



Environmental Risk Management in Commercial Lending

Environmental Risk Evaluation Tools, Analysis and Loan Documentation

Presented by:

Daria Milburn, CEC, CEM



Risk Evaluation

Risk Evaluation Tools

Questionnaire

Questionnaire completed by current owner/operator

Database Report

Public record search of environmental, health, chemical/waste regulatory databases for listings associated with site and surrounding area. Usually in accordance with ASTM 1527/1528 radii.

RSRA

SBA SOP 50 10 6

Questionnaire

Database

Historical Records

Transaction Screen

ASTM 1528-22

Questionnaire

Database

Historical Records

EP/Non-EP Site Visit

Phase I ESA

ASTM 1527-13 *
ASTM 1527-21

Questionnaire

Database

Historical Records

EP Site Visit

In-depth
Regulatory File
Review

**Innocent
Landowner
Defense**

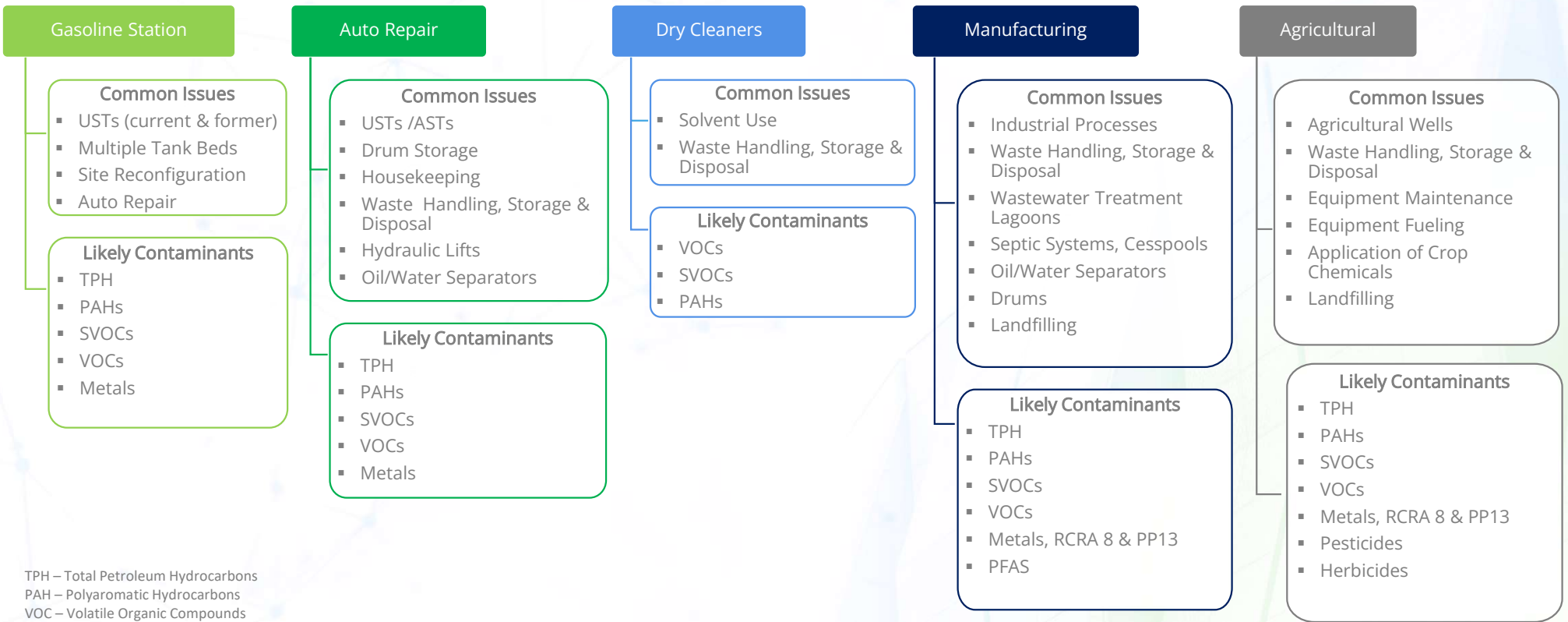
Phase II ESA

Site-specific

Sample Collection

Laboratory Analysis

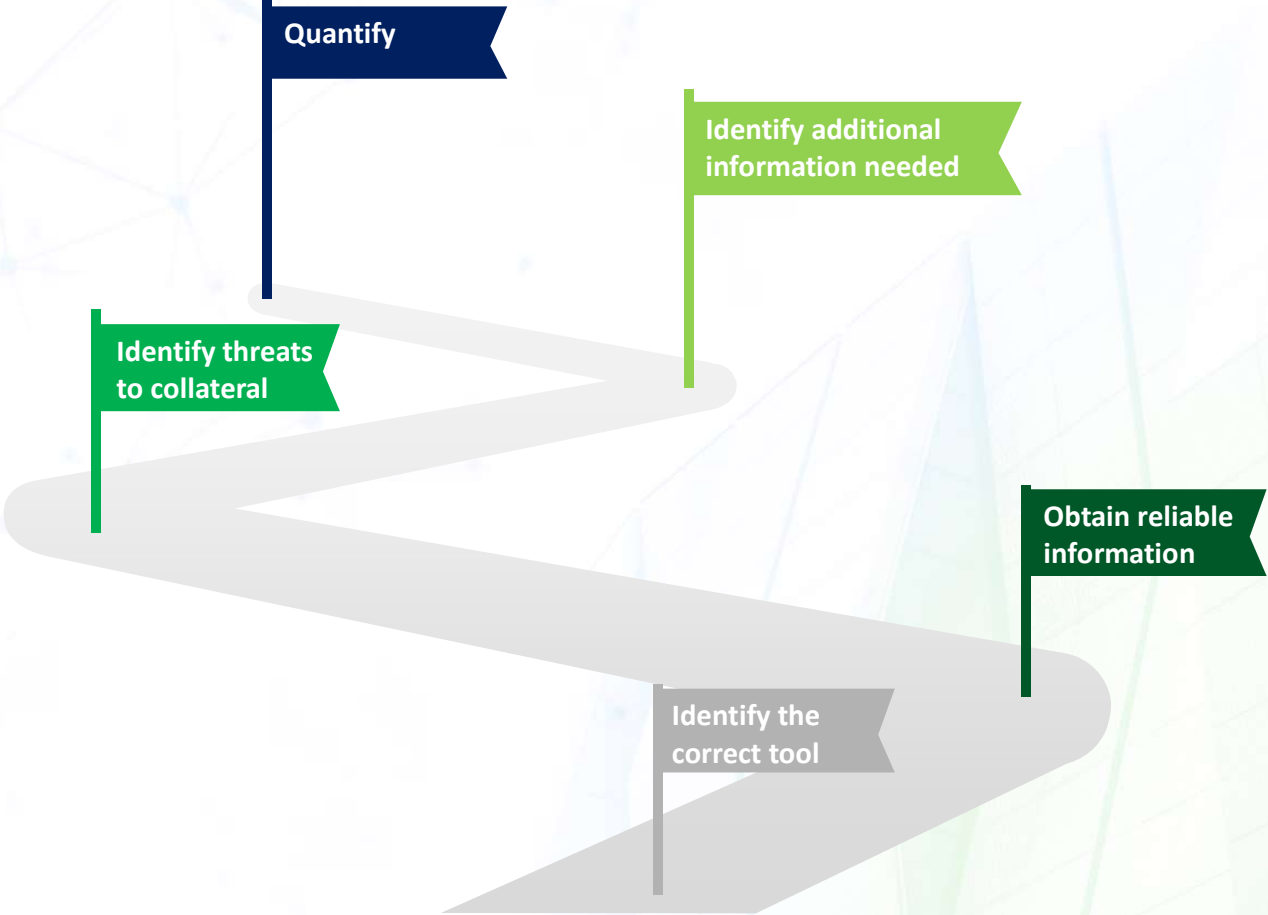
Common Issues & Contaminants



TPH – Total Petroleum Hydrocarbons
 PAH – Polyaromatic Hydrocarbons
 VOC – Volatile Organic Compounds
 SVOC – Semi-Volatile Organic Compounds
 RCRA- Resource Conservation & Recovery Act
 PP – Priority Pollutant
 PFAS - Polyfluoroalkyl Substances

Risk Analysis Considerations

Goal



You're Trying to Determine

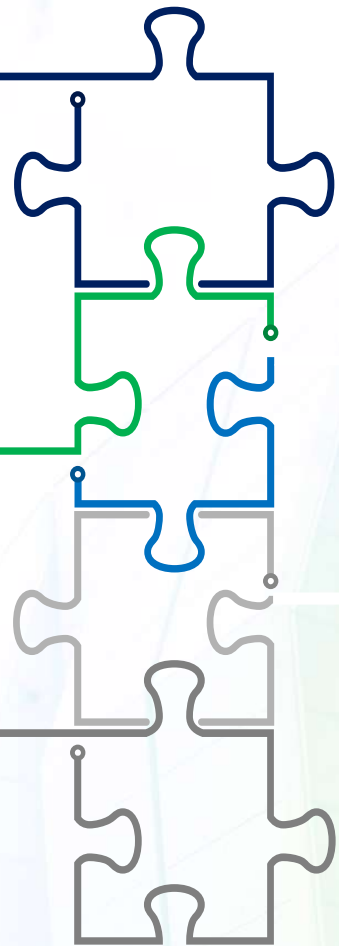
WAS there a risk?



IS there a risk?



WILL there be a risk?



Considerations

What is the likelihood the collateral caused the risk?

What is the likelihood the collateral contributed to the risk?

What is the likelihood the collateral is affected by the risk?

Does the risk affect or limit the use or future uses of the collateral?

Does the collateral owner have continuous obligations in managing the risk?

Are all costs for risk management accounted for in underwriting?

Risk Analysis Process

Risk Analysis - Questionnaire



Environmental Property Assessment Questionnaire

New Loan Renewal/Mod with New Money Renewal/Mod Date _____

This box to be completed in its entirety by the Banker (Phase I required)* ONLY complete information within this box

Borrower name: _____

If New Loan is it a Purchase or Refinance? _____ Exposure Amount on this Property: \$ _____
(Refinance – new loan to takeout existing debt at another bank)

Property Address _____ Prior Environmental Report(s) Obtained: Yes No
 Date of Report: _____

Current Tenant's NAICS Code and Suspect NAICS Code (Y/N)**:

_____ Yes No _____ Yes No _____ Yes No _____ Yes No

*For Example: gas station / c-store with UST(s), car wash, dry cleaning, laundry, etc. **If more space is needed, please attach an additional page.

The banker should personally meet with the property owner or designee who is familiar with current and, if applicable, historic uses of the subject property and assist in completing the questionnaire. The banker should not fill out the questionnaire for that individual. For questions requiring a "Yes or "No" response, place an "X" in the appropriate column in response to the question.

Current/Historic Uses		
1a) What is the current use of the subject property?		
1b) How long have you owned the property?		
1c) How was the property being used when you purchased it?		
1d) What are the past uses of the subject property? (include dates)		
1e) What are the past and present uses of adjoining properties?		
North:		
South:		
East:		
West:		
Questions	YES	NO
2) Is the subject and/or adjacent properties used for industrial purposes now or is there is evidence of historic industrial uses?		
Comments:		
3) Is the subject and/or adjacent properties used as a gasoline station, automotive repair, dry cleaner, or other use that would involve chemical handling and storage?		
Comments:		
4) Is there currently or has there historically been storage, generation, treatment, emission or disposal of "hazardous substances" including chemicals with properties that make them dangerous or potentially harmful to human health or the environment (expressly including petroleum or petroleum products) at the subject property and/or adjacent properties?		
Comments:		
5) Are there or have there been any permits issued allowing the use, storage, generation, disposal, treatment, and /or emissions permits for hazardous substances by any businesses operating at the subject property and/or adjacent properties?		

Risk Analysis - Questionnaire



Risk Analysis - Questionnaire



Who completed the document?

Banker? Current Owner (Refinance v. Seller)? Prospective Purchaser?



Complete answers provided?



Adequate understanding of the past, present and future property uses?



Follow up documentation provided where indicated?



Photographs consistent with answers?



Missing signatures?

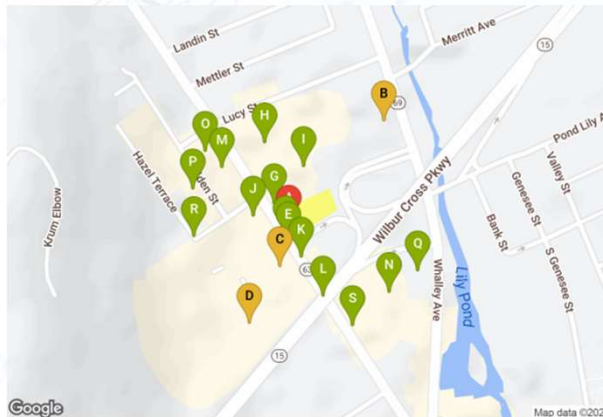


Unresolved red flags?

Risk Analysis – Database Report



SUBJECT PROPERTY: 149 Amity Rd, New Haven, CT 06515, USA
APN: 429 1174 00100



Regulatory Summary | Subject Property

SITE NAME	ADDRESS	DIST. DIR. ELEV. DIFF.	POINTS OF INTEREST	POTENTIAL RISK
AMITY ROAD SHELL STATION #100048 (FORMER TEXACO)	149 Amity Rd, New Haven, CT 06515, USA		Deleted Storage Tanks Facility Registry Service/Facility Index, STATUS - Registry ID : 110030317299	ELEVATED
AMITY SHELL			Hazardous Waste Handlers	

Regulatory Summary | Subject Property

SITE NAME	ADDRESS	DIST. DIR. ELEV. DIFF.	POINTS OF INTEREST	POTENTIAL RISK
MOTIVA ENTERPRISES LLC SHELL SERV STATION TEXACO SERVICE STATION	149 Amity Rd, New Haven, CT 06515, USA (Continued)		Leaking Underground Storage Tanks, STATUS - LUST Case ID : 59474, LUST Status - LUST COMPLETED RCRA Non-Consenters, STATUS - EPA Handler ID : CT0983874157 Releases from Federally Regulated Underground Storage Tank Systems, STATUS - LUST ID No : 59474, Spill Case No : 2003-08410 Releases from Federally Regulated Underground Storage Tank Systems, STATUS - LUST ID No : 59474, Spill Case No : 2012-02384 Spill Incident Tracking System (SITS), STATUS - Case No : 200308410, Status (SITS) : Closed Spill Incident Tracking System (SITS), STATUS - Case No : 201202384, Status (SITS) : CLOSED Underground Storage Tank Facilities, STATUS - Tank No - D1, Tank Status - Permanently Closed, Date Last Used - -A1	ELEVATED

Regulatory Summary | Properties within a 660 ft. radius

SITE NAME	ADDRESS	DIST. DIR. ELEV. DIFF.	POINTS OF INTEREST	POTENTIAL RISK
SHELL OIL SHELL OIL US SHELL SERVICE STATION	1660 Litchfield Turnpike, Woodbridge, CT 06525, USA	S7 NE	Facility Registry Service/Facility Index, STATUS - Registry ID : 110030406326 Hazardous Waste Handlers (2x) Hazardous Waste Manifest Data (2x)	MODERATE

en en

ge 5
ge 6
17

Risk Analysis – Database Report

Subject Property

- Are there listings?
 - Permit?
 - Incident?
 - Violation?
 - Open v. Closed?
- Do you already have knowledge of listings?
- Do you have documentation resolving the listings?

Off-site Properties

- Are there listings?
 - Permit?
 - Incident?
 - Violation?
 - Open v. Closed?
- Proximity/threat to Subject?
 - Adjacent?
 - Nearby?
 - Neighborhood?
- Risk tolerance?



Risk Analysis - RSRA



Findings

Low or Elevated Clearly Stated? Supported by research? Able to reference sources?



Conclusions

Supported by findings? Able to reference support?



Recommendations

Clear next steps? Do the recommendations make sense?



Less than 1 year old (for SBA)?



Data gaps adequately explained?



Risks to subject property?



Risks from off-site?

Risk Analysis – TSA & Phase I ESA



Phase I Environmental Site Assessment

RADIUS

Project # 22H02-54746-381
CREtelligent

Engaged by: _____
Subject Property: _____

Project Number: 22H02-54746-381
Date Engaged: August 3, 2022
Report Date: August 23, 2022

Assessment

Assessment

Phase I Environmental Site Assessment (ESA) for the property at 900 US-4123, 2022. This ESA was conducted at the request of the Client, in accordance with the ASTM E1527-13, Standard Practice for Phase I Environmental Site Assessment Process.

CREC	HREC	BER	DE-MINIMIS	SECTION
				2.1
				2.2
				2.3
				2.3.1
				2.3.2
				2.4
				2.5
				2.6

Table of Contents:

- 1
- 1
- 4
- 4
- 5
- 7
- 8
- 8
- 9
- 9
- 11
- 11
- 13
- 15
- 15
- 16
- 17
- 18
- 19
- 20
- 20
- 21
- 25
- 25
- 26
- 26

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1.1.4 Regulatory Information

A review of regulatory database information and any additional regulatory information reviewed by LCS identified the following conditions indicative of releases or threatened releases of hazardous substances or petroleum products in, on, or at the subject property:

- According to the EDR report, the subject property was listing regarding state cleanup and a Spills site; Case with state cleanup activities relative PI Number G0 website, the PI Number has a status of "to be assessed"
- According to Mr. Donald Cresitello (prospective purchaser) installed due to migration of contamination from an adjacent property
- According to the EDR report, adjacent properties were
 - A north adjacent site, XXXXXX Transmission at Cu identified as a pending state hazardous waste investigation), UST facility, NJEMS site, and NJ I website, some of the on-site releases have been associated with an UST, is classified as "active," ; oversight as of November 2016.
 - A northwest adjacent site, Ocean Star Fuel Service Station #12640 at 65 Union Avenue-Route 71 was identified as an UST facility, closed state haz Institutional Controls site, Brownfields site (remediation Release/Spills site. According to the NJDEP D classified as "closed" and appear to have been a classification exemption area was recorded in 200
 - A north adjacent site, Sunoco Station #0007-6919 leaking gasoline dispensers; the status of this spill
 - A north adjacent site, Service/F&F Auto Service/F 49-53 Union Avenue/Route 71 and Curtis Avenue generator (with no violations listed), active hazard site. According to the NJDEP Data Miner website Remediation Professional; a remedial investigator

A summary of the concerns specific to the subject property is provided below:

- The Fire Insurance Maps (FIMs) from 1951 and 1968 identified historical addresses associated with the subject property - 501 and 533 NE 29th Street.
- The subject property was initially developed for industrial and residential use sometime between 1945 and 1951. Additions were made to the main industrial building on the subject property between 1952 and 1955, 1957 and 1964, 1973 and 1984, and 1995 and 2004. Between 1952 and 1957, the residential structure on the subject property was demolished and another one was developed further new. Sometime between 1984 and 1987, the residential structure was demolished. A small industrial structure was developed on the subject property sometime between 1957 and 1964; however, this structure was expanded to the north sometime between 1984 and 1987.

FINDINGS

This assessment has revealed no evidence of recognized environmental conditions¹ in connection with the subject property except for the following:

A summary of our historical review for the subject property is provided below:

- The FIMs from 1951 and 1968 identified historical addresses associated with the subject property - 501 and 533 NE 29th Street.
- Railroads were constructed to the subject property (south-adjointing properties) sometime between 1927 and 1942, 194 properties appear to have been demolished.
- No environmental concerns were identified.

Please see [Appendix - Historical Resources](#)

- According to the site contact, the subject property was historically utilized for aluminum billet manufacturing from 1983 through 1998. A site contact noted an open concrete basin on the southern exterior of the subject structure; such was formerly utilized for cooling water from the furnace and was being filled with concrete debris; such was to be sealed with concrete. The basin formerly discharged to a lagoon located on the eastern portion of the subject property. Sludge removed from this system in 2010 was classified as non-hazardous.
- According to the EDR report, the subject property, listed as Carolina Billets, addressed on Route 1/Box 131/Mitchell Road, was identified as a registered UST facility with two 2,000-gallon USTs (one gasoline mix and one diesel fuel) listed as being installed in 1983 and removed in 1992. No additional records regarding the USTs were provided.
- Minor staining was noted in the vicinity of the on-site compressor.
- A railroad spur was noted on the northern portion of the property.
- A south adjacent property was identified as a plastic manufacturing facility and railroad tracks were noted adjacent. That site was identified as a registered UST facility, State Hazardous Waste Site (no details provided), and IMD facility with groundwater contamination detected.
- A proximate, possibly adjacent site, listed as West Point Pepperell-Ahoskie, was identified as a DC HSDS site. No details were provided.

Risk Analysis – TSA & Phase I ESA



Findings

Supported by research? Able to reference sources?



Conclusions

Supported by findings? Able to reference support?



Recommendations

Clear next steps? Do the recommendations make sense?



Data gaps adequately explained?



Risks to subject property from on-site sources?

Risks to subject from off-site sources?



Oversights? Check your Appendices!



General Report Considerations

Report meets standards listed? Still current? Limitations?

Risk Analysis – Phase II



Evaluation of Monitoring Point Seals

Following installation of the sample probe, a plastic open end container was placed around the sample probe with a thin ribbon of VOC free modeling clay on the bottom to form a water tight seal. Water was placed inside the cup around the sample probe to verify that the seal of the sample probe was intact. The water around the probe maintained its original volume within the open end container throughout the sampling procedure to verify the seal was retained.

Sample Collection

The sub-slab vapor samples and indoor and outdoor air samples were collected on April 11, 2018, with laboratory-provided pre-cleaned one-liter evacuated Summa Canisters with an eight-hour flow regulator. Each regulator was opened and the vacuum canister was monitored throughout the eight hour sampling period.

Soil

Soil samples were collected on April 11, 2018, with a percussion and hand system equipped with an approximate 2-inch diameter, approximate 60 cm sampler. Soil samples were collected within each test boring continuous surface until a depth of between approximately 6 and 30 feet below the ground surface. Any downhole equipment was decontaminated with an Alconox and tap water rinse between test borings. The cutting shoes were decontaminated between collection of each sample.

The physical characteristics of all soil samples were classified using the Unified Soil Classification System (USCS) (Visual-Manual Method) as a guide. Upon collection, the sample was opened slightly at several locations and total volatile organic concentrations in air within the sample were recorded using a photoionization detector calibrated in accordance with manufacturer's specifications. (The PID measures VOCs, such as those associated with petroleum and some solvents.) Screening are included in the attached boring logs. Based on the field of measurements, soils were selected for analysis (see below).

Groundwater

Temporary groundwater monitoring wells TPMW1 through TPMW5 were installed at borings BH1, BH7, BH8, BH10 and BH11. Generally, the bottoms of the wells were between 23.94 and 29.90 ft. bgs. Each of the wells were constructed with a PVC screen and riser with a silica filter pack placed around the well screen placed above the sand and the wells were covered with plastic caps, to prevent from entering the wells. Refer to the attached subsurface logs/well construction specific well construction details.

The groundwater samples from temporary groundwater monitoring wells TPMW3 were collected on April 11, 2018. Temporary groundwater monitoring wells TPMW5 were not sampled due to insufficient groundwater for sample collection, each well was developed by removing approximately three well New disposable dedicated PVC bailers were used for well development activities.

Sample Analysis

Following labeling of the laboratory-supplied sample containers, selected on ice. The samples were then submitted, under standard chain-of-custody, to Environmental Laboratory Accreditation Council (NELAC) approved lab in accordance with the United States Environmental Protection Agency (USEPA) as summarized below. The analytical methods were chosen based on LC50 of similar use.

subsurface investigations, using 4-foot long dual tube samplers. The borings were advanced to various depths below the ground surface ("bgs") as shown on boring logs, which are attached as Exhibit II. The borings proposed inside the building, near the existing dry cleaning machine, were to be advanced using a hand auger. The concrete floor was cored to provide access. Due to the presence of gravel fill, below the floor, the hand auger could only be advanced about 12-inches. Therefore, samples could not be collected at these locations. No evidence of contaminants was present based on the lack of solvent odors at this minimal depth.

Using the Geoprobe, borings SB-1 through SB-4 were advanced to 24-feet below the ground surface ("bgs"); SB-5 through SB-10 to 12-feet below the ground surface. Soil samples were obtained from each boring and field screen photoionization detector ("PID") with a 10.6 eV reading or the deepest sample in each boring, indications of contamination, was collected and analyzed. The soil samples were placed in lab closed with a lid having a Teflon® seal, labeled at laboratory was instructed to analyze the soil for volatile organic compounds, which include dry cleaning for the presence of petroleum chemicals by hydrocarbon for diesel and oil range organics analyses were performed in accordance with U.S. EPA 846 methods.

1-inch diameter 0.010-inch slotted PVC piezometer and placed in clean, laboratory furnished with the appropriate amount of tri-sodium borate. Samples were handled in a manner similar to the same analyses as the soil samples, using a chain-of-custody.

Results. The results of the analyses of groundwater samples collected on March 3, 2016 Teklab report (WorkOrder: 1661) is attached as Exhibit III. The results are compared with appropriate MDNR risk-based results of the analyses of the groundwater samples are presented in Table No. 3. The results of the analyses are compared with the MRBCA Default Target Levels; i.e. those levels which are safe for any use of the property. The tables also include, for comparative purposes, the Tier 1 Risk-Based Target Levels ("RBTs") for Soil Type 1 (Sandy) for soil and groundwater, as appropriate, for

Soil vapor samples were collected from sub-slab vapor points SSV-1 through SSV-6 and submitted to Pace laboratory for VOCs by EPA Method TO-15. The soil vapor analytical results are summarized in [Table 1](#) and presented on [Figure 3](#).

Volatile Organic Compounds

- Tetrachloroethene (PCE) was detected below its ESL (67 µg/m³) in SSV-1, SSV-2, SSV-4, SSV-5, and SSV-6 at concentrations of 18.4 µg/m³, 6.69 µg/m³, 6.52 µg/m³, 5.02 µg/m³, and 3.68 µg/m³, respectively. PCE was not detected above the laboratory detection limit in SSV-3.
- Trichloroethene (TCE) was not detected above the laboratory detection limit in all soil vapor samples collected.
- In addition, BETX (benzene, ethylbenzene, toluene, xylenes), tri- and dichlorofluoromethane (Freon 11 and 12), 2-butanone (MEK), 4-methyl-2-pentanone (MIBK), and several other petroleum-related compounds were detected in the soil vapor samples at concentrations below their respective ESLs.
- Several other unregulated VOCs were also detected in the soil vapor at the subject property.

The leak check compound, 2-propanol, was detected in each soil vapor sample. The leak check is performed to verify an adequate surface seal and that the sample train is leak-free during the vapor sample collection. Due to the sensitivity of the laboratory analytical method, it is not unexpected to detect the leak check compound in vapor samples. In a worst-case scenario, if the concentration of 2-propanol exceeds 0.005% by volume (50 parts per million), the sample integrity would be considered compromised and sample results should not be used. 50 PPMV of 2-propanol equates to a vapor concentration of 122,883 µg/m³ which is above the greatest concentration detected

Risk Analysis – Phase II ESA

A vertical bar with a color gradient from light green at the top to dark blue at the bottom, corresponding to the list items.

Scope

What was the scope requested? Did you outline the scope? Was the scope followed?

What was found?

Where was it found?

How much was found?

Can remedial costs be estimated?

Migration of contamination beyond property boundaries?

Check your appendices!

Risk Analysis – Other Documents

Environmental Insurance

- Transferability
- Mortgagee v Additional Insured
- Term of coverage
- Limitations or Exclusions
- Third party claim coverage
- Premium payments

Indemnifications

- Transferability
- Limitations or Exclusions
- Third party claim coverage
- Liquidity of Indemnitor

Escrow Agreements

- Adequate Funding
- Terms of disbursement

Documentation

Document Your Findings

Policy Followed

Tools used consistent with policy matrix.



Risk Evaluated

Potential environmental risks were evaluated and identified.



Risk Quantified & Understood

Informed Decision.



Your Document Should...

Be Clear

- Be Concise
- Avoid the "Copy & Paste"

Confirm Compliance

- Confirm the document's compliance with Policy Matrix.
- Confirm the document followed the appropriate Scope.
- Confirm the collateral's acceptability (risk tolerance).

Provide Analysis

- List the primary risks identified.
- Indicate whether any of the risks had been sufficiently mitigated and why/how.
- For unmitigated risks, indicate whether they have been sufficiently quantified.

State Conditions Precedent

- List steps required prior to closing.

Justify Exceptions

- Identify mitigating factors that offset the identified risk.
- Cite documentation supporting the decision.

Bringing It All Together



Identify the correct risk evaluation tool.

Know your concerns by industry.

Confirm your policy was followed.


Interpret your data – use a 3rd party when in doubt.

Identify clear instructions for your client.

Clearly Document your findings.

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<p>Environmental</p> <p>Instant Reports</p> <ul style="list-style-type: none"> EnviroPreScreen EnviroPreScreen Advanced <p>Desktop Reports</p> <ul style="list-style-type: none"> EnviroPreScreen Pro Insight EnviroScreen-RSRA Report Review <p>Site Assessments</p> <ul style="list-style-type: none"> Phase I Environmental Site Assessment Phase II Limited Subsurface Investigation Transaction Screen Assessment 	<p>Condition/Resilience</p> <p>Instant Reports</p> <ul style="list-style-type: none"> Property Condition PreScreen Carbon Footprint PreScreen ClimateCheck® Risk Report Commercial Flood Certification Residential Flood Certification <p>Site Assessments</p> <ul style="list-style-type: none"> Property Condition Inspection Property Condition Assessment 	<p>Land Services</p> <p>Desktop Reports</p> <ul style="list-style-type: none"> Zoning Reports <p>Site Assessments</p> <ul style="list-style-type: none"> ALTA/NSPS Land Surveys 	<p>Valuation</p> <p>Instant Reports</p> <ul style="list-style-type: none"> Commercial AVM <p>Site Assessments</p> <ul style="list-style-type: none"> Broker Price Opinion Commercial Evaluation Residential Evaluations 	<p>Packaged Services</p> <p>Instant Reports</p> <ul style="list-style-type: none"> Early Insights <p>Site Assessments</p> <ul style="list-style-type: none"> Package I (ESA, PCA) Package II (ESA, PCA, ALTA) Package III (ESA, PCA, ALTA, Zoning)
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What Lenders are saying about RADIUS...



“RADIUS also helps with initial site or parcel identification, and has tools to adjust parcel boundaries, view satellite or street level maps of the property... almost like a virtual site visit”



– **JoAnne Robinson**
Celtic Bank's
Closing Manager



It helps us get things done faster, it is intuitive, and its screening capabilities can help identify concerns early in the lending process.



– **Rich Grant**
CEO Bay Area
Development Company



I know when CREtelligent received my order and when I'm getting it back. I do not have to chase a vendor through email to track a project down.



– **Chris Friis**
Senior Vice President
of Commercial Lending



RADIUS has helped us with initial site identification, and the environmental prescreen helps us get an early look at potential environmental concerns



– **Daniel Greenblum**
Director at Lev


A large, solid green circle on the left side of the slide, partially overlapping the text "QUESTIONS?".

QUESTIONS?

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 (252) 461-4861

 d.milburn@cretelligent.com

 11344 Coloma Rd., Gold River, CA

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