103 (1-12'), TP-104 (0-12'), TP-105 (0-14'), TP-106 (0-4'), TP-109 (0-2'), TP-110 (0-12'), TP-113 (0-6'), TP-114 (0-3'), TP-116 (0-1'), TP-117 (0-1'), and TP-118 (0-3') contained TPH concentrations from approximately 1.1 to 7.25 times the applicable MADEP S-1 GW-1 Cleanup Standard. Only TP-118 (0-3') was above the S-1 GW-2/GW-3 Cleanup Standards, by approximately twice the standard.

Volatile Organic Compound (VOC) analysis (EPA Method 8260) was run on samples HA-3 (0-0.5'), HP-1 (gas tank pile), TP-101 (0-2'), TP-103 (1-12'), TP-105 (0-14'), TP-108 (0-2'), TP-110 (0-12'), TP-111 (0-4'), TP-113 (0-6'), TP-114 (0-3'), TP-115 (0-1'), TP-116 (0-1'), TP-117 (0-1'), TP-119 (0-1'), and TP-120 (0-2') and no VOCs were detected in any of these samples.

Samples from HA-3 (0-0.5'), TP-103 (1-12'), TP-105 (0-14'), TP-110 (0-12'), and TP-113 (0-6') were submitted for semi-volatile organic compound (SVOC) analysis (EPA Method 8270). The SVOCs acenaphthene, acenaphthylene, anthracene, benzo [a] anthracene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [ghi] perylene, benzo [a] pyrene, bis-(2-ethylhexyl)phthalate, carbazole, chrysene, dibenz [a,h] anthracene, dibenzofuran, fluoranthene, fluorene, indeno [1,2,3-cd] pyrene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene were detected in at least one of these samples. Benzo [a] anthracene, benzo [b] fluoranthene, and benzo [a] pyrene were detected in all samples at one to 24 times the S-1 Cleanup Standards. Chrysene was detected in TP-103 (1-12') and TP-105 (0-14') at approximately 2 times the Cleanup Standards; dibenz [a,h] anthracene was detected in TP-103 (1-12'), TP-105 (0-14'), and TP-110 (0-12') at one to three times the Cleanup Standards; and indeno [1,2,3-cd] pyrene was detected in samples

TP-103 (1-12'), TP-105 (0-14'), TP-110 (0-12'), and TP-113 (0-6') at two to eight times the applicable Cleanup Standards.

Samples were submitted for RCRA 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) from hand borings HA-2 (0-1'), HA-3 (0-0.5'), and HA-4 (0-1.5') and from test pits TP-101 (0-2'), TP-102 (0-2'), TP-102 (3'), TP-103 (1-12'), TP-104 (0-12'), TP-105 (0-14'), TP-106 (0-4'), TP-107 (0-2'), TP-108 (0-2'), TP-109 (0-2'), TP-110 (0-12'), TP-111 (0-4'), TP-113 (0-6'), TP-114 (0-3'), TP-115 (0-1'), TP-116 (0-1'), TP-117 (0-1'), TP-118 (0-3'), TP-119 (0-1'), and TP-120 (0-2'). Barium, cadmium, chromium, lead, mercury, and silver were detected in several of the soil samples. Of these metals, only barium and lead were detected above MADEP Method 1 S-1 Cleanup Standards. Barium was detected at approximately 1.5 times the Cleanup Standard in TP-116 (0-1'). Lead was detected in: HA-2 (0-1'), HA-3 (0-0.5'), HA-4 (0-1.5'), TP-103 (1-12'), TP-104 (0-12'), TP-105 (0-14'), TP-107 (0-2'), TP-110 (0-12'), TP-114 (0-3'), TP-116 (0-1'), and TP-118 (0-3') at levels ranging between 1.1 to 15 times the Cleanup Standards.

Asbestos analysis was performed on samples from: TP-103 (1-12'), TP-104 (0-12'), TP-105 (0-14'), TP-106 (0-4'), TP-107 (0-2'), TP-109 (0-2'), TP-110 (0-12'), TP-111 (0-4'), TP-113 (0-6'), TP-114 (0-3'), TP-116 (0-1'), and TP-118 (0-3'). An exterior siding sample collected from the small shed located along the access road (SS-1) was also submitted for asbestos analysis. Asbestos was detected in TP-103 (1-12'), TP-104 (0-12'), TP-105 (0-14'), TP-106 (0-4'), TP-109 (0-2'), TP-110 (0-12'), and SS-1.

PolyChlorinated Biphenyl (PCB) analysis was completed on soil samples from HA-3 (0-0.5'), TP-101 (0-2'), TP-102 (3'), TP-103 (1-12'), TP-105 (0-14'), TP-110 (0-12'), TP-111 (0-4'), TP-113 (0-6'), TP-117 (0-1'), TP-118 (0-3'), and TP-119 (0-1'). Arochlor 1254 was detected in one sample and Arochlor 1260 was detected in five samples. Arochlor 1260 was present in TP-105 (0-14') and TP-110 (0-12') at concentrations 1.1 and 1.4 times the Cleanup Standards.

Pesticide analysis was completed on samples from HA-3 (0-0.5'), TP-103 (1-12'), TP-105 (0-14'), TP-110 (0-12'), TP-113 (0-6'), TP-117 (0-1'), TP-118 (0-3'), and TP-119 (0-1'). The pesticides 4,4-DDD; 4,4-DDE; 4,4-DDT; dieldrin; endosulfan I; endosulfan II; endosulfan sulfate; endrin; endrin aldehyde; heptachlor; heptachlor epoxide; and methoxychlor were detected in at least one of these samples. Dieldrin, endosulfan I, and heptachlor epoxide were detected at 1.1 to three times the S-1 Cleanup Standards in the samples from TP-105 (0-14') and TP-110 (0-12'). Heptachlor was detected at approximately 1.6 times the Cleanup Standards in TP-110 (0-12'). Samples from TP-103 (1-12'), TP-105 (0-14'), TP-110 (0-12'), TP-113 (0-6'), TP-117 (0-1'), TP-118 (0-3'), and TP-119 (0-1') were submitted for herbicide analysis and no herbicides were detected in any of these samples.

5.2.2 Groundwater Samples

In total ten groundwater monitoring wells were sampled by Coler & Colantonio, Inc. One well, WE-4S, was sampled on two occasions for differing parameters. The first

round of sampling was conducted in 2002 and the second round of sampling was completed in 2004. Results of the 2004 groundwater sampling are summarized in Table 5. Results of the groundwater sampling conducted from 1999 through 2002 are summarized in Tables 6 and 7.

Groundwater samples from six shallow wells and two deep wells, collected in November and December 2004, were submitted for various types of laboratory analysis. Samples from wells WE-91-1S, WE-2S, WE-6S, WE-8S, WE-9D, WE-1BS, and WE-4S were analyzed for dissolved metals. No antimony, arsenic, barium, beryllium, cadmium, copper, mercury, nickel, selenium, thallium, vanadium, or zinc was detected in any of the samples. Lead was detected in wells WE-91-1S, WE-2S, WE-6S, WE-9D, and WE-1BS at 1.2 to 7 times the MADEP Method 1 GW-1 Cleanup Standard. Lead was present in well WE-1BS at 3.4 times the GW-3 Cleanup Standard. (No GW-2 Cleanup Standard exists for lead.) Wells WE-2S, WE-6S, WE-6D, WE-8S, and WE-9D were sampled for VOCs (EPA Method 8260). Tetrachloroethene was the only VOC detected and it was only detected in well WE-6D at 1.1 times the GW-1 Cleanup Standard. This concentration was well below both the GW-2 and GW-3 Cleanup Standards. Samples from wells WE-91-1S, WE-2S, WE-1BS, and WE-4S were submitted for SVOC analysis (EPA Method 8270); samples from wells WE-6S and WE-8S were submitted for Extractable Petroleum Hydrocarbons (EPHs) with target polyaromatic hydrocarbons (PAHs); samples from wells WE-91-1S, WE-2S, WE-6S, WE-8S, WE-9D, WE-1BS, and WE-4S were submitted for pesticide analysis; and samples from wells WE-91-1S, WE-2S, WE-6S, WE-8S, WE-1BS, and WE-4S were submitted for PCB analysis. None of these compounds were detected in any of the groundwater samples.

Coler & Colantonio, Inc. also collected five groundwater samples in September 2002. Samples from deep wells WE-1D, WE 91-5D, and WE 91-4D and shallow wells WE-4S and WE 91-3S were submitted for VOC analysis (EPA Method 8260). Carbon tetrachloride, cis- 1, 2-dichloroethene, and trichloroethylene (TCE) were the only VOCs detected at this time. Concentrations of TCE were present in wells WE-1D, WE-4S, WE 91-3S, and WE 91-4D at 22 to 320 times the MADEP Method 1 GW-1 Cleanup Standard. Samples from WE-4S and WE 91-3S contained concentration of TCE at 1.5 to 5 times the GW-2 Cleanup Standard. None of the wells sampled by Coler & Colantonio, Inc. in 2002 contained concentrations of TCE above the GW-3 Cleanup Standard.

5.2.3 Sediment Samples

Seven sediment samples were collected from locations within the wetlands. Sediment samples were decanted of water and the solids portion of the samples were used for analysis. Results of these analyses are summarized in Table 8.

Samples from SED-2, SED-3, SED-4, and SED-5 were submitted for total RCRA Metals and total cyanide analysis. Arsenic, cadmium, selenium, and cyanide were not detected in any sediment samples. Silver and chromium were only detected in SED-2. The concentration of chromium detected was below the MADEP threshold effect concentration (TEC) for chromium. The TEC concentration for sediments represents the concentration below which harmful effects on sediment-dwelling organisms are unlikely

to be observed. There is currently no TEC for silver; however, concentrations of both silver and chromium in SED-2 were at levels well below the MADEP Method 1 S-1 Cleanup Standards for soil. Barium, copper, lead, and mercury were detected in all four sediment samples tested for metals. Concentrations of lead and mercury exceeded their TEC in all samples and concentrations of copper exceeded their TEC in the sample from SED-2. No TEC has been established for barium. Lead in SED-2 was the only metal to exceed its S-1 Cleanup Standard. Samples from SED-1, SED-6, and SED-7 were submitted for total lead analysis. Lead was detected in SED-1 and SED-6, but only exceeded the TEC in SED-6 by approximately six times the standard. The concentration of lead in SED-6 did not exceed the S-1 Cleanup Standard.

All seven of the sediment samples were submitted for EPHs with target PAHs. Phenanthrene, fluoranthene, pyrene, benz[a]anthracene, chrysene, C9-C18 aliphatic hydrocarbons, C19-C36 aliphatic hydrocarbons, and C11-C22 aromatic hydrocarbons were detected in a least one of the samples. Concentrations of phenanthrene, fluoranthene, pyrene, benz[a]anthracene, and chrysene were above their TECs in SED-2 and fluoranthene, pyrene, benz[a]anthracene, and chrysene were above their TECs in SED-1. No TECs have been established for the aliphatic and aromatic hydrocarbon ranges. Benz[a]anthracene was the only compound present in concentrations exceeding S-1 Cleanup Standards at two to three times the Cleanup Standards in SED-1 and SED-2.

All seven samples were also submitted for pesticide analysis. The pesticides 4,4-DDD; 4,4-DDE; 4,4-DDT; dieldrin; and hexachlorobenzene were detected in at least one of the sediment samples. 4,4-DDD was detected in SED-2 and SED-5; 4,4-DDE was detected in SED-2, SED-5, and SED-6; 4,4-DDT was detected in SED-2; dieldrin was detected in SED-6; and hexachlorobenzene was detected SED-5 and SED-7. Pesticide concentrations in sediment samples with detected levels of 4,4-DDD; 4,4-DDE; 4,4-DDT; and dieldrin all exceeded their TECs. No TEC has been established for hexachlorobenzene. All pesticide concentrations were well below their MADEP Method 1 S-1 Cleanup Standards.

Sediments SED-2, SED-3, SED-4, and SED-5 were sampled for PCBs and VOCs (EPA Method 8260). PCBs were detected in two of the four samples collected. The highest level detected was approximately one–quarter the MADEP Reportable Concentration for S-1 soils, however both samples exceeded MADEP's TEC levels. No VOCs were detected in any of the submitted sediment samples.

5.2.4 Surface Water

Five surface water samples were collected from five locations within the wetlands. Analytical results for surface water samples are summarized in Table 9. All five samples were submitted for dissolved metals analysis. Samples CSW-1, CSW-3, CSW-4, and CSW-5 were submitted for TPH analysis (EPA Method 8100). Samples from CSW-2 were submitted for SVOC analysis (EPA Method 8270) and VOC analysis (EPA Method 8260). Samples from CSW-1, CSW-4, and CSW-5 were submitted for pesticide analysis. The pesticide a-BHC was the only compound detected. A-BHC was present in CSW-4 at

a concentration well below its RC. No benchmark values or Cleanup Standards exist for a-BHC.

5.2.5 Test Pit Description

In October of 2004, Coler & Colantonio, Inc. excavated 20 test pits throughout the Former Bird Property to depths ranging between one and 18 feet bsg. Test pit TP-107 was excavated proximal to the access road in the central portion of the Western Wetlands, test pits TP-115 through TP-120 were excavated in the Eastern Pond area, and all other test pits were excavated within the Access Road Loop Area in the central portion of the Site. The locations of these test pits are shown on Figure 2 and complete test pit logs have been included in this report as Appendix B.

Test pits excavated within the Access Road Loop Area were performed to confirm that this portion of the property was historically used for dumping, and to better understand the nature and extent of the fill material. Construction debris type fill material was encountered in every test pit excavated within this area with the exception of TP-108. Test pits located in the northern two thirds of this disposal area within the access road loop (TP-101, TP-102, TP-103, TP-104, TP-105, TP-106, and TP-110) consisted of 0.5 to one feet of dry sand and gravel covering construction debris which ceased at depths between two and 16 feet bsg. Native soils consisting of light to medium brown, moist, fine to coarse sand and gravel was encountered beneath the debris.

In test pits located to the northeast of the access road loop (TP-109, TP-111, TP-112, and TP-113), debris was encountered at the surface and extended to depths between one and six feet bsg. Test pits TP-108 and TP-114 were excavated in the southeast corner inside the access road loop. Both of these test pits were excavated to four feet bsg, but no debris was encountered in TP-108. Debris within TP-114 was encountered from the surface to about 2.5 feet bsg. Subsurface debris encountered within the entire Disposal Area included glass, wood, asphalt shingles, hoses, tires, metal, an aluminum gas tank, cable, fiberglass insulation, pipes, carpet, wires, brick, concrete, and asphalt. In the vast majority of the test pits excavated within this area, burnt debris was observed.

Test pit TP-107 was excavated just to the north of the access road in the central portion of wetlands. Aerial photographs from 1973 and 1978 showed extensive gravel mining operations being conducted in this area. The excavated area has since been filled and TP-107 is estimated to be located within the fill. No debris was observed within TP-107. Leaf litter and organic soil were encountered to 0.5 feet and native soils were encountered from 1.5 through two feet bsg.

Test pits TP-115 through TP-120 are located within the Northeast Pond Area. These test pits were excavated to depths of one to three feet bsg. Debris was encountered from the surface to one foot bsg in TP-116, TP-118, and TP-119. This debris included pipe, brick, concrete, metal, asphalt shingles, wood, and PVC piping. Native soils were located below the debris. No debris was encountered in TP-115, TP-117, or TP-120; however, surface debris, including a tank and tire pile, was noted in close proximity to these test pits.

6.0 NATURE AND EXTENT OF CONTAMINANTS

The following conclusions regarding the Nature and Extent of Contamination are presented for each distinct Area of Concern (AOC). The intent of each of these conclusions is to evaluate the potential risk to human health from each AOC. Since many of the AOCs are based on visual evidence and historic data has focused on chlorinated solvents, the sampling of a variety of media for a variety of parameters was completed to determine if the perceived risk or recognized environmental concern have impacted the environment proximal to, or within the AOC.

Field screening of soils and sediment did not detect any elevated levels of total organic compounds (TOCs) above what is considered ambient type readings (10 ppmv). Accordingly, volatile organic compound analysis was completed on samples based on other evidence of potential impact.

These conclusions are limited to risk to human health from potential contaminants and are not based on potential risks to safety, public welfare or the environment. Potential risks to safety and public welfare exist at the property, particularly in areas where a variety of construction debris, drums, tires, tanks, etc. are exposed on the surface. Coler & Colantonio recommends that these materials be disposed of off site in accordance with all state and local regulations, in an expedited fashion. The removal of these exposed materials will greatly mitigate the risk to public welfare and safety at the property. The "No Trespassing" signs located along much of the perimeter should remain and this policy should continue to be enforced.

A variety of regulatory compliance issues exist at the property. These issues were described in the Phase I ESA. The resolution or mitigation of these regulatory concerns are not within the Scope of Work of this Phase II. Coler & Colantonio, Inc. recommends that the regulators be contacted regarding the regulatory status and various regulatory requirements at the property.

6.1 AOC-1 - Eastern Groundwater

Multiple rounds of historical groundwater, surface water, and sediment sampling have documented the presence of trichloroethylene (TCE) and 1, 2-dichloroethylene (DCE) in shallow and deep aquifers in the eastern part of the Site. The results of both the passive and real time soil gas surveys conducted in this area by Wehran also suggested the presence of TCE and tetrachloroethylene (PCE) in soil gas. TCE and DCE have also been detected in wells downgradient from the Site, including abutting residential water supply wells. The extent of the chlorinated solvents in both shallow and deep groundwater was estimated in the Phase II Comprehensive Site Assessment that was prepared by Wehran in June of 1992. The Draft Phase III Remedial Action Plan and the Draft Class C Response Action Outcome Statement, prepared by IT Group, formerly Wehran, determined that no further remedial action with monitoring alternative as a Temporary Solution for a Class C RAO was the most appropriate approach to this area of concern. Nonetheless, the "Draft" status of these reports, the duration of time since

groundwater sampling was last conducted coupled with the potential development of the property require that this Area of Concern be investigated and/or remediated further.

Coler & Colantonio, Inc. sampled two shallow, overburden, monitoring wells for VOCs that historically recorded the highest levels of chlorinated compounds. Monitoring Wells WE-91-3S and WE-4S, detected trichloroethene (TCE) at 450 and 1,600 ug/L respectively. The levels detected in these two overburden wells exceed MADEP Method 1 GW-1 and GW-2 Cleanup Standards, but do not exceed the GW-3 Standard. No other compounds were detected above any of the MADEP Method 1 Standards. In addition Monitoring Well WE-2S located on the western side of AOC-1 was sampled on December 2, 2004 for chlorinated solvents, no VOCs were detected in the sample.

Coler & Colantonio, Inc. sampled two shallow, overburden, monitoring wells for VOCs that historically recorded the highest levels of chlorinated compounds. Monitoring Wells WE-91-3S and WE-4S, detected trichloroethene (TCE) at 450 and 1,600 ug/L respectively. The levels detected in these two wells exceed MA DEP Method 1 GW-1 and GW-2 Standards, but do not exceed the GW-3 Standard. Low levels of other chlorinated compounds were detected however no one of these compounds were detected above any applicable MA DEP Method 1 Cleanup Standards. Historically the levels of TCE fluctuated ten fold in these two wells, recent sampling detected similar fluctuations.

Coler & Colantonio, Inc. sampled three deep wells, two of which (WE-91-4D & WE-1D) historically recorded the highest levels of chlorinated compounds in the bedrock aquifer. Samples were submitted for laboratory analysis of VOCs (US EPA Method 8260). Monitoring Wells WE-91-4D and WE-1D, detected TCE at 120 and 110 ug/L respectively. The levels detected in these two wells exceed MADEP Method 1 GW-1 Standard of 5ug/L but do not exceed the applicable MADEP Method 1 GW-2 or GW-3 Cleanup Standards. Laboratory analysis of the sample collected from Monitoring Well WE-91-5D detected 1.6 ug/L of TCE. Low levels of other chlorinated compounds were detected in WE-91-4D and WE-1D, however none of these compounds were detected above any applicable MADEP Method 1 Cleanup Standards. Review of historic analysis from these wells detected levels of TCE and chlorinated compounds similar to those of the most recent round of sampling.

Although levels of TCE in the shallow groundwater varied considerably over time, the historic data from deeper monitoring wells indicates that levels of TCE have remained consistent. Similarly, other levels of VOCs, principally chlorinated compounds, have also remained consistent. TCE is the principal contaminant in AOC 1. Other chlorinated compounds are present at levels below the applicable Cleanup Standards. (Coler & Colantonio, Inc. understands that chlorinated compounds will degrade to vinyl chloride (VC) which has low MADEP Method 1 Cleanup Standards: GW-1 & GW-2 are 2 ug/L, GW-3 is 40,000 ug/L.) Nonetheless for the purposes of this report and future response actions, TCE is the principal contaminant of concern. Accordingly the nature and extent of chlorinated compounds is most simply delineated as the impact to groundwater by TCE. Historic as well as recent levels of TCE in the overburden and bedrock have been compiled on Figures 4 and 5. The greatest level of TCE impact has been observed

proximal to the pond in samples from monitoring wells WE-91-3S and WE-4S. Concentrations of TCE decrease downgradient (south - southeast) and continue beyond Marshall Street. The chlorinated solvents also impacted multiple private drinking water wells. A public water supply was extended to these properties in November of 1990 and all but one of the residences with contaminated wells were connected to the public water supply by May of 1992. The one residence opted to maintain the groundwater treatment system installed by the MADEP as an interim response action. Wehran's Phase II Comprehensive Site Assessment (CSA), completed in June of 1992, determined that no single source of contamination, including the landfilling, had been determined for the chlorinated solvents (primarily consisting of TCE) in the groundwater.

In 2001 IT Corp. (formerly Wehran) prepared a "Draft" Phase III that determined that no further remedial action with a monitoring alternative (Monitored Natural Attenuation (MNA)) was the most feasible alternative remedial response for the chlorinated compounds in the groundwater. IT Corp. selected the no further remedial action with MNA as a Temporary Solution based on the reasoning that groundwater pump and treat is not reliable for attaining drinking water standards and the costs for the in situ chemical oxidation alternative are substantial relative to the risk posed by the Site. In conjunction with the Phase III, IT Corp. completed a "Draft" Class C RAO documenting a temporary solution for RTN 2-60 addressing these only chlorinated solvents.

Since analysis of metals in this area has historically detected concentrations of RCRA 8 metals above regulatory standards, additional metals analysis was completed. Coler & Colantonio, Inc. sampled four select groundwater monitoring wells from AOC-1 for RCRA 8 metals along with arsenic, antimony, beryllium, copper, nickel, thallium, vanadium, and zinc to better determine the present nature and extent of impact to the groundwater from a diverse group of metals as well as arsenic.

Only lead and silver were detected in the groundwater samples submitted from AOC-1. Levels of lead exceeded the MADEP Method 1 GW-1 Cleanup Standard (0.015 mg/L) in Monitoring Wells WE-91-1S, WE-2S and WE-1BS. There are no Method 1 standards for GW-2 groundwater. Neither lead nor silver was detected in Monitoring Well WE-4S, and silver was not detected in WE-1BS. However, silver was detected in Monitoring Wells WE-91-1S and WE-2S, at levels above the MA DEP Method 1 GW-3 Cleanup Standard (0.007 mg/L), but not the GW-1 (0.040 mg/L) Cleanup Standard. The GW-3 standard is based on potential impact to surface waters and therefore potential ecological threats.

All detections of metals in the groundwater of AOC-1 were less than ten times the applicable standards. Historic sampling of metals in numerous groundwater monitoring wells within AOC-1 detected similar type sporadic concentrations of dissolved metals. The low levels of lead and silver detected do not appear widespread or contiguous within AOC-1. Since levels were detected in Monitoring Well WE-2S, which is located upgradient of the debris piles in this area, the source of these low levels of metals is not certain. Furthermore only one sample, WE-91-1S, detected levels of lead (0.023 mg/L)

which were above the most conservative (health protective) MADEP Reportable Concentration (0.020 mg/L); this detection is only 0.003 mg/L above the RC.

6.2 AOC-2 - Access Road Loop Area

Historic documents identify prior filling of a variety of materials, principally construction debris and drums in AOC-2. The drums were removed with MADEP and US EPA oversight in the 1990s. Historic limited analysis detected trace levels of VOCs, elevated levels of SVOCs, and low levels of metals. The nature of material used to fill this area particularly burnt wood, ash, tar paper, asphalt shingles, and asphalt inherently contain a variety of SVOCs, particularly PAHs. The metal materials used for filling also represent an environmental concern, therefore analyses for a variety of metal elements were completed in the soil and groundwater. The unknown variety of materials used for filling, particularly the roofing tar or asphaltic materials associated with the former drums and the crushed empty drums, require additional analysis of petroleum compounds (VOCs and SVOCs) in order to properly document if contaminants have impacted the soil, groundwater, surface water, or sediments.

6.2.1 Soil

Coler & Colantonio, Inc. completed 13 test pits in AOC-2; these excavations were advanced to native soils in order to better determine the depth of fill materials. All soil samples were composite samples of the fill material except for the samples submitted for VOC analysis, which were discrete samples.

The following quantity of soil samples were submitted for laboratory analysis in AOC -2:

13 Samples	RCRA 8 Metals
13 Samples	Total Petroleum Hydrocarbons (TPH) US EPA Method 8100;
8 Samples	Volatile Organic Compounds (VOCs) US EPA Method 8260;
4 Samples	SemiVolatile Organic Compounds (SVOCs)/Base Neutral Acid extractables (BNAs) US EPA Method 8270;
7 Samples	Polychlorinated Biphenyls (PCBs) US EPA Method 608
4 Samples	Pesticides US EPA Method 608
4 Samples	Herbicides US EPA Method 8081A
10 Samples	Bulk Asbestos PLM
5 Samples	pH and Flashpoint
5 Samples	Reactive cyanide and sulfide

Only one of the 8 RCRA metals was detected above regulatory limits. This analysis detected levels of lead above the MADEP Method 1 S-1/GW-1, GW-2, and GW-3 Cleanup Standards of 300 mg/Kg in five samples. No concentrations of lead exceeded the Upper Concentration Limits (UCLs).

Nine of the 13 soil samples submitted for TPH detected petroleum hydrocarbons above the MA DEP Method 1 S-1/GW-1 Cleanup Standard of 200 mg/Kg. One sample TP-118 (3') detected TPH concentrations at 1,450 mg/Kg, which exceeded the S-1/GW-2 and S-

1/GW-3 Cleanup Standards of 800 mg/Kg. The associated scan, or "fingerprint" could not identify the type of hydrocarbons, quantification was completed based on motor oil. No VOCs were detected in any of the eight samples submitted. SVOCs, principally Poly Aromatic Hydrocarbons (PAHs) were detected in all four of the soil samples submitted for BNAs; total concentrations of these SVOCs ranged between 50 and 160 mg/Kg approximately parts per million (ppm).

PCBs were detected above the MADEP Method 1 S-1/GW-1, GW-2, and GW-3 Cleanup Standards of 2 mg/Kg, approximately ppm, in two of the seven samples submitted from AOC-2. PCB Arochlor 1260 was detected in TP-105 (0-14') and TP-110 (0-12') at 2.72 mg/Kg and 2.11 mg/Kg respectively. All levels are below the MADEP UCL of 100 mg/Kg.

Two of the four soil samples submitted for Pesticides detected dieldrin, endosulfan I, and heptachlor epoxide above the MADEP Method 1 S-1/GW-1, GW-2, or GW-3 Cleanup Standards. One of the four soil samples detected heptachlor above the MADEP Method 1 S-1/GW-1, GW-2, and GW-3 Cleanup Standards. The highest levels of pesticides detected were approximately three times the most stringent standard. All levels are below the MADEP UCLs. Four samples were submitted for herbicides and no compounds were detected in any of the samples submitted.

Five soil samples were submitted for pH and flashpoint; all pH values were in the neutral range, between 7.6 and 7.9; and all flash points were greater than 93^{o} Fahrenheit. Five soil samples were submitted for reactive cyanide and sulfide; all values were below laboratory detection levels.

6.2.2 Groundwater

No groundwater monitoring wells are located directly in the debris pile, however four monitoring wells were sampled that are located within 150 feet of the AOC-2. Two of these wells were screened in the overburden soils (WE-6S and WE-8S) and two of the wells are screened in the bedrock (WE-9D and WE-6D). A variety of metals analysis including RCRA 8 metals along with antimony, beryllium, copper, nickel, thallium, vanadium, and zinc was completed on select wells.

Only lead and silver were detected in the groundwater samples submitted from AOC-2. Levels of lead exceeded the MADEP Method 1 GW-1 Cleanup Standard (0.015 mg/L), but were below the GW-3 Cleanup Standard (0.030 mg/L) in monitoring wells WE-9D, and WE-6S. Silver was detected in monitoring well WE-9D at 0.013 mg/L which is above the MADEP Method 1 GW-3 Cleanup Standard (0.007 mg/L), but not the GW-1 (0.040 mg/L) Cleanup Standard. There are no Method 1 GW-2 Cleanup Standards for lead or silver.

Additional laboratory analysis was conducted on monitoring wells located in AOC-2. Samples from four wells were analyzed for VOCs, samples from two wells were analyzed for Extractable Petroleum Hydrocarbon (EPH) ranges with Target PAHs, samples from three wells were analyzed for pesticides, samples from two wells were

analyzed for PCBs, and samples from one well were analyzed for arsenic. None of these parameters were detected in any of the well samples within AOC-2.

6.2.3 Surface Water

Two surface water samples, CSW-4 & CSW-5, were collected in the wetland at the base of the buried debris pile in AOC-2. Several types of analysis which included RCRA 8 metals, antimony, beryllium, copper, nickel, thallium, vanadium, zinc, TPH (Method 8100), and pesticides Method (608) were performed on the surface water samples. The pesticide a-BHC was the only compound detected in either of the surface water samples. None of the four regulatory ecological screening classifications for surface water which are applied within this report identified benchmark values for a-BHC. Although no other pesticides were detected by laboratory analysis, the laboratory detection limit for heptachlor was above the Tier II benchmark value. Laboratory detection limits for chlordane; 4,4-DDT, heptachlor, heptachlor epoxide, and toxaphene were above Criterion Continuous Concentration (CCC) benchmark values. In addition to a-BHC, b-BHC; d-BHC; 4,4-DDD; 4,4-DDE; endosulfate; endrin aldehyde; hexachlorobenze do not have benchmark values for the four surface water ecological screening classifications employed in this investigation.

6.2.4 Sediments

Four sediment samples were collected in the wetland at the base of the buried debris pile in AOC-2. None of the analysis detected any compounds above the MADEP Method 1 S-1/GW-1, GW-2, or GW-3 Cleanup Standards.

Two sediment samples were submitted for analysis of arsenic, barium, cadmium, chromium, copper, mercury, silver, selenium, and cyanide. Four sediment samples were submitted for analysis of lead. Lead and mercury were the only two metals detected above the MADEP TECs in any of the sediment samples submitted from AOC-2. A lead concentration of 44.7 mg/Kg was detected in sample SED-4, a concentration of 41.7 mg/Kg was detected in SED-5, and a concentration of 221 mg/Kg were detected in SED-6. All three levels exceeded the MADEP TEC of 35.8 mg/Kg for lead. Mercury was detected in sample SED-4 at 0.243 mg/Kg and SED-5 at 0.922 mg/Kg; both levels exceeded the MADEP TEC for mercury of 0.180 mg/Kg.

Samples SED-4 and SED-5 were submitted for VOCs method 8260; no volatile compounds were detected in either sample. All four sediment samples from AOC-2 were submitted for Extractable Petroleum Hydrocarbons (EPHs) and Target PAHs; no EPH carbon fractions of target compounds were detected in any of these four samples.

Sample SED-4 and SED-5 were also submitted for analysis of PCBs. No PCBs were detected in sample SED-5, however 291 ug/Kg of Arochlor 1260 was detected in SED-4. This value exceeds the MADEP TEC screening value of 59.8 ug/Kg.

All four sediment samples were also submitted for pesticide analysis. Two of these samples detected pesticides above TECs and two of the samples did not detect any pesticides. Sample SED-5 detected 4,4-DDD at 19.1 ug/Kg; 4,4-DDE at 14.3 ug/Kg; and

hexachlorobenzene at 19.1 ug/Kg. The TECs for 4,4-DDD and 4,4-DDE, 4.88 and 3.16 ug/Kg respectively, were exceeded. There is no TEC for hexachlorobenzene. Sample SED-6 detected dieldrin at 10.4 ug/Kg and 4,4-DDE at 10.4 ug/Kg. The TECs for these compounds are 1.9 ug/Kg and 3.16 ug/Kg, respectively.

6.3 AOC-3 - Debris Field - Marshall Street

Historic documents identify prior filling of a variety of materials, principally construction debris in AOC-3. Historic investigations in this area have focused on chlorinated compounds (VOCs) and metals in the groundwater. Although these investigations identified chlorinated compounds in the groundwater, minimal other concerns were documented. Test pits previously excavated in this area encountered demolition debris to varying depths. Based on the nature of this material Coler & Colantonio, Inc. collected additional soil and groundwater samples and analyzed these samples for a wide variety of parameters including metals, arsenic, TPH, VOCs, SVOCs, Pesticides, and PCBs.

6.3.1 Soil

Coler & Colantonio, Inc. completed two test pits, TP-116 and TP-120 in AOC-3. These excavations were advanced to native soils in order to better determine the impact of fill materials within AOC-3. Unfortunately due to the dense vegetative cover in this area, it was later determined that these two test pits were located on the perimeter of this debris field. Samples from each of these test pits were submitted for RCRA 8 metals, TPH, and VOC analysis. A concentration of 1,510 mg/Kg of barium and a concentration of 4,540 mg/Kg of lead in TP-116 were the only metal exceedances of the MADEP Method 1 S-1/GW-1, GW-2, and GW-3 Cleanup Standards with a Cleanup Standard of 1,000 mg/Kg for barium and 300 mg/Kg for lead. The Upper Concentration Limit (UCL) for lead is 6,000mg/Kg. A TPH concentration of 398 mg/Kg in TP-116 also exceeded the S-1/GW-1 Cleanup Standard of 200 mg/Kg, but did not exceed the S-1/GW-2 and S-1/GW-3 Cleanup Standards of 800 mg/Kg. TPH was detected in TP-120, but these concentrations did not exceed any of the applicable Cleanup Standards. No UCLs were exceeded by any of the detected compounds and no VOCs were detected in either of the samples from TP-116 and TP-120.

6.3.2 Groundwater

Groundwater samples were collected from three overburden monitoring wells within AOC-3 (WE-91-1S, WE-1BS, and WE-4S). Monitoring Well WE-4S is located approximately 250 feet upgradient of AOC-3 but was considered in this AOC because it is screened in the overburden soils and because of its location relative to the pond. Samples collected from Monitoring Wells WE-91-1S, WE-1BS, and WE-4S were submitted for arsenic, antimony, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, vanadium, zinc, SVOC EPA Method 8270, pesticide, and PCB analysis. Of all these parameters only dissolved lead and dissolved silver were detected. A concentration of silver of 0.008 mg/L was detected in WE-91-1S. This level of silver exceeds the GW-3 Cleanup Standard of 0.007 mg/L but remains below the GW-1 Cleanup Standard of 0.040 mg/L. Silver was not detected in either of the other two wells. A concentration of lead at 0.023 mg/L was detected in WE-91-1S

that exceeds the GW-1 Cleanup Standard of 0.015 mg/L. A concentration of lead at 0.102 mg/L in WE-1BS exceeds both the GW-1 Cleanup Standard of 0.015 mg/L and the GW-3 Cleanup Standard of 0.030 mg/L. Neither lead nor silver have a GW-2 Cleanup Standard.

6.4 AOC-4 - Western Wetlands Debris Field

A debris field principally consisting of demolition debris and general refuse extending as far as 200 feet to the south of the access road was observed along the northwest property line (Holliston & Hopkinton town lines) in the Western Wetlands Area. Virtually no previous assessments have addressed this area, and our assessment did not extend beyond the Property Line/Town Line.

6.4.1 Soils

Coler & Colantonio, Inc. has collected three soil samples (HA-2, HA-3, and HA-4) from this area. All three of these samples were submitted for RCRA 8 metals analysis. Of the eight RCRA metals only lead was detected above the MADEP Method 1 S-1/GW-1, GW-2, and GW-3 Cleanup Standards (300 mg/Kg for lead). No concentrations of lead exceeded the UCL. Samples from HA-2 and HA-4 were also submitted for TPH analysis while samples from HA-3 were submitted for VOC, SVOC, PCB, and pesticide analysis. Neither of the soil samples submitted for TPH analysis detected petroleum hydrocarbons above the MADEP Method 1 S-1/GW-1 Cleanup Standard of 200 mg/Kg or the S-1/GW-2, and GW-3 Cleanup Standard of 800 mg/Kg. The associated scan, or "fingerprint" could not identify the type of hydrocarbon; quantification was completed based on motor oil. SVOCs, principally PAHs, were detected in the samples collected HA-3; the total concentration of these SVOCs was 20 mg/Kg, approximately parts per million (ppm). Three of the SVOCs detected exceed the MADEP Method 1 S-1/GW-1, and GW-3 Cleanup Standards, but were well below the UCLs. One PCB, Arochlor 1254, and one pesticide, methoxychlor, were detected in HA-3, but these concentrations were below all Method 1 Cleanup Standards. No VOCs were detected in HA-3.

6.4.2 Groundwater

No groundwater monitoring wells are located directly in AOC-4, however three existing monitoring wells, WE-6S, WE-6D and WE-8S, are all located within 300 feet of AOC-4. Two of these wells were screened in the overburden soils (WE-6S and WE-8S) and WE-6D is screened in the bedrock. A variety of metals analysis including RCRA 8 metals along with antimony, beryllium, copper, nickel, thallium, vanadium, and zinc was completed on select wells. Lead was the only metal detected and only in WE-6S at a concentration of 0.02 mg/L. Levels of lead exceeded the MADEP Method 1 GW-1 Cleanup Standard (0.015 mg/L), but were below the GW-3 Cleanup Standard (0.030 mg/L) in monitoring wells WE-6S. Samples from WE-6S, WE-6D, and WE-8S were also submitted for laboratory analysis of VOCs, method 8260, only one compound TCE was detected at 5.5 ug/L. This concentration is slightly above the MADEP Method 1 GW-1 cleanup standards of 5 ug/L. Samples from the two shallow monitoring wells, WE-6S and WE-8S, were also submitted for analysis of EPH, pesticides, and PCBs; none of these parameters were detected.

6.5 AOC-5 - Central Wetlands Fill

Aerial photographs of the Site from 1973 and 1978 showed extensive gravel mining operations being conducted approximately half way between the western property line and the Access Road Loop Area. Based on these photos, areas proximal to the access road have been filled; the access road splits this fill area. South of the access road a debris field is visible that terminates in a small area of open water that is at least three feet deep. North of the access road are wetlands that are typically less than two feet in depth. During Coler & Colantonio, Inc.'s site visit, construction debris was observed approximately 100 feet south of the access road. Some surficial debris was noted to the north of the access road. Coler & Colantonio, Inc. collected soil, groundwater, sediment, and surface water samples from this area to be analyzed for a variety of parameters.

6.5.1 Soil

One test pit was excavated within AOC-5, because of the wetland nature of this area. No construction debris, only native soils were encountered within this test pit, TP-107. Soil samples from this test pit were submitted for RCRA 8 metals and TPH analysis. Lead was detected at 343 mg/Kg which is above the MADEP Method 1 S-1/GW-1, GW-2, and GW-3 Cleanup Standards of 300 mg/Kg, but well below the UCL for lead. None of the other RCRA 8 metals were detected above the MADEP Method 1 Cleanup Standards. TPH analysis detected petroleum hydrocarbons at 58.4 mg/Kg which is below the MADEP Method 1 S-1/GW-1 Cleanup Standard of 200 mg/Kg and the S-1/GW-2, and GW-3 Cleanup Standards of 800 mg/Kg. The associated scan, or "fingerprint" could not identify the type of hydrocarbon; quantification was completed based on motor oil.

6.5.2 Groundwater

No groundwater monitoring wells are located directly in AOC-5, however two monitoring wells (WE-6S and WE-6D) were sampled that are located within 150 feet of the AOC-5; and Monitoring Well WE-8S is located approximately 350 feet away. Two of these wells were screened in the overburden soils (WE-6S and WE-8S) and WE-6D is screened in the bedrock. A variety of metals analysis including RCRA 8 metals along with antimony, beryllium, copper, nickel, thallium, vanadium, and zinc was performed on select wells. Lead was the only metal detected and only in WE-6S at a concentration of 0.02 mg/L. Levels of lead exceeded the MADEP Method 1 GW-1 Cleanup Standard (0.015 mg/L), but were below the GW-3 Cleanup Standard (0.030 mg/L) in monitoring wells WE-6S. Samples from WE-6S, WE-6D, and WE-8S were also submitted for laboratory analysis of VOCs, method 8260. Only one compound, TCE, was detected at 5.5 ug/L which is above the MADEP Method 1 GW-1 Cleanup Standard of 5 ug/L. Samples from the two shallow monitoring wells WE-6S and WE-8S were also submitted for analysis of EPH, pesticides, and PCBs; none of these parameters were detected.

6.5.3 Surface Water

Two surface water samples, CSW-1 and CSW-2, were collected from AOC-5. CSW-1 was submitted for RCRA 8 metals, antimony, beryllium, copper, nickel, thallium, vanadium, zinc, TPH, and pesticide analysis. CSW-2 was submitted for RCRA 8 metals, antimony, beryllium, copper, nickel, thallium, vanadium, zinc, SVOC, and VOC analysis.

None of these compounds were detected in either of the surface water samples collected from AOC-5.

6.5.4 Sediment

Two sediment samples, SED-1 and SED-2, were collected from AOC-5. SED-1 was submitted for lead, EPH with target PAHs, and pesticide analysis. SED-2 was submitted for RCRA 8 metals, copper, cyanide, EPH with target PAHs, VOC, pesticide, and PCB analysis.

Copper, lead, and mercury were detected in SED-2 above the MADEP TEC benchmark values for these compounds. The concentration of lead, 775 mg/Kg, also exceeded the MADEP Method 1 S-1/GW-1, GW-2, and GW-3 Cleanup Standards of 300 mg/Kg. The concentration of mercury, 1.40 mg/Kg, detected in SED-2 remained below these Cleanup Standards. No Cleanup Standards were available for copper within the soil. Lead was also detected in SED-1 at 14.7 mg/Kg which is well below the Cleanup Standards of 300 mg/Kg.

Several PAHs exceed the MADEP TEC benchmark values in both of the sediment samples. Of the compounds detected, only benz[a]anthracene also exceeded the MADEP Method 1 S-1/GW-1, GW-2, and GW-3 Cleanup Standards (0.7 mg/Kg for benz[a] anthracene). No VOCs were detected in the samples from AOC-5.

The pesticides 4,4-DDD; 4,4-DDE; and 4,4-DDT were detected in SED-2. The concentrations of these compounds exceeded the MADEP TEC benchmark values but were well below the MADEP Method 1 Cleanup Standards. No pesticides were detected in SED-1.

One PCB, Arochlor 1260, was detected in SED-2. The concentration of Arochlor 1260 detected in SED-2 is 460 ug/Kg. This concentration exceeded the MADEP TEC benchmark value of 59.8 ug/Kg, but was well below the MADEP Method 1 S-1/GW-1, GW-2, and GW-3 Cleanup Standards of 2,000 ug/Kg.

6.6 AOC-6 - Access Road

Debris was frequently noted within 50 feet of either side of the access road, much of this material does not represent a recognized environmental concern. Much of the debris consists of wire pens formerly associated with the mink farm, tires/shredded tire, metal debris and other construction related debris that should be removed for public safety reasons. Due to the ambiguous nature and extreme length of this area of concern, it is not reasonable to sample soils throughout the area. Therefore two specific areas were designated, AOC-7 (assigned to a group of steel drums) and AOC-8 (assigned to a pile of automobile gasoline tanks). AOC-7 and AOC-8 were assigned specific area of concern numbers due to the level of concern associated with each of these items while AOC-6 remained a more general Area of Concern. Nonetheless multiple analysis of a variety of media is applicable to AOC-6, these include: Test Pits TP-108, TP-115, TP-118 and TP-119, Hand Auger HA-1 (misidentified by the laboratory as HP-1), Sediment Sample

SED-3, Surface Water Sample CSW-3, and groundwater samples from monitoring wells WE-2S, WE-91-1S, WE-4S, and WE-1BS. In addition the MADEP, the US EPA and their consultants have conducted a great deal of historic assessment in this general Area of Concern.

6.6.1 Groundwater

Groundwater samples were collected from WE-2S, WE-91-1S, WE-4S, and WE-1BS for a wide variety analytical parameters. No PCBs, pesticides, or SVOCs were detected in samples from any of these four monitoring wells. VOCs were analyzed on one sample, WE-2S, and no compounds were detected. Metals analysis only detected two metals: lead and silver. Concentrations of lead ranged between <0.01 to 0.102 mg/L, and silver ranged between <0.007 and 0.009 mg/L.

6.6.2 Soils

Soil data from TP-108 (0-2'), TP-115 (0-1'), TP-118 (0-3'), and TP-119 (0-1') included analysis of RCRA 8 Metals and TPH, for all four samples. VOCs analysis was completed on samples TP-108(0-2'), TP-115 (0-1'), and TP-119 (0-1'); and PCBs and Pesticide analysis was completed on samples TP-118 (0-3') and TP-119 (0-1'). The only parameters detected above the MADEP Method 1 S-1/GW-1, GW-2, or GW-3 Cleanup Standards were lead and TPH in sample TP-118 (0-3'). Lead was detected at 434 mg/Kg and TPH was detected at 1,430 mg/Kg, exceeding the most conservative (health protective) Cleanup Standards of 300 mg/Kg and 200 mg/Kg. Sample TP-118 (0-3') was a composite sample of the fill material located above the native soils. Hand auger HP-1, was advanced to investigate AOC-8, but is also located within 100 feet of the road and AOC-6. This soil sample was submitted for analysis of VOCs and no VOC compounds were detected.

6.6.3 Sediments and Surface Water

One sediment sample, SED-3, and one surface water sample, CSW-3, are applicable to AOC-6. (Both these samples were collected to target AOC-8, but based on their proximity to AOC-6 are applicable to both areas.) SED-3 was submitted for metals, cyanide, EPHs, pesticides, PCBs, and VOCs analysis. Only two parameters, lead and mercury, were detected above the MADEP TECs. Lead was detected at 36.2 mg/Kg, and mercury was detected at 1.45 mg/Kg; the TECs for these metals are 35.8 and 0.18 mg/Kg, respectively. Surface water sample CSW-3 was submitted for analysis of metals and TPH; no TPH or metals were detected in this surface water sample.

6.7 AOC-7 - Eastern Pond Area Drums

Approximately a dozen empty rusted drums were observed to the north of the access road, about 100 feet to the northeast of the pond. Test Pit TP-119 was excavated within a few feet of these drums to a depth of one foot. Soil sample TP-119 (0-1') was submitted to the laboratory for analysis of RCRA 8 Metals, TPH, VOCs PCBs, pesticides, and herbicides. None of these parameters were detected above the most conservative (health protective) MADEP Cleanup Standards. These drums appear to have been placed at this location during prior removal actions to dispose of debris or hazardous materials.

6.8 AOC-8 - Automobile Gasoline Tanks

A pile of empty crushed automobile gasoline tanks was encountered amongst a rock pile to the south of AOC-2 and the access road. Hand auger HA-1 was placed in a low area within a few feet of the rocks and tanks. One soil sample, HA-1 (mis-identified by the laboratory as HP-1), was collected from this location and submitted for analysis of VOCs. No VOC compounds were detected in this sample.

As discussed in Section AOC-6, one sediment and one surface water sample were collected in a wetland area less than 200 feet topographically downgradient from the tank pile of AOC-8. SED-3 was submitted for metals, cyanide, EPHs, pesticides, PCBs, and VOCs. Only two parameters, lead and mercury, were detected above the MADEP TECs. Lead was detected at 36.2 mg/Kg, and mercury was detected at 1.45 mg/Kg; the TECs for these metals are 35.8 and 0.18 mg/Kg, respectively. Surface water sample CSW-3 was submitted for analysis of metals and TPH; no TPH or metals were detected in this surface water sample.

6.9 Additional Analysis

Additional analysis for disposal parameters, specifically flashpoint, pH, reactive cyanide, reactive sulfide, and asbestos was completed on a variety of soil samples typically collected from the fill material. Seven soil samples: TP-101 (0-2), TP-103(1-12'), TP-105 (0-14', TP-110 (0-12'), TP-113 (0-6'), and TP-118(0-3') were submitted for pH and flashpoint. Values for pH were neutral ranging between 7.6 and 8.4 units. All flash points were above 93^{o} Fahrenheit. Similarly analysis for reactive sulfide and cyanide was completed on soil samples: TP-101 (0-2'), TP-103 (1-12'), TP-105 (0-14'), TP-110 (0-12'), TP-113 (0-6') TP-117 (0-1') and TP-118 (0-3'). Reactive Cyanide was less than 30 mg/Kg and Reactive Sulfide was less than 0.312 mg/Kg. This analysis was performed to better determine the waste characteristics of the fill material. None of these analyses suggests that "hazardous listed waste" is present in the fill material tested.

6.9.1 Asbestos Inspections and Analysis

A total of 14 samples, 12 soil samples and two bulk (tile) samples, were submitted for asbestos analysis, using Polarizing Light Microscopy (PLM). The tile sample SS-1 which was collected from the shed in AOC-1 and sample TP-110, a fragment of tile encountered in the fill material in TP-110, were presumed to be Asbestos Containing Materials (ACM) known as Transite. Both these Presumed ACM samples were confirmed as asbestos containing tile.

Laboratory analysis for asbestos in soil is inherently problematical, because separation of asbestos fibers in soils is a difficult process. Three preparation methods were employed prior to PLM analysis for this assessment. Some analysis confirmed the presence of asbestos while other analyses were a quantitative determination of the percentage of asbestos. The methodologies used for analysis vary in precision and accuracy because liquid separation methodologies were not utilized or offered by our subcontractor. In

addition, no methodology has been endorsed for asbestos in soils by the MADEP, and asbestos analysis using PLM is prone to identifying other minerals and having false positive identifications. In addition "reportable concentrations" and "cleanup standards" have yet to be promulgated by regulators. Massachusetts regulators and environmental associations have been at the forefront of addressing asbestos in soil and draft regulations are included in the MCP "Wave 2" revisions and Asbestos In Soil (AIS) amendments, but issues involving asbestos have yet to be resolved. The main route of exposure to asbestos to humans is via inhalation; the potential for asbestos fibers to become airborne is considered with all asbestos risk assessments. The potential for asbestos fibers to become airborne is referred to as "friable", this definition is roughly based on the ability of asbestos materials to crumble under hand pressure. In addition asbestos materials have to be exposed to air, accordingly draft regulations address reporting and mitigation requirements based on the depth below surface of asbestos fibers in the soil.

Of the fill materials submitted for analysis, five of the 12 samples identified asbestos. All asbestos that was visible was non-friable Transite material. Coler & Colantonio, Inc, did not observe any thermal insulation, air-cell type insulation, or any ACM that would be considered friable, at the property. ACM was visually observed and confirmed with laboratory analysis in the fill material within AOC-2 and Transite material is used as siding on the shed in AOC-1. Floor tiling (9"x 9") in the house and the porch of the house was presumed ACM and other exterior siding on out-buildings was noted as presumed ACM.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 AOC-1 - Eastern Groundwater

Recent and historic groundwater sampling has documented the presence of trichloroethylene (TCE), 1,2-dichloroethylene (DCE) and low levels of metals in shallow and deep aquifers in this area of concern. Groundwater categories are varied at this portion of the property and proposed development would alter the existing applicable standards. A small portion of AOC-1 roughly 150 feet west and parallel to Marshall Street is located within the Zone 2 of the public water supply. This area would be classified as GW-1, therefore the MADEP Method 1 S-1/GW-1 Cleanup Standard for soil is also applicable. The depth to groundwater within this area is typically less than 15 feet below grade. Accordingly, the GW-2 Cleanup Standards are applicable within 30 feet of the residences in this area, and the GW-3 Method 1 Cleanup Standard is applicable throughout. Proposed future usage includes residential development throughout most of this area except within a 200-foot buffer of the pond, accordingly the GW-2 standards would then be applicable proximal to the proposed occupied structures

7.1.1 Chlorinated Solvents - Groundwater

The levels of TCE and DCE have fluctuated over the last ten years with little decrease in concentrations. These compounds were the emphasis of prior response actions by the US EPA and the MADEP. A wide variety of detailed assessment was not able to locate the

source of the chlorinated solvents. Wehran completed a Phase II Comprehensive Site Assessment for the MADEP in June of 1992 that estimated the extent of the chlorinated solvents in both shallow and deep groundwater. Recent sampling shows similar and fluctuating concentrations of chlorinated solvents in the shallow and the deep aquifers. TCE was detected above the MADEP Method 1 GW-1 and GW-2 Cleanup Standards proximal to the pond in AOC-1 and TCE was detected above GW-1 standards in a plume located southeast of the pond in a similar configuration with similar concentrations as noted in previously assessments. Figures 4 and 5 show the most recent TCE contaminant concentrations as well as associated contours.

Although, IT Group's 2002 Draft Phase III Remedial Action Plan selected monitored natural attenuation (MNA) as the most feasible solution and a Draft Class C Response Action Outcome Statement was prepared, minimal changes in concentrations over the past 13 years and projected future usage necessitates a more aggressive approach for remediation. Review of historic data and recent data indicates a minimal decrease in contaminant levels, suggesting slow degradation, attenuation and overall plume migration. Although this could also indicate that a source is leaching into the groundwater, prior extensive assessments did not locate a source, therefore the potential that additional assessment at this point in time would locate a source is significantly lessened.

Additional groundwater, surface water and sediment sampling within AOC-1 and groundwater sampling on downgradient properties is warranted to better determine the extent of the chlorinated compounds. Additional remediation is recommended to mitigate future exposure and enhance the proposed future development of the property. Based on the data collected to date, Coler & Colantonio, Inc. believes that enhanced in-situ bioremediation in the downgradient portion of the plume combined with an ex-situ pump and treat system located proximal to the pond; or enhanced in-situ bioremediation throughout the impacted area are suitable approaches. Prior to any remediation at the Site, the Site RTN 2-60 must be brought into regulatory compliance and a plan for remediation must be submitted to the MADEP.

7.1.2 Metals – Groundwater

Historic and recent analysis of metals in AOC-1 has detected concentrations of metals above regulatory standards. Recent sampling detected lead in three monitoring wells in excess of the MADEP Method 1 GW-1 Cleanup Standard. Two monitoring wells detected lower levels of lead upgradient of the debris fields located in AOC-3. Monitoring wells WE-91-1S and WE-1BS are located proximal to Marshall Street, since these wells are downgradient or within the debris of AOC-3 and higher concentrations of lead were detected, it maybe interpreted that the source of lead in the groundwater is attributable to the metal and construction debris piles within AOC-3. This is a feasible potential source considering the low levels of lead detected in the soils within TP- 115 and the typical association of lead paint and construction debris.

Silver was detected above the MADEP Method 1 GW-3 Cleanup Standard (0.007 mg/L), but not the MADEP Method 1 GW-1 or GW-2 Cleanup Standard in monitoring wells

WE-91-1S and WE-2S. Specifically, silver was detected at 0.008 in WE-91-1S and at 0.018 mg/L at WE-2S. The GW-3 Cleanup Standard for silver evaluates potential impact to surface waters or potential impact to the environment. The GW-3 standard is based on a hypothetical and conservative dilution factor for contaminants to reach surface waters. The nearest surface water body is Cedar Swamp, located approximately 1,100 feet to the southeast of the Site. Considering the low levels of silver detected in the groundwater and the distance to Cedar Swamp, it is unlikely that the levels of silver detected in the two wells within AOC-1 represent a significant threat to the environment. Nonetheless, additional assessment is necessary to properly address this detection of silver.

Considering the risk to public safety represented by the surface debris in AOC-3, this debris should be removed, regardless of whether or not it proves to be the source of metals into the groundwater. The levels of lead and silver detected in the groundwater may be naturally occurring (anthropogenic), nonetheless the debris in AOC-3 should be removed for public safety reasons. Since the GW-1 Cleanup Standard is based on drinking water and previous response actions have mitigated or eliminated this potential exposure by connecting these residences to the public water supply, present conditions do not represent a significant threat to human health. The urgency to resolve the groundwater impact by lead has been resolved. Accordingly, Coler & Colantonio, Inc. recommends that additional soil samples be collected to better determine the extent of lead contamination in the soils; that the surficial debris be removed: and that soils with elevated levels of lead be remediated, through excavation and disposal or stabilization. The removal of the surficial metal debris and construction debris piles is recommended throughout AOC-1 and AOC-3; more specific recommendations regarding AOC-3 are addressed in Section 7.3 of this report.

7.2 AOC-2 - Access Road Loop Area

Historic documents identify prior filling of a variety of materials, principally construction debris, including high percentages of asphalt shingles, tar-paper, and drums containing roofing tar in AOC-2. The drums were removed with MADEP and US EPA oversight in the 1990s. Limited historic analysis was conducted in this area because only relatively low levels of VOCs, elevated levels of SVOCs, and low levels of metals were detected. Coler & Colantonio, Inc. collected groundwater, surface water, soil, and sediment samples to evaluate the impact of the fill materials located within AOC-2.

The GW-3 and S-1/GW-3 Method 1 Cleanup Standard are presently the only applicable Method 1 standards in AOC-2. Proposed future usage includes development on the periphery of the fill material, accordingly the GW-2 standards may then become applicable dependent on depth to groundwater and proximity to the occupied structures.

7.2.1 Metals

Thirteen soil samples were submitted for RCRA 8 metals analysis from this area of concern. Only lead was detected above any of the MADEP Method 1 Cleanup Standards. Lead was detected in five of the thirteen samples in excess of the MADEP Method 1 Cleanup Standards of 300 mg/Kg. To determine if lead had leached into the groundwater

three monitoring wells were sampled and the samples were submitted for lead analysis. Lead was detected in two of these samples at concentrations which exceeded the MADEP Method 1 GW-1 Cleanup Standard of 0.015 mg/L; however, the GW-1 standard is not applicable to this portion of the property. The detected concentrations are below the applicable GW-3 Cleanup Standard of 0.030 mg/L. (There is no GW-2 Cleanup Standard for lead in groundwater.)

In an attempt to determine if lead, and a variety of other metals, had leached from the fill material into the adjacent wetlands, four sediment samples and two surface water samples were submitted for metals analysis. Lead was detected in three of these samples SED-4, SED-5, and SED-6 at concentrations that exceed the MADEP TEC screening value. Only one sample (SED-2) exceeded the MA DEP Method 1 S-1/GW-1, 2 or 3 Cleanup Standard. Mercury was also detected in two samples above the MADEP TEC levels. The detected levels of mercury, were below the MA DEP Method 1 S-1/GW-1, S-1/GW-2, and S-1/GW-3 Cleanup Standards. In addition, two surface water samples from AOC-2 were submitted for analysis of 15 metals. No metals were detected in any of these samples. Although this investigation detected evidence of lead impact to the soil, groundwater, and sediment, only the levels detected in the soils represent a risk to human exposure while levels detected in the sediment may represent a risk to ecological exposure. A Method 3 Ecological Stage II risk assessment is recommended to determine if lead and mercury levels pose any significant ecological risk.

Silver was detected in groundwater and soil samples collected from AOC-2. One groundwater sample from monitoring well WE-9D exceeded the applicable GW-3 Cleanup Standard by 0.001 mg/L. Silver was detected in the majority of soil samples; however, the detected concentrations of silver in soil were all below the S-1/GW-1, S-1/GW-2, and S-1/GW-3 of 100 mg/L. Two sediment and two surface water samples were also submitted for silver analysis and no silver was detected in any of these samples. Levels of silver were only detected at levels that indicate potential exposure (above regulatory levels) in the one media, groundwater, and in only one monitoring well. The level of silver detected in this well exceeded the MADEP Method 1 GW-3 Cleanup Standard. This standard evaluates exposure to surface water, yet analysis of surface water and sediment did not detect levels of silver above TECs. Therefore, it does not appear that the potential ecological exposure from silver in the groundwater to the surface water is significant. Nonetheless, additional analysis of groundwater and surface water is warranted to properly document these levels and a Stage II ecological screening is recommended.

7.2.2 Organics

Several types of analysis for organic compounds were conducted on the groundwater, soil, sediment, and surface water of AOC-2. Asphalt materials, tar paper, and roofing shingles were visually apparent on the surface and in many of the test pits within the fill material at the property. Four soil samples from AOC-2 were submitted for Semi Volatile Organic Compounds (SVOCs) utilizing US EPA Method 8270. The results of this analysis indicated that between four and six PAHs exceeded the applicable Method 1 Cleanup Standards for soils. TPH concentrations in soils exceeded the applicable S-

1/GW-1 Cleanup Standard of 200 mg/Kg in nine of the thirteen samples; the maximum concentration of TPH detected in theses samples was 715 mg/Kg which is below the S-1/GW-2 and GW-3 Cleanup Standard of 800 mg/Kg. To evaluate whether PAH compounds leached into groundwater and the adjacent wetlands, EPH and PAH analysis was conducted on two groundwater samples and four sediment samples from AOC-2; no EPHs or target PAH analytes were detected in any of these samples. Two surface water samples from AOC-2 were also submitted for TPH analysis, but the TPH concentrations in these samples were below the laboratory detection limits. Although material within the fill area contains levels of semivolatile compounds, specifically PAHs, these materials have not significantly impacted the adjacent wetlands. Nonetheless, future development should address the potential exposure of these PAHs.

Four groundwater samples were submitted for VOC analysis. Tetrachloroethene (TCE) was the only VOC detected and was only present in the sample collected from WE-6D at a concentration of 5.5 ug/L. The detected concentrations are below the applicable GW-3 Cleanup Standard of 5,000 ug/L. No VOCs were detected in the eight soil samples and two sediment samples from AOC-2 which were submitted for VOC analysis.

7.2.3 PCBs

PCBs were detected in soil and sediment samples collected from AOC-2. Seven soil samples were submitted for PCB analysis and the PCB Arochlor 1260 was detected in five of these samples. The concentration of Arochlor 1260 exceeded the S-1/GW-1, GW-2, and GW-3 Cleanup Standards of 2 mg/Kg, by less than 1 mg/Kg, in two samples: TP-105 (0-14') and TP-110 (0-12'). Two sediment samples from AOC-2 were submitted for PCB analysis. Arochlor 1260 was detected in SED-4 at a concentration of 291 ug/Kg. This concentration is above the MADEP TEC screening value of 59.8 ug/Kg, but below the S-1/GW-1, S-1/GW-2, and S-1/GW-3 Cleanup Standards of 2,000 ug/Kg. Two groundwater samples were also submitted for PCB analysis, but no PCBs were detected in these samples.

7.2.4 Pesticides

Pesticides were detected in soil, sediment, and surface water samples collected from AOC-2. Four soil samples were submitted for pesticide analysis and pesticides were detected at relatively low levels these samples. However, these levels were above the MADEP Method 1 S-1/GW-1, GW-2, and GW-3 Cleanup Standards for pesticides in two of the samples.

To better determine if pesticides present in the soil had leached into the groundwater, pesticide analysis was performed on sediment, surface water, and groundwater samples. Pesticides were detected in sediment samples SED-5 and SED-6 and only 4,4-DDD; 4,4-DDE; and dieldrin were present in concentrations that exceeded the conservative MADEP TEC screening values. (No MADEP TEC screening value was available for hexachlorobenzene.) No pesticide concentration in sediments exceeded the MADEP Method 1 Cleanup Standard. Pesticide analysis was also conducted on two surface water samples. A-BHC was the only pesticide detected and no benchmark values were

available for a-BHC. No pesticides were detected in the three groundwater samples submitted for pesticide analysis.

7.2.5 Recommendations

It does not appear that significant leaching of metals, SVOCs, PCBs, or pesticides from the fill material into the groundwater or surface water has occurred; however the placement of groundwater wells is not ideal for this evaluation. Accordingly, Coler & Colantonio, Inc. recommends a minimum of three additional groundwater monitoring wells be placed between the wetland and the fill area. This recommendation is based on prior experience with third party review Based on the contaminants detected in the fill material and the concentrations of these contaminants, wells should be screened at the soil water interface. Sampling should be conducted for: lead, silver, mercury, PAHs, PCBs, and pesticides.

Because the groundwater is not utilized for drinking water in this area, potential human exposure under present usage is minimal. Nonetheless, ecological exposure requires further assessment, specifically a Stage II ecological screening.

Coler & Colantonio, Inc. recommends that this area be thoroughly covered with sufficient clean fill or an appropriate barrier to mitigate exposure to the fill materials. Based on the low levels of lead, silver, PCBs, and pesticides detected within AOC-2, it is the opinion of Coler & Colantonio, Inc. that a Method 2 or 3 Risk Characterization and/or the implementation of an Activity and Use Limitation (AUL) would document and significantly mitigate exposure to allow for a Condition of No Significant Risk for present and proposed future usage. The AUL would also significantly mitigate exposure to soils contaminated with PAHs, asphalt type materials, to allow for documentation of a Condition of No Significant Risk.

Although groundwater sampling in areas of the Site did not detect significant levels of contaminants, Coler & Colantonio, Inc. strongly recommends that all future usage of the property should limit water supplies to public sources. No groundwater or surface water should be utilized for potable or irrigation type purposes; this measure will help mitigate potential stigmas associated with the development of the property.

Based upon the lead, silver, organic compounds, PCBs, and pesticides detected within AOC-2, Coler & Colantonio, Inc. recommends that a Stage II Environmental Risk Characterization be conducted on AOC-2 and surrounding areas. Exposure to fill material within AOC-2 should be mitigated either through containment within a barrier, i.e. clean soil and/or pavement or if practical by removal. Estimates of the volume of construction debris and cover in AOC-2 range between 50,000 and 70,000 cubic yards. In addition, based on the contaminant levels detected, it is Coler & Colantonio. Inc.'s opinion that the ecological concerns can be resolved by the completion of a Stage II Ecological Risk Assessment.

7.3 AOC-3 - Debris Field - Marshall Street

Historic documents identify prior dumping of a variety of materials, principally construction debris along Marshall Street. Site inspections in this area have observed various mounds of construction debris, empty rusted drums and tanks, and remnants from the former mink farm. The mounds of construction debris estimated between ten and 25 cubic yards in volume are evident proximal to Marshall Street. The height of the debris mounds range between four and eight feet. Test pits previously excavated in this area encountered demolition debris to varying depths, relative elevations of these depths is not known, since surface grade varied. The depth of fill in AOC-3 is not certain, however test pits in this area determined that fill materials generally did not extend two feet below the depth to groundwater. Since groundwater is less than five feet below the typical surface grade (bsg) it has been projected that the fill material is between five and seven feet bsg. The mound type configuration of demolition debris and shallow distance between grade and groundwater all influence and complicate estimates of the volume of material in this area of concern. Historic investigations in AOC-3 have focused on chlorinated compounds (VOCs) and metals in the groundwater. Although these investigations identified chlorinated compounds in the groundwater, minimal other concerns were documented. Coler & Colantonio, Inc. collected soil and groundwater samples from AOC-3 that were analyzed for a wide variety of parameters based on the nature of the encountered fill material.

The metals barium, chromium, lead, mercury, and silver were detected in soil samples within AOC-3. Of these metals only barium, lead, and silver were present in concentrations which exceed applicable MADEP Method 1 Cleanup Standards. In the two soil samples collected from AOC-3, barium and lead exceed the S-1/GW-1, S-1/GW-2, and S-1/GW-3 Cleanup Standards of 1,000 and 300 mg/Kg in only one sample: TP-116 (0-1'). As discussed in previous sections of AOC-1, lead and silver were detected in some groundwater samples.

TPH concentrations of 398 and 13.6 mg/Kg were detected in soil samples TP-116 (0-1') and TP-120 (0-2'). The level of TPH in TP-116 (0-1') exceeds the applicable S-1/GW-1 and S-1/GW-3 Cleanup Standard of 200 mg/Kg, but remains below the S-1/GW-2 Cleanup Standard of 800 mg/Kg. No VOCs were detected in the two soil samples submitted from this AOC.

The variety of metal debris within AOC-3 may represent a source for the metals detected in the soil and groundwater. The removal of the general debris piles is recommended throughout AOC-3. This recommendation is based on the potential impact to the environment and the potential risk to public safety. Fill material should be further investigated for both structural and environmental concerns. Dependent on these results and future property usage, fill type soils should be removed, stabilized, or covered as appropriate.

7.4 AOC-4 & AOC-5 Western Wetlands Debris Field "AOC –4"

Based on the nature and extent of contaminants, source materials (fill), topography and their relative proximity, AOC-4 and AOC-5 will be consolidated into one Area of Concern, AOC-4, for recommendation purposes. From this point forward in this report all references to **AOC-4** will include both AOC-4 and AOC-5. These areas are made up of multiple debris fields that were emplaced into the western wetlands of the property. Debris fields principally consist of demolition debris and general refuse extending as far as 200 feet to the south of the access road along the northwest property line (Holliston & Hopkinton town lines) in the Western Wetlands Area. Coler & Colantonio, Inc.'s assessment of AOC-4 included soil and groundwater sampling and did not extend beyond the Property Line/Town Line.

The metals barium, chromium, lead, mercury, and silver were detected in soil samples from both AOCs. Of the metals detected, only lead concentrations exceeded the applicable MADEP Method 1 Cleanup Standards. Lead was also detected in groundwater samples, however the concentrations were below the applicable GW-3 Cleanup Standard of 0.030 mg/L.

Several types of analyses for organic compounds were conducted on the groundwater and soil samples collected from AOC-4. Field screening of soils did not observed any VOCs nor were any detected in the one confirmatory soil sample submitted for VOC analysis. Only tetrachloroethene (TCE) was detected in the VOC analysis from one of the three groundwater samples submitted, the concentration was 5.5 ug/L well below the applicable MADEP Method 1 GW-3 Cleanup Standard of 5,000 ug/L. TPH analysis was performed on three soil samples and TPH concentrations were well below the applicable S-1/GW-3 Cleanup Standard of 800 mg/Kg. SVOC analysis was conducted on one soil sample from AOC-4; three PAH compounds were detected at less than two times the applicable standard. EPH analysis was conducted on two groundwater samples collected from AOC-4, but no EPHs or target analytes were detected in these samples.

Pesticides and PCBs were detected at low levels below applicable standards in the one soil sample collected from AOC-4. Two groundwater samples were submitted for PCBs and pesticide analysis. No PCBs or pesticides were detected in either of the groundwater samples submitted from AOC-4.

Copper, lead and mercury were detected in a sediment sample collected from AOC-4 (formerly AOC-5) at concentrations above their MADEP TEC screening values. No MADEP TEC screening values were available for barium or silver, which were also detected. Semivolatile organic compounds, PCBs, and pesticides were also detected above MADEP TEC screening levels. Accordingly, a Stage II Ecological screening is warranted in these wetlands to address this potential ecological threat.

Two surface water samples were collected from AOC-4 and submitted for metals, a variety of VOC, and SVOCs analysis. One of these two samples was submitted for pesticide analysis. None of these constituents were detected.

Lead and PAHs were detected, in the soils and sediments within AOC-4 at levels that require additional attention. In addition, pesticides and PCBs were detected in the sediments above the MADEP TEC ecological screening values. Coler & Colantonio, Inc. recommends that additional assessment to better delineate the extent of lead and PAH impact to the soils and sediment be conducted, along with a Stage II Ecological screening. The low levels of petroleum constituents detected represent minimal ecological or human risk, however additional assessment coupled with a Risk Characterization is recommended to properly address these constituents. The nature of the surficial debris observed in these areas represents a public safety issue and the debris should be removed. In addition, fill material containing steel concrete and rubble represents a public safety issue and needs to be addressed by removal or by filling with a suitable material and subsequent compaction of this material.

7.5 AOC-6 - Access Road

Debris was frequently noted within 50 feet, and in isolated areas within 200 feet, of either side of the access road. Much of the debris consists of wire pens formerly associated with the mink farm, tires/shredded tire, metal debris, and other construction related debris. A great deal of historic assessment of this area has been conducted by the MADEP, the US EPA, and their consultants, however minimal areas were targeted for additional assessment or remediation.

Much of the debris in and of itself does not represent a "Recognized Environmental Concern" but requires removal for public safety and aesthetic rationale. Due to the lack of Recognized Environmental Concerns, ambiguous nature, and extreme length of this area of concern, it is not reasonable to sample soils throughout the area. Nonetheless, Coler & Colantonio, Inc. collected numerous soil and groundwater samples from specific areas of concern which were designated along the access road. These areas of concern include AOC-7 (assigned to a group of steel drums) and AOC-8 (assigned to a pile of empty crushed automobile gasoline tanks). AOC-7 and AOC-8 were assigned specific area of concern numbers due to the increased level of potential concern associated with each of these areas. They are further discussed in sections 7.7 and 7.8. Another area north of the access road, just prior to where the road takes a sharp turn south, has not been assigned a specific area of concern number, but contains multiple tires (approximately 50) that should be removed for public safety reasons.

The sampling associated with this area that detected levels of constituents above applicable standards is being addressed under other AOCs. These constituents require additional assessment or remediation as warranted and should be adequately addressed in each AOC. General housekeeping and removal of the debris along the access road is recommended under the guidance of an environmental professional to field screen surficial soils and determine if recognized environmental concerns are present. Disposal of all materials should be completed in accordance with local and state regulations.

7.6 AOC-7 - Eastern Pond Area Drums

Approximately a dozen empty rusted drums were observed to the north of the access road, about 100 feet to the northeast of the pond. Test Pit TP-119 was excavated within a few feet of these drums to a depth of one foot. Field screening did not detect any evidence of OHM impact. Soil sample TP-119 (0-1') was submitted to the laboratory for analysis of RCRA 8 Metals, TPH, VOCs PCBs, pesticides, and herbicides. None of these parameters were detected above the most conservative (health protective) MADEP Cleanup Standards. Based on this analytical data, these drums do not represent an environmental concern to the Site, but should be removed and disposed of properly.

7.7 AOC-8 - Automobile Gasoline Tanks

A pile of empty crushed automobile gasoline tanks was encountered amongst a rock pile. Hand auger HA-1 was placed in a low area, topographically downgradient of these tanks, and within a few feet of the rocks and tanks, one soil sample HA-1 (mis-identified by the laboratory as HP-1) was collected from this location and submitted for analysis of VOCs. No VOCs were detected in this sample. One sediment and one surface water sample were collected in a wetland area less than 200 feet topographically downgradient from the tank pile. Lead and mercury, were detected above the MADEP TECs, but below MADEP S-1/GW-1, S-1/GW-2, and S-1/GW-3 Cleanup Standards in the sediment samples.

Based on this analytical data, these discarded empty crushed automobile gasoline tanks do not represent an environmental concern to the Site, but should be removed and disposed of properly. The levels of lead and mercury in the adjacent wetlands should be addressed in the Stage II ecological screening performed in AOC –4.

7.8 General Property Recommendations

The property as a whole has a wide variety of debris scattered in proximity to the accessible areas. The Drumlin Area and the Southern Uplands have minimal materials and appear to be native upland type areas, with minimal disturbance. Extensive removal and disposal of surface debris in AOC-2, 3, 4, 6, 7, and 8 are strongly recommended; the debris in these areas represents a threat to public safety. The MADEP should be contacted prior to removal of these materials.

Based on the lack of regulatory compliance at the property, completion of MADEP and possibly US EPA regulatory reporting requirements are necessary prior to initiating any remedial activities. Based on conversation with the MADEP, the $4,200,000 lien on the property from former MADEP and US EPA response actions will need to be resolved prior to bringing the Site into regulatory compliance.

Given the wide variety of materials used as fill material at the property, the detection of some VOCs in the fill material and in groundwater proximal to the fill material would be expected. Soil data from 14 soil samples did not detect any VOCs using EPA Method

8260, which includes chlorinated solvents, from a variety of locations at the property. Similarly sediment, surface water, and groundwater samples collected from the western portion of the property detected little to no VOCs.

Chlorinated solvents have been, and continue to be, major contaminants in the eastern groundwater (AOC-1). Laboratory data from soil sampling in that area only detected minimal chlorinated solvents. The lack of VOCs in the soils on the eastern portion of the property, and the general void of VOCs in all media in the western portion of the property, may be attributed in some part to the burning of debris and possibly an intentional ban of these materials as fill by the former owner/operator. Historic fire department records and visually charred material observed in many test pits on the perimeter of the fill material in AOC-2, support that extensive burning has historically occurred on the property. Additional analysis of VOCs in soils and sediment is recommended in select areas with limited previous data, however extensive analysis on soil samples in AOC-2 is no longer warranted.

The source of chlorinated solvents in AOC-1 remains uncertain. The highest levels of chlorinated solvents were detected in monitoring well WE-4S, but Coler & Colantonio, Inc. was not able to locate any VOC data results from groundwater monitoring well WE-91-2S, which is directly up gradient of WE-4S. The proximity of this well in relation to the property line suggest that the source of the groundwater impact could be from an off site source. If this is the case, a new or unknown Responsible Party would be responsible for the release of chlorinated solvents to the groundwater. Additional sampling of monitoring wells WE-91-2D, WE-91-2S, WE-4D, WE-91-8S, and WE-91-8D is recommended to better determine the extent and potential source of the chlorinated solvents in the groundwater. If levels of chlorinated solvents are higher in any of these wells than the levels historically detected in WE-4S, the installation of additional wells is recommended.

A length of black pipe approximately four inches in diameter has been noted sticking up above the water in the pond located in AOC-1. The pipe is capped with a typical black pipe cap. Based on our review of the groundwater monitoring well locations, and the cap of this pipe, it does not appear to be a former monitoring well. Further research regarding this pipe is warranted: specifically the cap should be removed and the length of pipe should be traced and if contents are encountered they should be sampled. If the pipe is connected to a storage tank then Coler & Colantonio, Inc. recommends that it be removed. If the pipe is a Monitoring well it can serve as an additional data collection point.

Coler & Colantonio, Inc. recommends that multiple additional wells be sampled at the property for appropriate contaminants of concern for each Area of Concern. To better determine the accuracy of prior sampling and fully document the degree of contaminants. This and other recommendations are incorporated within this ASTM Phase II Report and will be consolidated in a separate document for interested persons.

FIGURES

TABLES

APPENDIX A

Statement of Limitations

APPENDIX B

Test Pit Logs

APPENDIX C

Complete Laboratory Analytical

APPENDIX D

Historic Test Pit Logs

APPENDIX E

Historic Soil Boring Logs

STATEMENT OF LIMITATIONS

The observations described in this report were made under the conditions and dates stated herein. The conclusions presented in the report were based solely upon the services described herein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client. The work described in this report was carried out in accordance with the Terms & Conditions of Engagement.

Coler & Colantonio, Inc. has relied on information available at federal, state, and municipal agencies, and provided by other parties referenced herein. Coler & Colantonio, Inc. provides no warranties on the accuracy or completeness of information provided by third parties.

Observations were made of the site and of structures on the site only on the date indicated within this report. Where visual observation of the ground surface was obscured by pavement, and where access to portions of the site or to structures on the site was unavailable or limited, Coler & Colantonio, Inc. renders no opinion as to the presence of hazardous material or oil, or to the presence of indirect evidence relating to hazardous material or oil, in that portion of the site or structure. In addition, Coler & Colantonio, Inc. renders no opinion as to the presence of hazardous material or oil, or to the presence of indirect evidence relating to hazardous material or oil, where direct observation of the interior walls, floor, or ceiling of a structure on a site was obstructed by objects or coverings on or over these surfaces.

Unless otherwise specified in the Scope of Work, Coler & Colantonio, Inc. did not perform testing or analyses to determine the presence or concentration of, lead-based paint, or lead in drinking water at the site.

The purpose of this report was to assess the physical characteristics of the subject site with respect to the presence in the environment of hazardous material or oil, as defined within the general laws and statutes of the particular state. No specific attempt was made to check on the compliance of present or past owners or operators of the site with federal, state, or local laws and regulations, environmental or otherwise.

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 101
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 5, 2004
Weather: sunny 55°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
	dry sand & gravel mixed with loam - FILL	TP - 101 (0-2)	0' - 2'	TPH, RCRA 8 metals, PCBs, cyanide, sulfide, pH, & flash point		1.2
1	sand & silt intermixed with burnt construction debris: glass, aluminum gas tank, wood, asphalt shingles, hoses, tires, metal, & cobbles - FILL					
2						
	native soils: light to medium brown, moist, fine to coarse sand & gravel - TILL	TP - 101 (2)	2	8260 VOCs		0.8
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 15
WIDTH: 4
HEIGHT: 6

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 102
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 5, 2004
Weather: sunny 55°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	dry sand & gravel mixed with loam - FILL	TP - 102 (0-2)	0' - 2'	TPH & RCRA 8 metals	1	
2	sand & silt intermixed with burnt construction debris: asphalt shingles, tires, cable, fiberglass insulation, & wood - FILL				↓	
3		TP - 102 (3)	3	TPH, RCRA 8 metals, & PCBs	↓	
4	native soils: light to medium brown, moist, fine to coarse sand & gravel - TILL					
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 12
WIDTH: 4
HEIGHT: 6

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 103
Page: 1 of 1

Client:	R & C Trust and C & R Trust	**Project:**	11-1113.10
Site:	Bird Property	**Site Location:**	Marshall Street, Holliston, MA
Date:	October 5, 2004	**Field Personnel:**	Bill Hoyerman & Lauren Gervais
Weather:	sunny 55°	**Contractor:**	Northeast Tank
Equipment:	Thermo 580B PID		
GW Depth:	not encountered		

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	dry sand & gravel mixed with loam - FILL					
2	sand & silt intermixed with burnt construction debris: pipes, rocks, steel, radiators, carpet, metal, bricks, wires, & wood - FILL	TP - 103 (1 - 12)	1' - 12'	TPH, RCRA 8 metals, PCBs, BNAs, pesticides, herbicides, cyanide, sulfide, pH, flash point, & asbestos	1	
3						
4						
5						
6						
7						
8						
9						
10		TP - 103 (10)	10'	8260 VOCs		
11						
12	native soils: light to medium brown, moist, fine to coarse sand & gravel - TILL					
13						
14						
15						
16						
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 20

WIDTH: 4

HEIGHT: 12

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 104
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 5, 2004
Weather: sunny 60°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	dry sand & gravel mixed with loam - FILL	TP - 104 (0-12)	0' - 12'	TPH, RCRA 8 metals, & asbestos	0	
2						
3						
4						
5						
6						
7						
8						
9	sand & silt intermixed with burnt construction debris: tires, brick, concrete, metal, & wood - FILL					
10						
11						
12						
13						
14						
15						
16	native soils: light to medium brown, moist, fine to coarse sand & gravel - TILL					
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 20
WIDTH: 4
HEIGHT: 18

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 105
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 5, 2004
Weather: sunny 60°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
	dry sand & gravel mixed with loam - FILL	TP - 105 (0-14)	0' - 14'	TPH, RCRA 8 metals, PCBs, BNAs, pesticides, herbicides, cyanide, sulfide, pH, flash point, & asbestos	<2	
1						
2						
3						
4						
5						
6	sand & silt intermixed with burnt construction debris: tires, brick, concrete, metal, & wood - FILL					
7						
8						
9						
10						
11						
12						
13						
		TP - 105 (14)	14'	8260 VOCs		
14	native soils (starting depth varies 10' - 14'): light to medium brown, moist, fine to coarse sand & gravel - TILL					
15						
16						
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 25
WIDTH: 4
HEIGHT: 17

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 106
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 5, 2004
Weather: sunny 60°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
	minimal dry sand & gravel mixed with loam - FILL	TP - 106 (0-4)	0' - 4'	TPH, RCRA 8 metals, & asbestos	0	
1						
	sand & silt intermixed with surface & subsurface construction debris: tires, brick, concrete, metal, broken asphalt, & wood - FILL				↓	
2						
3	native soils (starting depth varies 3' - 4'): light to medium brown, moist, fine to coarse sand & gravel - TILL					
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 6
WIDTH: 4
HEIGHT: 4

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 107
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 5, 2004
Weather: sunny 60°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
	leaf litter & organic topsoil	TP - 107 (0-2)	0' - 2'	TPH, RCRA 8 metals, & asbestos	0	
1	native soils: light to medium brown, moist, fine to coarse sand & gravel, some cobbles - TILL				↓	
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 4
WIDTH: 4
HEIGHT: 2

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 108
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 5, 2004
Weather: sunny 60°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
	leaf litter & organic topsoil	TP - 108 (0-2)	0' - 2'	TPH & RCRA 8 metals	0	
1	native soils: light to medium brown, moist, fine to coarse sand & gravel, some cobbles - TILL					
		TP - 108 (2)	2'	8260 VOCs	↓	
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

NOTES: Near Gasoline Tanks

PIT DIMENSIONS (FT):

LENGTH: 4
WIDTH: 4
HEIGHT: 2

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 109
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 5, 2004
Weather: sunny 60°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	sand & silt intermixed with construction debris: tires, brick, concrete, metal, & wood - FILL	TP - 109 (0-2)	0' - 2'	TPH, RCRA 8 metals, & asbestos	0	
2						
3	native soils: light to medium brown, moist, fine to coarse sand & gravel - TILL					
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 4
WIDTH: 4
HEIGHT: 4

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 110
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 5, 2004
Weather: sunny 60°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	dry sand & gravel mixed with loam - FILL	TP - 110 (1-12)	1' - 12'	TPH, RCRA 8 metals, PCBs, BNAs, pesticides, herbicides, cyanide, sulfide, pH, flash point, & asbestos	0	
2						
3						
4						
5						
6						
7	sand & silt intermixed with construction debris: tires, brick, concrete, metal, & wood - FILL					
8						
9						
10						
11						
12		TP - 110 (12)	12'	8260 VOCs		
13						
14						
15						
16						
17						
18						

NOTE: Native Soils were observed under the road to depth (12'). Edge of FILL Material is edge of dirt road.

NOTES:
TP - 110 is located on edge of the road at the top of the fill area. Native soil is continuous beneath the road.

PIT DIMENSIONS (FT):

LENGTH: 15
WIDTH: 4
HEIGHT: 12

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 111
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 5, 2004
Weather: sunny 55°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	sand & silt intermixed with surficial construction debris: tires, brick, concrete, metal, 5 gallon bucket, & wood - FILL	TP - 111 (0-4)	0' - 4'	TPH, RCRA 8 metals, PCBs, & asbestos	0	
2	native soils: light to medium brown, moist, fine to coarse sand & gravel - TILL					
3						
4		TP - 111 (4)	4'	8260 VOCs		
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 18
WIDTH: 4
HEIGHT: 4

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 112
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 5, 2004
Weather: sunny 60°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	sand & silt intermixed with construction debris: tires, brick, concrete, metal, & wood - FILL				0	
2						
3						
4						
5						
6						
7	native soils: light to medium brown, moist, fine to coarse sand & gravel - TILL					
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 10
WIDTH: 4
HEIGHT: 8

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 113
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 6, 2004
Weather: sunny 40°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	sand & silt intermixed with construction debris: tires, brick, concrete, metal, & wood - FILL	TP - 113 (0-6)	0' - 6'	TPH, RCRA 8 metals, PCBs, BNAs, pesticides, herbicides, cyanide, sulfide, pH, flash point, & asbestos	0.1	
2						
3						
4						
5						
6	native soils: light to medium brown, moist, fine to coarse sand, silt, & gravel - TILL	TP - 113 (6)	6'	8260 VOCs		
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 15
WIDTH: 4
HEIGHT: 6

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 114
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 6, 2004
Weather: sunny 40°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	sand & silt intermixed with burnt construction debris: tires, brick, concrete, metal, & wood - FILL	TP - 114 (0-3)	0' - 3'	TPH, RCRA 8 metals, & asbestos	0.4 - 0.8	
2						
3	native soils: light to medium brown, moist, fine to coarse sand & gravel - TILL	TP - 114 (3)	3'	8260 VOCs		
4						
5						
6						
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14						
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16						
17						
18						

NOTES: VOCs were collected proximal to gas tanks

PIT DIMENSIONS (FT):

LENGTH: 20
WIDTH: 4
HEIGHT: 4

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 115
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 6, 2004
Weather: sunny 45°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
	~ 2" of organic topsoil	TP - 115 (0-1)	0' - 1'	TPH & RCRA 8 metals	<1.1	
1	native soils: light to medium brown, moist, fine to coarse sand, silt, & gravel - TILL					
		TP - 115 (1)	1'	8260 VOCs		
2						
3						
4						
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NOTES: 15' from presumed tank

PIT DIMENSIONS (FT):

LENGTH: 30
WIDTH: 4
HEIGHT: 1

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 116
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 6, 2004
Weather: sunny 50°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	sand & silt intermixed with surficial construction debris: pipe, brick, concrete, metal, asphalt shingles, & painted wood - FILL	TP - 116 (0-1)	0' - 1'	TPH, RCRA 8 metals, & asbestos	1.1	
2	native soils: light to medium brown, moist, fine to coarse sand & gravel - TILL	TP - 116 (1)	1'	8260 VOCs		
3						
4						
5						
6						
7						
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14						
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18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 5
WIDTH: 4
HEIGHT: 1

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 117
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 6, 2004
Weather: sunny 55°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	native soils: light to medium brown, moist, fine to coarse sand, silt, & gravel, some cobbles - TILL - tire pieces on surface	TP - 117 (1)	1'	8260 VOCs	0.8 - 0.9	
2		TP - 117 (0-1)	0' - 1'	TPH, RCRA 8 metals, PCBs, pesticides, herbicides, cyanide, sulfide, pH, flash point, & asbestos		
3						
4						
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16						
17						
18						

NOTES: near shreaded tire pile

PIT DIMENSIONS (FT):

LENGTH: 15
WIDTH: 4
HEIGHT: 1

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 118
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 6, 2004
Weather: sunny 55°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	sand & silt intermixed with surficial construction debris: pipe, brick, concrete, metal, & wood - FILL	TP - 118 (0-3)	0' - 3'	TPH, RCRA 8 metals, PCBs, pesticides, herbicides, cyanide, sulfide, pH, flash point, & asbestos	0.8 - 0.9	
2	native soils: light to medium brown, moist, fine to coarse sand & gravel - TILL					
3						
4						
5						
6						
7						
8						
9						
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11						
12						
13						
14						
15						
16						
17						
18						

NOTES:

PIT DIMENSIONS (FT):

LENGTH: 7
WIDTH: 4
HEIGHT: 3

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 119
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 6, 2004
Weather: sunny 55°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	sand & silt intermixed with surficial construction debris: pipe, brick, concrete, metal, PVC, & wood - FILL	TP - 119 (6")	6"	8260 VOCs	0.6 - 0.8	
2	native soils: light to medium brown, moist, fine to coarse sand & gravel - TILL	TP - 116 (0-1)	0' - 1'	TPH, RCRA 8 metals, PCBs, pesticides, & herbicides		
3						
4						
5						
6						
7						
8						
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10						
11						
12						
13						
14						
15						
16						
17						
18						

NOTES: Near 13 drums in various states of disrepair (holes & rust)

PIT DIMENSIONS (FT):

LENGTH: 10
WIDTH: 4
HEIGHT: 1

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

TEST PIT LOG

Test Pit ID No.: TP - 120
Page: 1 of 1

Client: R & C Trust and C & R Trust
Site: Bird Property
Date: October 6, 2004
Weather: sunny 60°
Equipment: Thermo 580B PID
GW Depth: not encountered

Project: 11-1113.10
Site Location: Marshall Street, Holliston, MA
Field Personnel: Bill Hoyerman & Lauren Gervais
Contractor: Northeast Tank

DEPTH (ft.)	Classification	SAMPLE ID	SAMPLE Depth (ft.)	SAMPLE Tests	PID READINGS TOV FS	PID READINGS TOV HST
1	native soils: light to medium brown, moist, fine to coarse sand, silt, & gravel, some cobbles - TILL	TP - 117 (0-2)	0' - 2'	TPH, RCRA 8 metals, & asbestos	< 0.9	
2		TP - 117 (2)	2'	8260 VOCs		
3						
4						
5						
6						
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14						
15						
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17						
18						

NOTES: VOC sample taken from south side of TP-120

PIT DIMENSIONS (FT):

LENGTH: 30
WIDTH: 4
HEIGHT: 2

Table 1: Summary of General Analytical Results for Soil
Bird Property
Marshall and Prentice Streets
Holliston, Massachusetts

Contaminant	CAS NUMBER	AOC 1	AOC 1 & 3		AOC 1 & 6		AOC 1, 6, & 7	AOC 2												AOC 2 & 6	AOC 4			AOC 5	AOC 8	Reportable Concentrations	MADEP Method 1 Clean Up Standards			Upper Concentration Limits (UCLs)
		Sample Identification																												
		TP-117	TP-116	TP-120	TP-115	TP-118	TP-119	TP-101	TP-102	TP-102	TP-103	TP-104	TP-105	TP-106	TP-109	TP-110	TP-111	TP-113	TP-114	TP-108	HA-2	HA-3	HA-4	TP-107	HP-1					
		0-1'	0-1'	0-2'	0-1'	0-3'	0-1'	0-2'	3'	0-2'	1-12'	0-12'	0-14'	0-4'	0-2'	0-12'	0-4'	0-6'	0-3'	0-2'	0-1'	0-0.5'	0-1.5'	0-2'	gas tank pile					
		10/06/04	10/06/04	10/06/04	10/06/04	10/06/04	10/06/04	10/05/04	10/05/04	10/05/04	10/05/04	10/05/04	10/05/04	10/05/04	10/05/04	10/05/04	10/05/04	10/06/04	10/06/04	10/05/04	12/02/04	12/02/04	12/02/04	10/05/04	10/05/04	S-1	S-1/GW-1	S-1/GW-2	S-1/GW-3	
RCRA 8 Metals		milligrams per kilogram (mg/Kg) -or- parts per million (ppm)																												
BARIUM	07440-39-3	19.2	**1,510**	13.5	19.0	732	29.7	401	61.8	79.2	431	425	261	98.1	465	163	15.1	69.2	331	37.8	994	454	173	97.1	NT	1,000	1,000	1,000	1,000	10,000
CADMIUM	07440-43-9	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	6.44	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	<5.94	NT	30	30	30	30	800
CHROMIUM	07440-47-3	<6.9	23.1	7.52	8.19	48.1	<6.9	42.5	16.3	26.1	20.6	44.1	21.0	16.0	53.9	19.8	<6.9	23.0	9.25	17.1	22.6	16.2	10.4	18.3	NT	1,000	1,000	1,000	1,000	10,000
LEAD	07439-92-1	16.1	**4,540**	11.3	7.07	**434**	79.0	251	<8.76	<8.76	**609**	**399**	**429**	138	249	**335**	10.2	149	**2,080**	50.7	**2,260**	**2,680**	**648**	**343**	NT	300	300	300	300	6,000
MERCURY	07439-97-6	<0.1	1.51	<0.1	<0.1	0.405	<0.1	0.132	<0.1	0.166	0.766	2.37	0.189	1.27	0.262	0.143	<0.1	<0.1	0.164	<0.1	0.210	<0.1	1.28	<0.1	NT	20	20	20	20	600
SILVER	07440-22-4	4.40	4.34	4.10	1.98	2.54	1.92	3.75	3.69	2.10	1.96	2.97	2.28	<1	2.04	8.84	3.94	2.30	4.01	2.95	1.96	<1.0	1.69	3.34	NT	100	100	100	100	2,000
Total Petroleum Hydrocarbons (TPH): EPA Method 8100		**237**	**398**	13.6	18.4	**1,450**	18.5	**210**	12.9	187	**671**	**332**	**476**	**635**	**508**	**457**	67.9	**360**	**715**	98.8	71.3	NT	65.1	58.4	NT	200	200	800	800	10,000
Volatile Organic Compounds (VOCs): EPA Method 8260B GC/MS		ND	ND	ND	ND	NT	ND	ND	NT	NT	ND	NT	ND	NT	NT	ND	ND	ND	ND	ND	NT	ND	NT	NT	ND	-	-	-	-	-
Semi-Volatile Organic Compounds (SVOCs): EPA Method 8270C		milligrams per kilogram (mg/Kg) -or- parts per million (ppm)																												
Acenaphthene	00083-32-9	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.74	NT	1.00	NT	NT	0.447	NT	0.264	NT	NT	NT	0.26	NT	NT	NT	2	20	1,000	1,000	10,000
Acenaphthylene	00208-96-8	NT	NT	NT	NT	NT	NT	NT	NT	NT	1.02	NT	2.44	NT	NT	0.968	NT	0.640	NT	NT	NT	<0.025	NT	NT	NT	100	100	100	100	10,000
Anthracene	00120-12-7	NT	NT	NT	NT	NT	NT	NT	NT	NT	5.16	NT	5.12	NT	NT	2.44	NT	1.97	NT	NT	NT	0.88	NT	NT	NT	1,000	1,000	1,000	1,000	10,000
Benzo [a] anthracene	00056-55-3	NT	NT	NT	NT	NT	NT	NT	NT	NT	**11.10**	NT	**11.50**	NT	NT	**6.78**	NT	**4.61**	NT	NT	NT	**1.32**	NT	NT	NT	0.7	0.7	0.7	0.7	100
Benzo [b] fluoranthene	00205-99-2	NT	NT	NT	NT	NT	NT	NT	NT	NT	**14.80**	NT	**16.50**	NT	NT	**10.70**	NT	**6.13**	NT	NT	NT	**1.30**	NT	NT	NT	0.7	0.7	0.7	0.7	100
Benzo k] fluoranthene	00207-08-9	NT	NT	NT	NT	NT	NT	NT	NT	NT	6.01	NT	6.80	NT	NT	4.88	NT	2.72	NT	NT	NT	0.30	NT	NT	NT	7	7	7	7	400
Benzo [ghi] perylene	00207-08-9	NT	NT	NT	NT	NT	NT	NT	NT	NT	6.05	NT	7.11	NT	NT	4.32	NT	2.45	NT	NT	NT	0.81	NT	NT	NT	1,000	1,000	1,000	1,000	10,000
Benzo [a] pyrene	00050-32-8	NT	NT	NT	NT	NT	NT	NT	NT	NT	**8.64**	NT	**9.49**	NT	NT	**7.87**	NT	**4.69**	NT	NT	NT	**0.96**	NT	NT	NT	0.7	0.7	0.7	0.7	100
Bis-(2-ethylhexyl)phthalate	00117-81-7	NT	NT	NT	NT	NT	NT	NT	NT	NT	9.12	NT	<0.20	NT	NT	<0.20	NT	<0.20	NT	NT	NT	<0.20	NT	NT	NT	100	100	200	200	10,000
Carbazole	00086-74-8	NT	NT	NT	NT	NT	NT	NT	NT	NT	2.41	NT	2.33	NT	NT	1.08	NT	0.86	NT	NT	NT	0.41	NT	NT	NT	-	NS	NS	NS	NS
Chrysene	00218-01-9	NT	NT	NT	NT	NT	NT	NT	NT	NT	**10.90**	NT	**11.70**	NT	NT	6.960	NT	4.530	NT	NT	NT	1.490	NT	NT	NT	7	7	7	7	400
Dibenz [a,h] anthracene	00053-70-3	NT	NT	NT	NT	NT	NT	NT	NT	NT	**1.47**	NT	**2.22**	NT	NT	**0.984**	NT	0.623	NT	NT	NT	0.156	NT	NT	NT	0.7	0.7	0.7	0.7	100
Dibenzofuran	00132-64-9	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.59	NT	1.35	NT	NT	0.466	NT	0.367	NT	NT	NT	0.239	NT	NT	NT	100	NS	NS	NS	NS
Fluoranthene	00206-44-0	NT	NT	NT	NT	NT	NT	NT	NT	NT	27.60	NT	29.40	NT	NT	18.60	NT	10.10	NT	NT	NT	3.35	NT	NT	NT	1,000	1,000	1,000	1,000	10,000
Fluorene	00086-73-7	NT	NT	NT	NT	NT	NT	NT	NT	NT	1.05	NT	1.58	NT	NT	0.77	NT	0.67	NT	NT	NT	0.28	NT	NT	NT	400	400	1,000	1,000	10,000
Indeno [1,2,3-cd] pyrene	00193-39-5	NT	NT	NT	NT	NT	NT	NT	NT	NT	**5.44**	NT	**7.23**	NT	NT	**3.61**	NT	**2.01**	NT	NT	NT	0.55	NT	NT	NT	0.7	0.7	0.7	0.7	100
2-Methylnaphthalene	00091-57-6	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.18	NT	0.50	NT	NT	0.13	NT	0.13	NT	NT	NT	<0.075	NT	NT	NT	4	4	500	500	10,000
Naphthalene	00091-20-3	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.30	NT	1.06	NT	NT	0.22	NT	0.21	NT	NT	NT	0.16	NT	NT	NT	4	4	100	100	10,000
Phenanthrene	00085-01-8	NT	NT	NT	NT	NT	NT	NT	NT	NT	12.30	NT	16.80	NT	NT	9.05	NT	7.54	NT	NT	NT	3.76	NT	NT	NT	100	700	1,000	100	10,000
Pyrene	00129-00-0	NT	NT	NT	NT	NT	NT	NT	NT	NT	19.00	NT	20.20	NT	NT	11.80	NT	7.33	NT	NT	NT	3.51	NT	NT	NT	700	700	700	700	10,000
Polychlorinated Biphenyls (PCBs): EPA Method 8082 Arochlor		milligrams per kilogram (mg/Kg) -or- parts per million (ppm)																												
Arochlor 1254	11097-69-1	<0.05	NT	NT	NT	<0.05	<0.05	<0.05	<50	NT	<0.05	NT	<0.05	NT	NT	<0.05	<0.05	<0.05	NT	NT	NT	0.063	NT	NT	NT	2	2	2	2	100
Arochlor 1260	11096-82-5	<0.05	NT	NT	NT	<0.05	<0.05	0.097	<50	NT	0.29	NT	**2.72**	NT	NT	**2.11**	0.80	<0.05	NT	NT	NT	<0.05	NT	NT	NT	2	2	2	2	100
Pesticides: EPA Method 8081A		milligrams per kilogram (mg/Kg) -or- parts per million (ppm)																												
4,4-DDD	00072-54-8	<0.007	NT	NT	NT	0.041	<7	NT	NT	NT	<0.007	NT	<0.007	NT	NT	0.215	NT	<0.007	NT	NT	NT	<0.05	NT	NT	NT	2	2	2	2	100
4,4-DDE	00072-55-9	<0.007	NT	NT	NT	<0.007	<7	NT	NT	NT	0.036	NT	0.064	NT	NT	0.109	NT	<0.007	NT	NT	NT	<0.05	NT	NT	NT	2	2	2	2	90
4,4-DDT	00050-29-3	0.025	NT	NT	NT	0.280	<7	NT	NT	NT	0.203	NT	0.232	NT	NT	0.340	NT	0.023	NT	NT	NT	0.012	NT	NT	NT	2	2	2	2	90
DIELDRIN	00060-57-1	<0.007	NT	NT	NT	0.016	<7	NT	NT	NT	<0.007	NT	**0.099**	NT	NT	**0.084**	NT	<0.007	NT	NT	NT	<0.05	NT	NT	NT	0.03	0.03	0.03	0.03	2
ENDOSULFAN I	00959-92-8	<0.007	NT	NT	NT	<0.007	<7	NT	NT	NT	<0.007	NT	**0.068**	NT	NT	**0.056**	NT	<0.007	NT	NT	NT	<0.05	NT	NT	NT	0.05	20	100	0.05	4,000
ENDOSULFAN II	33212-65-9	<0.007	NT	NT	NT	0.047	<7	NT	NT	NT	<0.007	NT	0.025	NT	NT	0.026	NT	<0.007	NT	NT	NT	<0.05	NT	NT	NT	0.05	20	100	0.05	4,000
ENDOSULFAN SULFATE	01031-07-8	<0.007	NT	NT	NT	<0.007	<7	NT	NT	NT	<0.007	NT	0.028	NT	NT	0.023	NT	<0.007	NT	NT	NT	<0.05	NT	NT	NT	NS	NS	NS	NS	NS
ENDRIN	00072-20-8	<0.007	NT	NT	NT	<0.007	<7	NT	NT	NT	<0.007	NT	0.055	NT	NT	0.053	NT	<0.007	NT	NT	NT	<0.05	NT	NT	NT	0.6	0.6	6	1	100
ENDRIN ALDEHYDE	07421-93-4	<0.007	NT	NT	NT	0.049	<7	NT	NT	NT	0.050	NT	0.030	NT	NT	0.027	NT	<0.007	NT	NT	NT	<0.05	NT	NT	NT	10	NS	NS	NS	NS
HEPTACHLOR	00076-44-8	<0.007	NT	NT	NT	<0.007	<7	NT	NT	NT	<0.007	NT	0.078	NT	NT	**0.156**	NT	<0.007	NT	NT	NT	<0.05	NT	NT	NT	0.1	0.1	0.1	0.1	7
HEPTACHLOR EPOXIDE	01024-57-3	<0.007	NT	NT	NT	<0.007	<7	NT	NT	NT	0.009	NT	**0.122**	NT	NT	**0.120**	NT	<0.007	NT	NT	NT	<0.05	NT	NT	NT	0.06	0.06	0.06	0.06	3
METHOXYCHLOR	00072-43-5	<0.007	NT	NT	NT	<0.007	<7	NT	NT	NT	<0.007	NT	0.025	NT	NT	0.015	NT	<0.007	NT	NT	NT	0.014	NT	NT	NT	30	100	100	30	3,000
Herbicides: EPA Method 8151A		ND	NT	NT	NT	ND	ND	NT	NT	NT	ND	NT	ND	NT	NT	ND	NT	ND	NT	NT	NT	NT	NT	NT	NT	-	-	-	-	-

Notes:

Reportable Concentrations taken from 310 CMR 40.1600 Edition of June 27, 2003

MADEP Cleanup Values taken from 310 CMR 40:.0974(2) Edition of June 27, 2003 MCP Method 1

Values with the < Symbol before it are less than the Laboratory Reporting Limits and were not detected in the sample.

BOLD = above applicable cleanup standards

NS = no standard

Table 2: Summary of Asbestos Results
Bird Property
Marshall and Prentice Streets
Holliston, Massachusetts

	Sample Identification	Depth	Date	PLM Bulk Asbestos Results
SHED	SS-1	Shingle	10/5/2004	**CHRYSOTILE 50%**
AOC 2	TP-103*	1-12'	10/5/2004	CHRYSOTILE <1%
	TP-104	0-12'	10/5/2004	**CHRYSOTILE**
	TP-105*	0-14'	10/5/2004	**CHRYSOTILE >1%**
	TP-106	0-4'	10/5/2004	**CHRYSOTILE**
	TP-109	0-2'	10/5/2004	**CHRYSOTILE**
	TP-110	0-12'	10/5/2004	**CHRYSOTILE**
	TP-110	Shingle	10/5/2004	**CHRYSOTILE 55%**
	TP-111	0-4'	10/6/2004	NAD
	TP-113	0-6'	10/6/2004	NAD
	TP-114*	0-3'	10/6/2004	NAD
AOC 3	TP-116	0-1'	10/6/2004	NAD
	TP-118	0-1'	10/6/2004	NAD
AOC 5	TP-107	0-2'	10/5/2004	NAD

Notes:

BOLD = Asbestos Detected

NAD = No Asbestos Detected

* EPA Protocol for Screening Soil and Sediment Samples for Asbestos Content Used by USEPA, Region 1 Laboratory (Rev May 24, 1994). Modified by EMSL (Sept. 1999)

Table 3: Summary of Flashpoint Results
Bird Property
Marshall and Prentice Streets
Holliston, Massachusetts

	Sample Identification	Depth	Date	pH	Flashpoint
AOC 1	TP-118	0-3'	10/6/2004	8.4	>93
AOC 2	TP-101	0-2'	10/5/2004	7.9	>93
	TP-103	1-12'	10/5/2004	7.6	>93
	TP-105	0-14'	10/5/2004	7.6	>93
	TP-110	0-12'	10/5/2004	7.9	>93
	TP-113	0-6'	10/6/2004	7.8	>93

Table 4: Summary of Reactivity Results
Bird Property
Marshall and Prentice Streets
Holliston, Massachusetts

	AOC 1		AOC 2				
Contaminant	**Sample Indentification**						
	TP-117	**TP-118**	**TP-101**	**TP-103**	**TP-105**	**TP-110**	**TP-113**
	0-1'	0-3'	0-2'	1-12'	0-14'	0-12'	0-6'
	10/06/04	10/06/04	10/05/04	10/05/04	10/05/04	10/05/04	10/06/04
milligrams per kilogram (mg/Kg) -or- parts per million (ppm)							
Reactive Cyanide	<30	<30	<30	<30	<30	<30	<30
Reactive Sulfide	<0.312	<0.312	<0.312	<0.312	<0.312	<0.312	<0.312

Table 5: Summary of General Analytical Results for Groundwater (2004)
Bird Property
Marshall and Prentice Streets
Holliston, Massachusetts

Contaminant	CAS NUMBER	AOC 1, 3, 6, & 7			AOC 1 & 6	AOC 2	AOC 2, 4, & 5			Reportable Concentrations		MCP Method 1 Cleanup Standards		
		Sample Identification												
		WE-91-1S	WE-1BS	WE-4S	WE-2S	WE-9D	WE-6S	WE-6D	WE-8S					
		12/02/04	12/03/04	12/03/04	12/02/04	12/02/04	11/30/04	12/02/04	11/30/04	GW-1	GW-2	GW-1	GW-2	GW-3
Dissolved Priority Pollutant Metals		milligrams per liter (mg/L) -or- parts per million (ppm)												
LEAD	07439-92-1	**0.023**	**0.102**	<0.01	**0.018**	**0.019**	**0.020**	NT	<0.01	0.020	0.030	0.015	NS	0.030
SILVER	07440-22-4	**0.008**	<0.007	<0.007	**0.009**	**0.013**	NT	NT	NT	0.007	0.007	0.040	NS	0.007
Antimony, Beryllium, Copper, Nickel, Thallium, Vanadium, and Zinc		ND	ND	ND	ND	ND	ND	NT	ND	-	-	-	-	-
Arsenic, Barium, Cadmium, Chromium, Mercury, and Selenium		ND	ND	ND	ND	ND	NT	NT	NT	-	-	-	-	-
Volatile Organic Compounds (VOCs)		micrograms per liter (ug/L) -or- parts per billion (ppb)												
Tetrachloroethene	00127-18-4	NT	NT	NT	<5	<5	<5	**5.5**	<5	5.0	3,000	5.0	3,000	5,000
All other VOCs: EPA Method 8260B GC/MS		NT	NT	NT	ND	ND	ND	ND	ND	-	-	-	-	-
Semi-Volatile Organic Compounds (SVOCs): EPA Method 8270C		ND	ND	ND	ND	NT	NT	NT	NT	-	-	-	-	-
Extractable Petroleum Hydrocarbons (EPHs): MADEP Method for EPH		NT	NT	NT	NT	NT	ND	NT	ND	-	-	-	-	-
Pesticides: EPA Method 608		ND	ND	ND	ND	ND	ND	NT	ND	-	-	-	-	-
Polychlorinated Biphenyls (PCBs): EPA Method 608 Arochlor		ND	ND	ND	ND	NT	ND	NT	ND	-	-	-	-	-

Notes & Abbreviations:

Reportable Concentrations taken from 310 CMR 40.1600 Edition of June 27, 2003

MADEP Cleanup Values taken from 310 CMR 40:.0974(2) Edition of June 27, 2003 MCP Method 1

Values with the < Symbol before it are less than the Laboratory Reporting Limits and were not detected in the sample.

BOLD = above applicable cleanup standards

NS = no standard

NT = not tested

ND = values were below the laboratory detection limit

Table 6: Summary of VOC Results for Groundwater (1999-2002 Overburden Monitoring Wells)
Bird Property
Marshall and Prentice Streets
Holliston, MA

Contaminant	CAS NUMBER	Sample Indentification																			
		Overburden Monitoring Wells																Residential Wells		MCP Method 1 Cleanup Standards		
		WE-91-1S			WE-91-3S			WE-91-4S		WE-91-10S		WE-91-11S		WE-1S	WE-4S			30 Marshall St.				
		02/11/99	05/29/01	2/11/99dup	02/11/99	05/29/01	09/12/02	02/11/99	05/29/01	02/11/99	05/29/01	02/11/99	05/29/01	05/29/01	02/11/99	05/29/01	09/12/02	02/11/99	05/30/01	GW-1	GW-2	GW-3
Volatile Organic Compounds (VOCs)		micrograms per liter (ug/L) -or- parts per billion (ppb)																				
Acetone	67-64-1	NT	<5.0	NT	NT	<5.0	<20.0	NT	<5.0	NT	<5.0	NT	<5.0	<5.0	NT	<5.0	<20.0	NT	NT	3,000	50,000	50,000
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1	ND	ND	5	20	50,000
1,1-Dichloroethene	75-35-4	<2.0	ND	<2.0	<2.0	ND	NT	<2.0	ND	<2.0	ND	<2.0	ND	ND	<2.0	ND	NT	<0.5	ND	7	1	50,000
cis-1,2-Dichloroethene	156-59-2	NT	<2.0	NT	NT	17	5.1	NT	50.9	NT	<2.0	NT	<2.0	6.2	NT	16.9	12	ND	<0.5	70	30,000	50,000
trans-1,2-Dichloroethene	156-60-5	<2.1	ND	<2.1	<2.1	ND	<1.0	<2.1	ND	<2.1	ND	<2.1	ND	ND	<2.1	ND	<1.0	<0.5	ND	100	20,000	50,000
Methylene Chloride	75-09-2	<1.4	ND	<1.4	<1.4	ND	NT	<1.4	ND	<1.4	ND	<1.4	ND	ND	<1.4	ND	NT	<0.5	ND	5	50,000	50,000
Tetrachloroethene	127-8-4	<2.3	ND	<2.3	<2.3	ND	<1.0	<2.3	ND	<2.3	ND	<2.3	ND	ND	<2.3	ND	<1.0	<0.5	ND	5	3,000	5,000
Trichloroethene	79-01-6	<2.4	<2.0	**83**	**86**	**767**	**450**	**31**	<2.0	<2.4	4.3	**20**	**16.3**	**60.1**	**1,200**	**95**	**1,600**	1.3	1.8	5	300	20,000
Vinyl Chloride	75-01-4	<1.6	<2.0	<1.6	<1.6	<2.0	<1.0	<1.6	<2.0	<1.6	<2.0	<1.6	<2.0	<2.0	<1.6	**7.7**	<1.0	<0.5	<0.5	2	2	40,000

Notes & Abbreviations:

MADEP Cleanup Values taken from 310 CMR 40:.0974(2) Edition of June 27, 2003 MCP Method 1
Values with the < Symbol before it are less than the Laboratory Reporting Limits and were not detected in the sample.
BOLD = above applicable cleanup standards
ND = values were below the laboratory detection limit
NT = not tested
Monitoring well samples collected in 1999 were analyzed for VOCs in accordance with USEPA Method 624
Monitoring well samples collected in 2001 were analyzed for VOCs in accordance with USEPA Method 8260
Residential well samples collected in 1999 were analyzed in accordance with USEPA Method 524
Residential well samples collected in 2001 were analyzed in accordance with USEPA Method 524.2

Table 7: Summary of VOC Results for Groundwater (1999-2002 Bedrock Monitoring Wells)
Bird Property
Marshall and Prentice Streets
Holliston, MA

Contaminant	CAS NUMBER	Sample Indentification																			MCP Method 1 Cleanup Standards		
		Bedrock Monitoring Wells																					
		WE-91-1D		WE-91-3D		WE-91-4D			WE-91-5S		WE-91-5D			WE-91-10D			WE-91-11D		WE-1D				
		02/11/99	05/29/01	02/11/99	05/29/01	02/11/99	05/29/01	09/12/02	02/11/99	05/29/01	02/11/99	05/29/01	09/12/02	02/11/99	05/29/01	5/29/01dup	02/11/99	05/29/01	05/29/01	09/12/02	GW-1	GW-2	GW-3
Volatile Organic Compounds (VOCs)	micrograms per liter (ug/L) -or- parts per billion (ppb)																						
Acetone	67-64-1	NT	<5.0	NT	<5.0	NT	<5.0	<20.0	NT	<5.0	NT	<5.0	<20.0	NT	<5.0	<5.0	NT	8.2	<5.0	<20.0	3,000	50,000	50,000
Carbon Tetrachloride	56-23-5	ND	ND	ND	ND	ND	ND	<1.0	ND	ND	ND	ND	<1.0	ND	ND	ND	ND	ND	ND	<1.0	5	20	50,000
1,1-Dichloroethene	75-35-4	<2.0	ND	<2.0	ND	<2.0	ND	NT	<2.0	ND	<2.0	ND	NT	<2.0	ND	ND	<2.0	ND	ND	NT	7	1	50,000
cis-1,2-Dichloroethene	156-59-2	NT	<2.0	NT	<2.0	NT	9.3	9.7	NT	<2.0	NT	<2.0	<1.0	NT	<2.0	<2.0	NT	2.2	11	13	70	30,000	50,000
trans-1,2-Dichloroethene	156-60-5	<2.1	ND	<2.1	ND	<2.1	ND	<1.0	<2.1	ND	<2.1	ND	<1.0	<2.1	ND	ND	<2.1	ND	ND	<1.0	100	20,000	50,000
Methylene Chloride	75-09-2	<1.4	ND	<1.4	ND	<1.4	ND	NT	<1.4	ND	<1.4	ND	NT	<1.4	ND	ND	<1.4	ND	ND	NT	5	50,000	50,000
Tetrachloroethene	127-8-4	<2.3	ND	<2.3	ND	<2.3	ND	<1.0	<2.3	ND	<2.3	ND	<1.0	<2.3	ND	ND	<2.3	ND	ND	<1.0	5	3,000	5,000
Trichloroethene	79-01-6	<2.4	<2.0	<2.4	4.0	**130**	**131**	**120**	<2.4	<2.0	2.5	<2.0	1.6	3.2	2.3	2.2	**12**	**5.5**	**106**	**110**	5	300	20,000
Vinyl Chloride	75-01-4	<1.6	<2.0	<1.6	<2.0	<1.6	<2.0	<1.0	<1.6	<2.0	<1.6	<2.0	<1.0	<1.6	<2.0	<2.0	<1.6	<2.0	<2.0	<1.0	2	2	40,000

Notes & Abbreviations:

MADEP Cleanup Values taken from 310 CMR 40:.0974(2) Edition of June 27, 2003 MCP Method 1

Values with the < Symbol before it are less than the Laboratory Reporting Limits and were not detected in the sample.

BOLD = above applicable cleanup standards

ND = values were below the laboratory detection limit

NT = not tested

Monitoring well samples collected in 1999 were analyzed for VOCs in accordance with USEPA Method 624

Monitoring well samples collected in 2001 were analyzed for VOCs in accordance with USEPA Method 8260

Table 8: Summary of Analytical Results for Sediments
Bird Property
Marshall and Prentice Streets
Holliston, Massachusetts

Contaminant	CAS NUMBER	AOC 2				AOC 5		AOC 6 & 8	MADEP TEC	Reportable Concentrations	MCP Method 1 Cleanup Standards		
		Sample Identification									S-1		
		SED-4	SED-5	SED-6	SED-7	SED-1	SED-2	SED-3					
		11/30/04	11/30/04	11/30/04	11/30/04	11/30/04	11/30/04	11/30/04					
Total RCRA Metals		milligrams per kilogram (mg/Kg) -or- parts per million (ppm)								**S-1**	**GW-1**	**GW-2**	**GW-3**
BARIUM	07440-39-3	37.7	83.4	NT	NT	NT	248	69.0	NS	1,000	1,000	1,000	1,000
CHROMIUM	07440-47-3	<6.90	<17.9	NT	NT	NT	30.7	<6.90	43.4	1,000	1,000	1,000	1,000
COPPER	07440-50-8	18.6	13.1	NT	NT	NT	**343**	20.3	31.6	1,000	NS	NS	NS
LEAD	07439-92-1	**44.7**	**41.7**	**221**	<8.76	14.7	***775***	**36.2**	35.8	300	300	300	300
MERCURY	07439-97-6	**0.243**	**0.922**	NT	NT	NT	**1.40**	**1.45**	0.180	20	20	20	20
SILVER	07440-22-4	<1.00	<1.00	NT	NT	NT	2.66	<1.00	NS	100	100	100	100
Arsenic, Cadmium, and Selenium		ND	ND	NT	NT	NT	ND	ND	-	-	-	-	-
Total Cyanide	00057-12-5	<0.0507	<0.0507	NT	NT	NT	<0.0507	<0.0507	NS	100	100	100	100
Extractable Petroleum Hydrocarbons (EPHs)		milligrams per kilogram (mg/Kg) -or- parts per million (ppm)											
Phenanthrene	00085-01-8	<0.05	<0.05	<0.05	<0.05	<0.05	**0.486**	<0.05	0.204	100	700	1,000	100
Fluoranthene	00206-44-0	<0.2	<0.2	<0.2	<0.2	**1.39**	**0.581**	<0.2	0.423	1,000	1,000	1,000	1,000
Pyrene	00129-00-0	**<0.2**	**<0.2**	**<0.2**	**<0.2**	**1.69**	**0.467**	**<0.2**	0.195	700	700	700	700
Benz[a]Anthracene	00056-55-3	<0.1	<0.1	<0.1	<0.1	***2.12***	***1.28***	<0.1	0.108	0.7	0.7	0.7	0.7
Chrysene	00218-01-9	<0.1	<0.1	<0.1	<0.1	**1.91**	**1.00**	<0.1	0.166	7	7	7	7
C9-C18 Aliphatic Hydrocarbons[1]		<10	<10	<10	<10	<10	<10	19.4	NS	1,000	1,000	1,000	1,000
C19-C36 Aliphatic Hydrocarbons[1]		<10	<10	<10	<10	78.2	65.4	132	NS	2,500	2,500	2,500	2,500
C11-C22 Aromatic Hydrocarbons[1,2]		<10	<10	<10	<10	33.2	56.7	60.5	NS	200	200	800	800
Pesticides: EPA Method 8081A		micrograms per kilogram (ug/Kg) -or- parts per billion (ppb)											
4,4-DDD	00072-54-8	<3	**19.1**	<3	<3	<3	**60.3**	<3	4.88	2,000	2,000	2,000	2,000
4,4-DDE	00072-55-9	<3	**14.3**	**10.4**	<3	<3	**19.1**	<3	3.16	2,000	2,000	2,000	2,000
4,4-DDT	00050-29-3	<3	<3	<3	<3	<3	**36.5**	<3	4.16	2,000	2,000	2,000	2,000
DIELDRIN	00060-57-1	**<3**	**<3**	**10.4**	**<3**	**<3**	**<3**	**<3**	1.9	30	30	30	30
HEXACHLOROBENZENE		<3	19.1	<3	9.52	<3	<3	<3	NS	30,000	100,000	100,000	30,000
Polychlorinated Biphenyls (PCBs): EPA Method 8082 Arochlor		micrograms per kilogram (ug/Kg) -or- parts per billion (ppb)											
Arochlor 1260	11096-82-5	**291**	<15	NT	NT	NT	**490**	<15	59.8*	2,000*	2,000*	2,000*	2,000*
Volatile Organic Compounds (VOCs): EPA Method 8260B GC/MS		ND	ND	NT	NT	NT	ND	ND	-	-	-	-	-

Notes & Abbreviations:

MADEP TEC values taken from *Freshwater Sediment Screening Benchmarks for Use Under the Massachusetts Contingency Plan* guidance document

Values with the < Symbol before it are less than the Laboratory Reporting Limits and were not detected in the sample.

BOLD = above applicable MADEP TEC value

ITALLIC = above applicable cleanup standards

NS = no standard

NT = not tested

ND = values were below the laboratory detection limit

* PCB standards are based on cumulative standards for all arochlor compounds

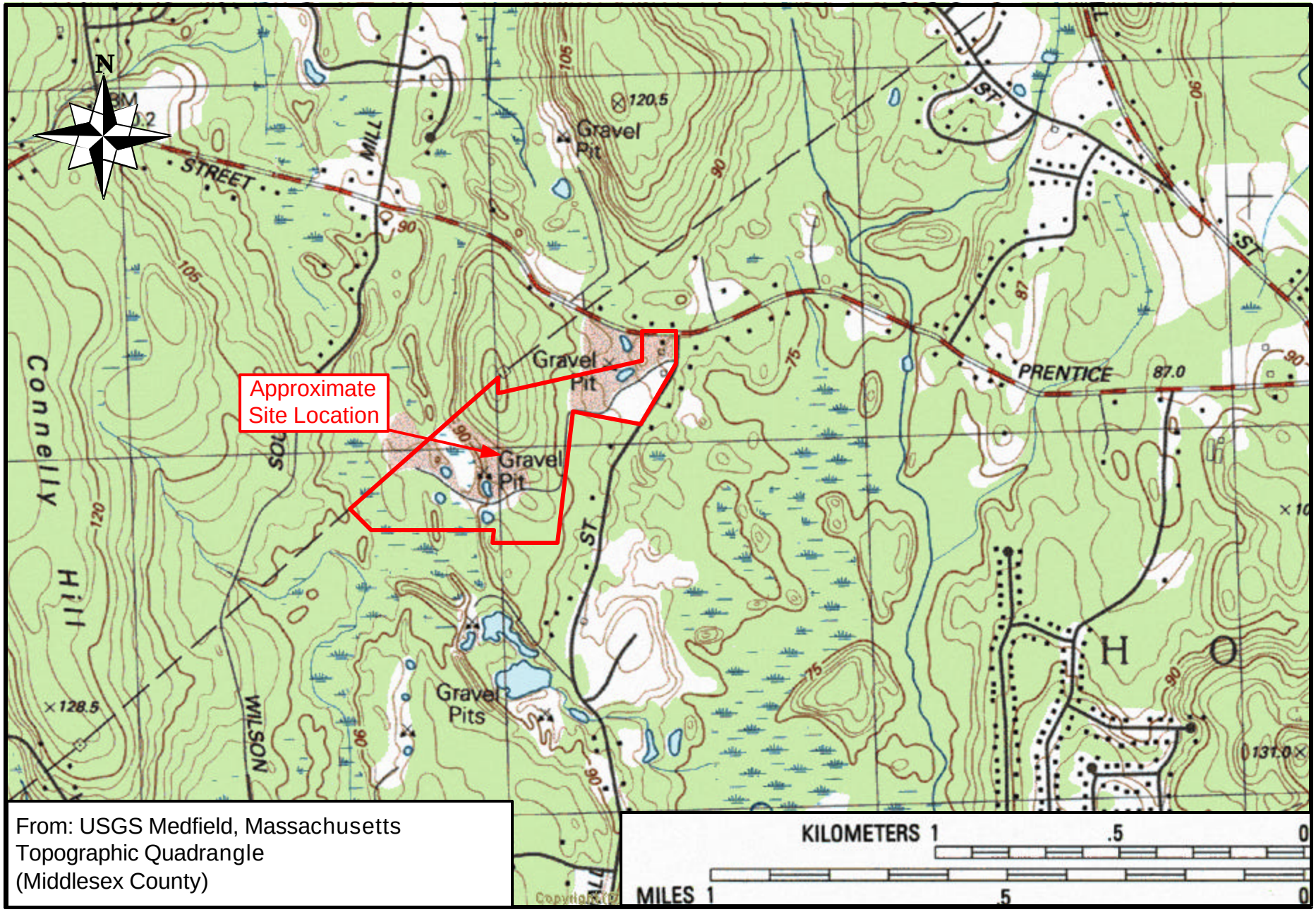
Table 9: Summary of Analytical Results for Surface Water
Bird Property
Marshall and Prentice Streets
Holliston, Massachusetts

Contaminant	CAS NUMBER	AOC 2		AOC 5		AOC 6 & 8
		Sample Identification				
		CSW-4	CSW-5	CSW-1	CSW-2	CSW-3
		11/30/04	11/30/04	11/30/04	11/30/04	11/30/04
Dissolved Metals: (RCRA 8 + antimony, beryllium, copper, nickel, thallium, vanadium, & zinc)		ND	ND	ND	ND	ND
Total Petroleum Hydrocarbons (TPH): EPA Method 8100		ND	ND	ND	NT	ND
Semi-Volatile Organic Compounds (SVOCs): EPA Method 8270C		NT	NT	NT	ND	NT
Volatile Organic Compounds (VOCs): EPA Method 8260B		NT	NT	NT	ND	NT
Pesticides: EPA Method 608		micrograms per liter (ug/L) -or- parts per billion (ppb)				
a-BHC	00319-84-6	0.040	ND	ND	NT	NT

Notes & Abbreviations:

NT = not tested

ND = values were below the laboratory detection limit



From: USGS Medfield, Massachusetts
Topographic Quadrangle
(Middlesex County)

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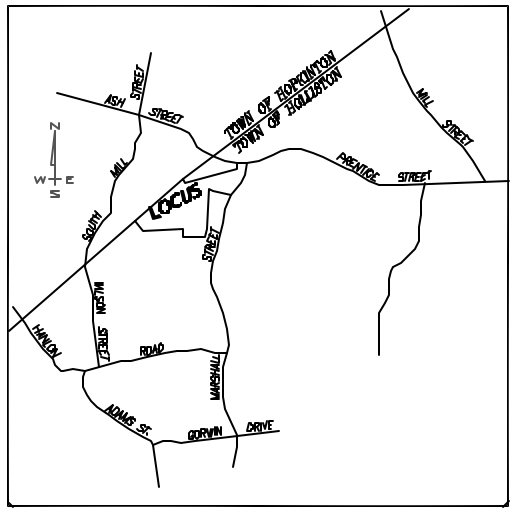
ENGINEERS AND SCIENTISTS

Bird Property
Marshall and Prentice Streets
Holliston, Massachusetts

Figure 1
Locus Map



VICINITY MAP
(NOT TO SCALE)

LEGEND

AOC-1	EASTERN GROUNDWATER
AOC-2	ACCESS ROAD LOOP
AOC-3	DEBRIS FIELD ALONG MARSHALL STREET
AOC-4	WESTERN WETLANDS DEBRIS FIELD
AOC-5	CENTRAL WETLANDS FILL
AOC-6	ACCESS ROAD
AOC-7	EASTERN POND AREA DRUMS
AOC-8	AUTOMOBILE GASOLINE TANKS
	WETLANDS
325	CONTOURS

REVISIONS:

No.	DATE	

GENERAL NOTES:

1. LOCUS INFORMATION:

OWNER OF RECORD: RMD TRUST & GMR TRUST
c/o 270 WARREN TREE LANE
HOLLISTON, MA
01746

LOCUS IS COMPRISED OF HOLLISTON ASSESSOR'S MAP 7, BLOCK 3, LOTS 19 AND 22.

DEEDS TO LOCUS: BOOK 17084, PG. 328
BOOK 17084, PAGE 334

2. PLAN REFERENCES:

(ALL PLANS ARE ON FILE AT THE MIDDLESEX COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED)

- PLAN NO. 1068 [4 OF 2] OF 1894
- PLAN NO. 1028 OF 1988
- PLAN NO. 256 OF 1983
- PLAN NO. 271 OF 1957
- PLAN NO. 241 OF 1868
- L.C.R. 382B8 4, CERT. NO. 13151, BOOK 888, PG. 3

3. THIS PLAN IS NOT INTENDED TO BE USED FOR PROPERTY LINE PURPOSES.

4. INFORMATION SHOWN HEREON IS BASED IN PART ON A FIELD SURVEY CONDUCTED BY COLER & COLANTONIO INC. ON SEPTEMBER 16, 2002 AND COMPILED RECORD INFORMATION.

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

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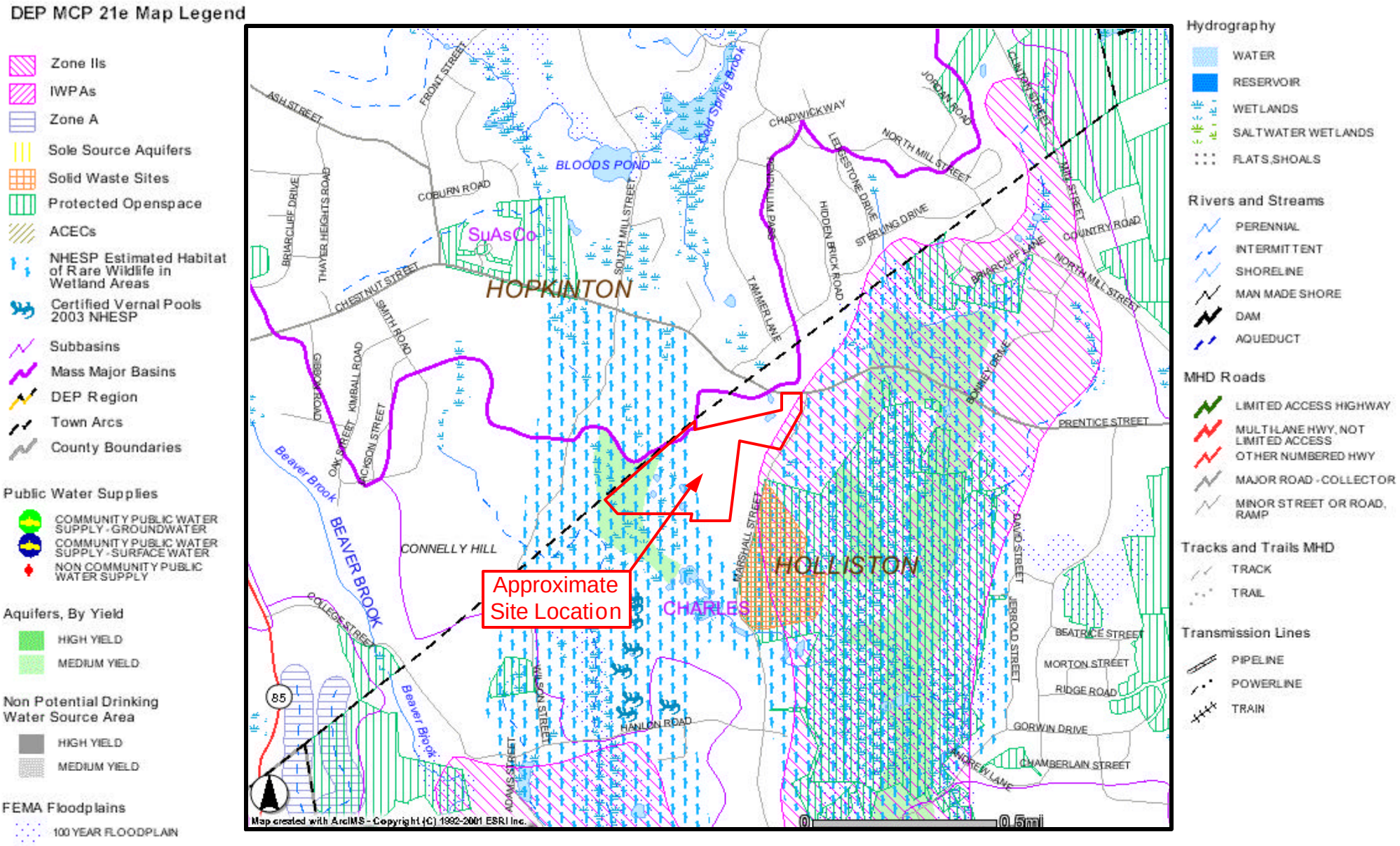
181 Ascend Park Drive
Norwell, MA 02061-1669

FIGURE 2 – SITE PLAN
AREAS OF CONCERN

708 PRENTICE STREET
HOLLISTON, MA 01784

DATE: JANUARY 7, 2005	
COMP./DESIGN: LKG/WRH	
CHECK: LKG	
DRAWN: BDJ	
SCALE: 1" = 120'	
DWG NO.: PROJECTS\DIV11\11-1113 Bird Property Holliston\dwgs\Areas.dwg	
JOB NO.: 11-1113.10	SHEET 01 OF 01

120 60 0 120 240



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ENGINEERS AND SCIENTISTS

Bird Property
708 Prentice Street
Holliston, Massachusetts

Figure 3
DEP Priority Resource Map

LEGEND

- WETLANDS
- MONITORING WELL
- Green — Various: 4/87, 10/90, 6/91, 12/91, 4/92
- Red — 2/11/99
- Blue — 5/29/01
- Black — 9/12/02
- GW-1: 5 ppb
- GW-2: 300 ppb

Contours are based on most recent data or highest TCE concentration before 1993

PRENTICE (PUBLIC - VARIABLE WIDTH) STREET

WE 91-8D
WE 91-8S
T1

WE 4D
WE 91-5D
WE 91-5S
WE 91-2D
WE 91-2S
WE 4S
600
730
5
3,800
1,700
95
1,600

TP-119

ND
WE 5S
WE 5D

STREET

WE 2D
WE 2S
WE 91-7S
WE 91-7D
TP-117
WE
WE 91-3S
390
320
1,400
86
88
767
430

16
11
31
310

GZA 1B
WE 1BS
90
31
110

WE 91-4S
WE 91-4D
TP-120

WE 91-10D
WE 91-10S
T1
<2.4
4.3

TP-115

ND
ND
<2.4
<2.0
WE 3D
WE 91-1S
WE 91-1D
TP-118

WE 1D
WE 1S
VARIABLE WIDTH)
36
7
77
130
600

WE 91-6D

WE 2BS
GZA 2B
130
13
27
210

TP-116

WE 91-11M
WE 91-11S
WE 91-11D
84
38
45
20
165

WE 91-12S
WE 91-12D

MARSHALL

N

REVISIONS:

No.	DATE	

GENERAL NOTES:

1. LOCUS INFORMATION:

OWNER OF RECORD: RAG TRUST & D&M TRUST
C/O 270 MARKED TREE LANE
HOLLISTON, MA
01746

LOCUS IS COMPRISED OF HOLLISTON ASSESSOR'S MAP 7, BLOCK 3, LOTS 19 AND 22.

DEEDS TO LOCUS: BOOK 17084, PG. 326
BOOK 17084, PAGE 334

2. PLAN REFERENCES

(ALL PLANS ARE ON FILE AT THE MIDDLESEX COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED)

- PLAN NO. 1098 (A OF 2) OF 1924
- PLAN NO. 1068 OF 1959
- PLAN NO. 238 OF 1963
- PLAN NO. 877 OF 1967
- PLAN NO. 241 OF 1994
- L.C.R.A. 33689 A, DEPT. NO. 13155, BOOK 5888, PG. 3

3. THIS PLAN IS NOT INTENDED TO BE USED FOR PROPERTY LINE PURPOSES.

4. INFORMATION SHOWN HEREON IS BASED IN PART ON A FIELD SURVEY CONDUCTED BY COLER & COLANTONIO INC. ON SEPTEMBER 18, 2002 AND COMPILED RECORD INFORMATION.

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS

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101 Accord Park Drive
Norwell, MA 02061-1655

TITLE:

FIGURE 4-HISTORIC TRICHLOROETHENE CONCENTRATIONS IN OVERBURDEN WELLS

708 PRENTICE STREET HOLLISTON, MA 01784

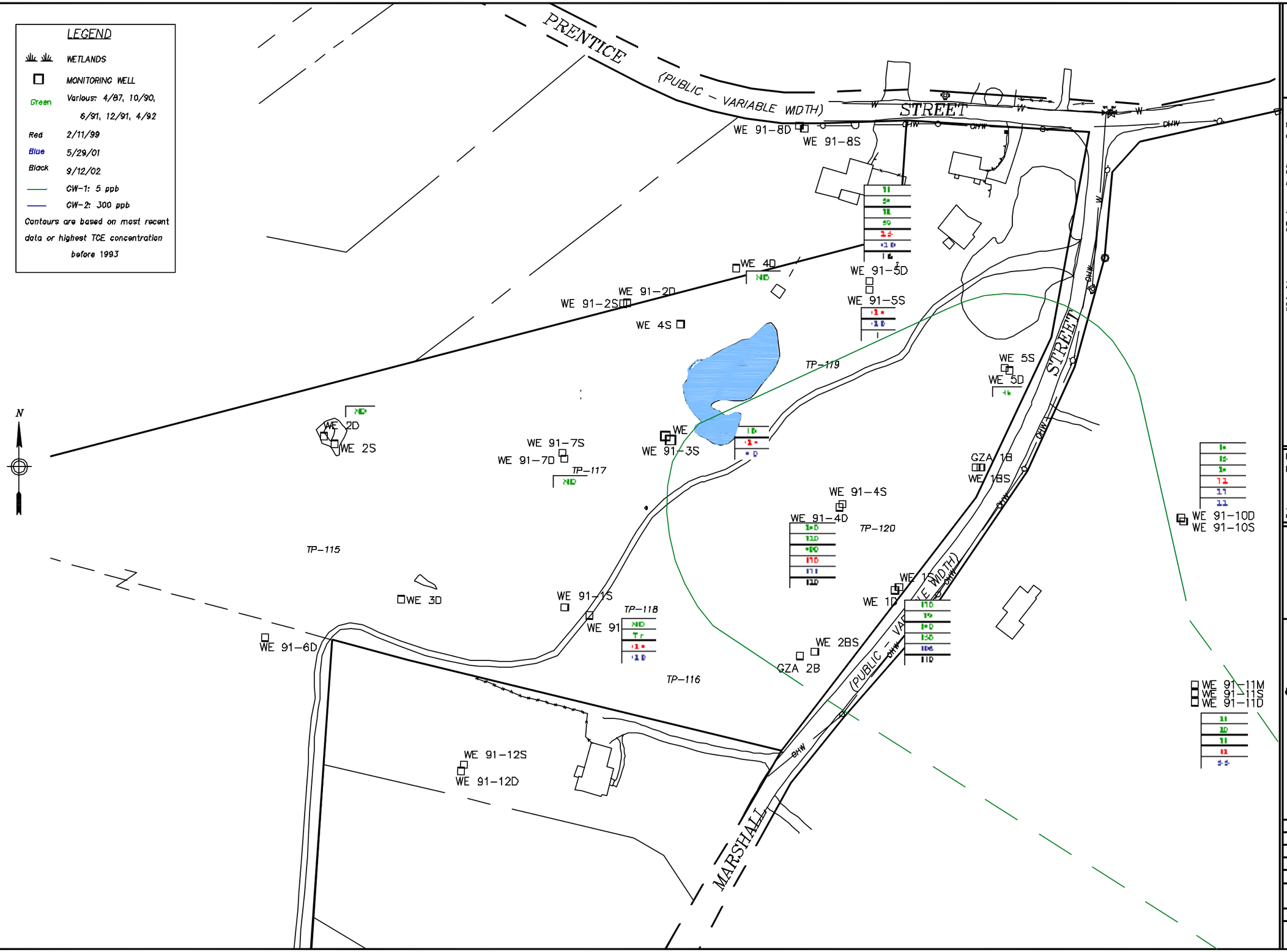
DATE: FEBRUARY 8, 2005
COMP./DESIGN: LKG/WRH
CHECK: LKG
DRAWN: BDJ
SCALE: 1" = 240'
DWG NO.: PROJECTS\DIV11\11-1113 Bird Property Holliston\dwgs\Areas Jan-05.dwg
JOB NO.: 11-1113.10 SHEET 01 OF 01

0 60 120 240 360

LEGEND

- WETLANDS
- MONITORING WELL
- Green — Various: 4/87, 10/90, 6/91, 12/91, 4/92
- Red — 2/11/99
- Blue — 5/29/01
- Black — 9/12/02
- CW-1: 5 ppb
- CW-2: 300 ppb

Contours are based on most recent data or highest TCE concentration before 1993



REVISIONS:

No.	DATE	

GENERAL NOTES:

1. LOCUS INFORMATION:

OWNER OF RECORD: RUBO TRUST & DEMI TRUST
C/O 270 MARKED TREE LANE
HOLLISTON, MA
01746

LOCUS IS COMPRISED OF HOLLISTON ASSESSOR'S MAP 7, BLOCK 3, LOTS 19 AND 22.

DEEDS TO LOCUS: BOOK 17084, PG. 326
BOOK 17084, PAGE 334

2. PLAN REFERENCES

(ALL PLANS ARE ON FILE AT THE MIDDLESEX COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED)

- PLAN NO. 1098 (A OF 2) OF 1924
- PLAN NO. 1068 OF 1959
- PLAN NO. 238 OF 1963
- PLAN NO. 877 OF 1967
- PLAN NO. 341 OF 1996
- LCRA 33689 A, DEPT. NO. 13155, BOOK 5888, PG. 3

3. THIS PLAN IS NOT INTENDED TO BE USED FOR PROPERTY LINE PURPOSES.

4. INFORMATION SHOWN HEREON IS BASED IN PART ON A FIELD SURVEY CONDUCTED BY COLER & COLANTONIO INC. ON SEPTEMBER 18, 2002 AND COMPILED RECORD INFORMATION.

COLER & COLANTONIO INC
ENGINEERS AND SCIENTISTS
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101 Accord Park Drive
Norwell, MA 02061-1653

TITLE:

FIGURE 5–HISTORIC TRICHLOROETHENE CONCENTRATIONS IN BEDROCK WELLS

708 PRENTICE STREET HOLLISTON, MA 01784

DATE:	FEBRUARY 8, 2005
COMP./DESIGN:	LKG/WRH
CHECK:	LKG
DRAWN:	BDJ
SCALE:	1" = 240'
DWG NO.:	PROJECTS\0IV11\11-1113 Bird Property Holliston\dwgs\Areas Jan-05.dwg
JOB NO.:	11-1113.10
SHEET	01 OF 01

0 30 60 120 180

LEGEND

		MADEP METHOD 1	
	MONITORING WELL	CLEANUP STANDARDS	SEDIMENT
	TEST PIT	S-1/GW-1	MADEP TECS
Brown	COPPER	NT	31.6
Blue	MERCURY	100	NS
Black	LEAD	300	35.8
Red	TPH/SVOCs	200/NA	NA/NA
Purple	PCBs	2.0	59.8
Green	PESTICIDES	NA	NS

WETLANDS

All concentrations are in ppm.

SVOCs for Sediments are totals of PAHs.

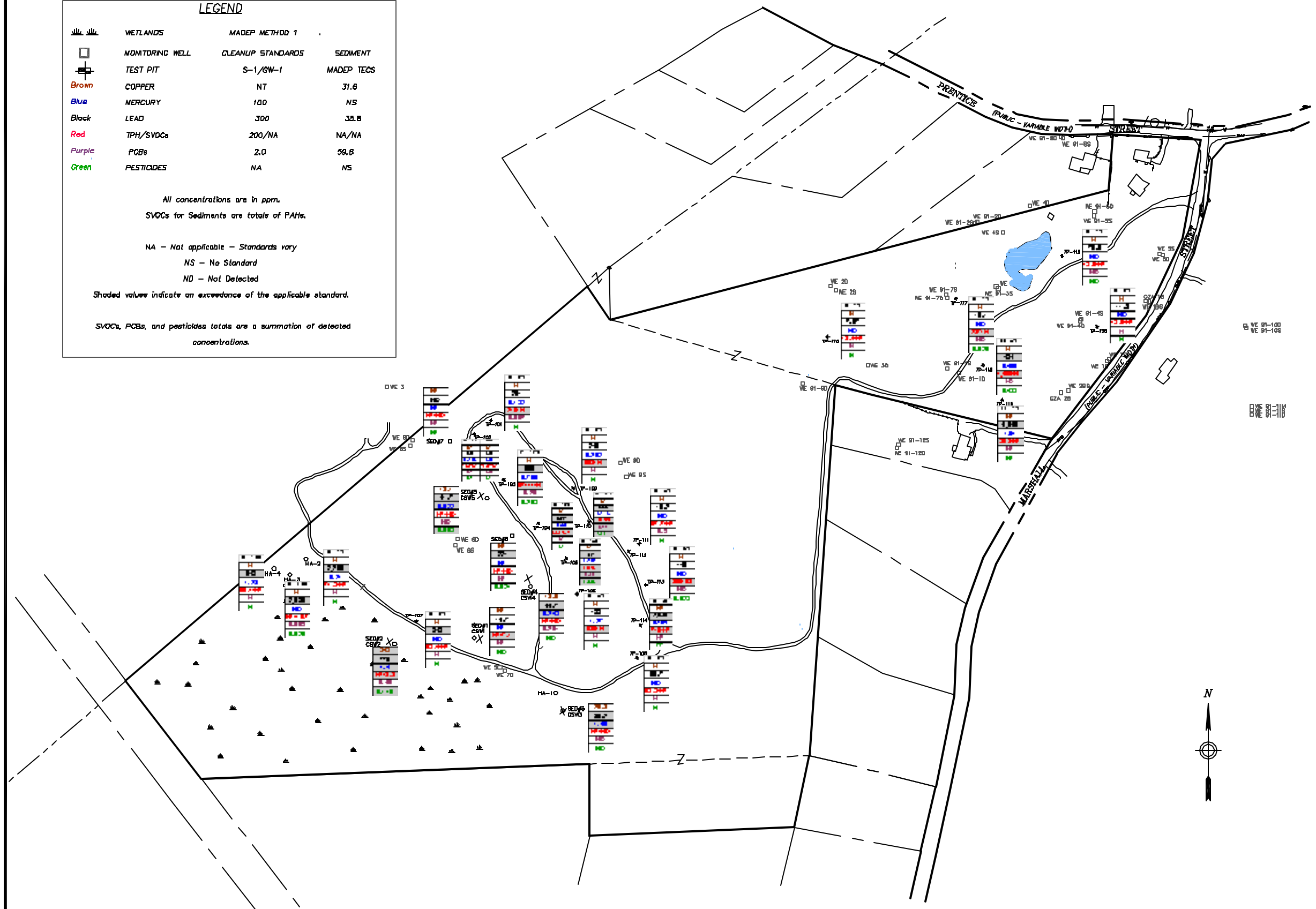
NA – Not applicable – Standards vary

NS – No Standard

ND – Not Detected

Shaded values indicate an exceedance of the applicable standard.

SVOCs, PCBs, and pesticides totals are a summation of detected concentrations.



REVISIONS:

No.	DATE	

GENERAL NOTES:

1. LOCUS INFORMATION:

OWNER OF RECORD: R&C TRUST & C&R TRUST
C/O 270 MARKED TREE LANE
HOLLISTON, MA
01746

LOCUS IS COMPRISED OF HOLLISTON ASSESSOR'S MAP 7, BLOCK 3, LOTS 19 AND 23.

DEEDS TO LOCUS: BOOK 17084, PG. 525
BOOK 17084, PAGE 534

2. PLAN REFERENCES:

(ALL PLANS ARE ON FILE AT THE MIDDLESEX COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED)

- PLAN NO. 1088 (4 OF 2) OF 1964
- PLAN NO. 1088 OF 1964
- PLAN NO. 228 OF 1983
- PLAN NO. 871 OF 1987
- PLAN NO. 241 OF 1996
- L.C.P. 30069 & CERT. NO. 18163, BOOK 888, PG. 3

3. THIS PLAN IS NOT INTENDED TO BE USED FOR PROPERTY LINE PURPOSES.

4. INFORMATION SHOWN HEREON IS BASED IN PART ON A FIELD SURVEY CONDUCTED BY COLER & COLANTONIO, INC. ON SEPTEMBER 16, 2002 AND COMPILED RECORD INFORMATION.

5. SAMPLING LOCATIONS HAVE NOT BEEN SURVEYED AND ARE APPROXIMATE.

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TITLE:

FIGURE 6 – CONTAMINANT CONCENTRATIONS FOR SOILS AND SEDIMENTS SUMMARY PLAN

708 PRENTICE STREET
HOLLISTON, MA 01784

DATE:	JANUARY 7, 2005
COMP./DESIGN:	LKG/WRH
CHECK:	LKG
DRAWN:	BDJ
SCALE:	1" = 120'
DWG NO.:	PROJECTS\DIV11\11-1113 Bird Property Holliston\dwgs\Areas.dwg
JOB NO.:	11-1113.12
SHEET:	01 OF 01

120 60 0 120 240