
June 4, 2020

Rebecca Gendreau
Conservation Agent
Town of Sturbridge
301 Main Street
Sturbridge, MA 01566

**Re: Notice of Intent Application – Heating Fuel Release Emergency Response & Remediation Activities
53 Caron Road, Sturbridge, MA
CMG ID 2019-137**

Dear Ms. Gendreau,

On behalf of Dr. Young-Ho & Tia Oh (applicants), CMG Environmental, Inc. (CMG) is writing you this letter to describe the emergency spill response work completed at 53 Caron Road (Site) in Sturbridge, MA.

The 0.31 Acres site is located on the shores of Cedar Pond and currently consists of an owner-occupied single-family home with a detached shed. The site is serviced by a private well and on-site sewage disposal system.

On July 8, 2019, the residents noted a leak in their 275 gallon above-ground storage tank, used to store fuel for heating purposes. CMG was retained by the homeowner to evaluate the situation. On the same day, CMG reported the 2-hour release identified as RTN 2-20941. CMG performed the following actions in response to the fuel leak between July, 2019 & May, 2020 :

- Inspect and maintain boom to recover oil from water surface and prevent further migration.
- Pump non-aqueous phase liquid (NAPL) from initial recovery well until oil no longer accumulates significantly.
- Install a second recovery well 5-10' downgradient and continue to pump NAPL
- Advance soil borings to determine extent of contamination (including potentially inside basement of house)
- Use a Vactor to remove contaminated soil adjacent to (and possibly underneath) the house, with dewatering as necessary.
- Install groundwater monitoring wells and sample to determine impact to groundwater.

- Use a Vector to remove soil adjacent to Cedar Lake after the lake association lowers the water level (circa November).
- Sample surface water and sediment from the lake.
- Sample drinking water at residences within 500' downgradient of the Site that have private drinking water wells.
- Collect additional indoor air samples during peak heating season (between November & March).
- Apply sealant to landward side of retaining wall from below lawn level down to below seasonal low water level.
- Backfill and restore landscaping.

A more detailed report of CMG's spill response efforts is included in the "Immediate Response Action Plan" (IRA Plan), prepared by CMG Environmental, Inc., dated September 6, 2019. CMG can provide a copy of the IRA Plan upon request.

On December 20, 2019, CMG received an Emergency Certification Form issued by the Sturbridge Conservation Commission. A copy of the Emergency Certification Form is included in this submission as Attachment #1. As noted in the above-mentioned form, an "after-the-fact" Notice of Intent is required for all completed and continued activities for this project. CMG is including a completed Town of Sturbridge "NOI Packet" and supplemental materials in accordance with the above-mentioned form.

As of May 2020, the remediation efforts for the Site are ongoing with positive results. Per the Massachusetts Contingency Plan (MCP), CMG is required to submit an IRA Status Report every six months. CMG notes the following findings as of the writing of this letter.

- The RTN 2-20941 release does not appear to have impacted drinking water at the Site and abutting properties
- The release significantly impacted Site soil at 53 Caron Road.
- The release has not significantly impacted soil at the abutting 55 Caron Road.

A copy of the November 12, 2019 & May 5, 2020 IRA Status Report is included as Attachment #2. CMG can provide a copy of the IRA Status Reports upon request during the continuous remediation efforts for the Site.

Please let me know if you have any questions or concerns. I can be reached at (508) 254-4822.

Sincerely,
CMG ENVIRONMENTAL, INC.



Robert Lussier
Project Engineer



Town of Sturbridge

Conservation Commission

Notice of Intent Application Checklist – Form B

Applicant / Property Owner Dr. Young-Ho Oh

Representative CMG Environmental, Inc.

Project Location 53 Caron Road, Sturbridge, MA

Assessor's Information Map 195-02131-053

Date NOI filed with Conservation June 4, 2020

Date NOI filed with MA DEP Central Region June 4, 2020

- Complete most recent WPA Form 3 (Notice of Intent Application) and necessary attachments (2 copies)
- Plans and calculations clearly describing the location and nature of the work including all necessary Stormwater documents if applicable (2 copies)
- An 8.5 x 11 color section of the USGS Quadrangle (topo) identifying the locus and with a scale
- An 8.5 x 11 copy of the most recent Natural Heritage Map with WH, PH and VP data identifying the locus and with a scale
- An 8.5 x 11 copy of the FIRM Map identifying the locus and with a scale
- Confirmation that a copy of the NOI was sent to NHESP (if applicable)
- Copy of the Certified Abutters List (to include all abutters within 200-feet of the subject property) and a copy of the completed Abutter Certification Form
- Signed Affidavit of Service for Abutter Notification
- Completed Local Filing Fee Worksheet and NOI Wetland Transmittal Form
- Filing fee checks, one of the town's portion of the state fee and one for the local fee – both made out to the Town of Sturbridge (See Local Filing Fee Worksheet)
- Copy of State filing fee check made out to the Commonwealth of MA (1 copy)
- Tax Form signed by the Sturbridge Tax Collector, notifying the Conservation Commission that the property taxes are paid-to-date (1 copy)

This Check list is to be filled out and submitted to the Sturbridge Conservation Commission at the time of filing the Notice of Intent Application.

Please contact me if you have any questions (508)-347-2506 or via email at regendreau@town.sturbridge.ma.us.

Conservation Agent



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Sturbridge

City/Town

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

53 Caron Road
a. Street Address

Sturbridge
b. City/Town

01566
c. Zip Code

Latitude and Longitude:

42.12571 N
d. Latitude

-72.08894 E
e. Longitude

195
f. Assessors Map/Plat Number

02131-053
g. Parcel /Lot Number

2. Applicant:

Young-Ho
a. First Name

Oh
b. Last Name

c. Organization

53 Caron Road
d. Street Address

Sturbridge
e. City/Town

MA
f. State

01566
g. Zip Code

(508) 740-9779
h. Phone Number

i. Fax Number

j. Email Address

3. Property owner (required if different from applicant): Check if more than one owner

Tia
a. First Name

Oh
b. Last Name

53 Caron Road Nominee Realty Trust
c. Organization

53 Caron Road
d. Street Address

Sturbridge
e. City/Town

MA
f. State

01566
g. Zip Code

(508) 740-9779
h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Robert
a. First Name

Lussier
b. Last Name

CMG Environmental, Inc.
c. Company

67 Hall Road
d. Street Address

Sturbridge
e. City/Town

MA
f. State

01566
g. Zip Code

(508) 254-4822
h. Phone Number

(774) 241-0906
i. Fax Number

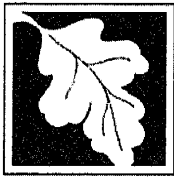
rlussier@cmgenv.com
j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

\$1,050.00
a. Total Fee Paid

\$512.50
b. State Fee Paid

\$537.50
c. City/Town Fee Paid



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A. General Information (continued)

6. General Project Description:

Continued remediation activities as outlined in the Immediate Response Action Plan for 53 Caron Road, prepared by CMG Environmental, Inc. (dated 9-6-2019). All remediation activities are in response to a leak from an above-ground storage tank holding heating fuel on July 8, 2019.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- 1. Single Family Home
- 2. Residential Subdivision
- 3. Commercial/Industrial
- 4. Dock/Pier
- 5. Utilities
- 6. Coastal engineering Structure
- 7. Agriculture (e.g., cranberries, forestry)
- 8. Transportation
- 9. Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. Yes No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Worcester County

a. County

59581

c. Book

b. Certificate # (if registered land)

237

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- 1. Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- 2. Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced

- f. Riverfront Area
1. Name of Waterway (if available) - **specify coastal or inland**
2. Width of Riverfront Area (check one):
- 25 ft. - Designated Densely Developed Areas only
 - 100 ft. - New agricultural projects only
 - 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: _____ square feet

4. Proposed alteration of the Riverfront Area:

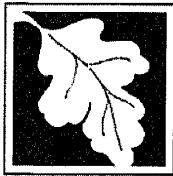
a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

5. Has an alternatives analysis been done and is it attached to this NOI? Yes No

6. Was the lot where the activity is proposed created prior to August 1, 1996? Yes No

3. Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f.** above.



Massachusetts Department of Environmental Protection
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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	1. square feet _____	
	2. cubic yards dredged _____	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	1. square feet _____	2. cubic yards beach nourishment _____
e. <input type="checkbox"/> Coastal Dunes	1. square feet _____	2. cubic yards dune nourishment _____
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	1. linear feet _____	
g. <input type="checkbox"/> Rocky Intertidal Shores	1. square feet _____	
h. <input type="checkbox"/> Salt Marshes	1. square feet _____	2. sq ft restoration, rehab., creation _____
i. <input type="checkbox"/> Land Under Salt Ponds	1. square feet _____	
	2. cubic yards dredged _____	
j. <input type="checkbox"/> Land Containing Shellfish	1. square feet _____	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	
	1. cubic yards dredged _____	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	1. square feet _____	
4. <input type="checkbox"/> Restoration/Enhancement	If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.	
	a. square feet of BVW _____	b. square feet of Salt Marsh _____
5. <input type="checkbox"/> Project Involves Stream Crossings		
	a. number of new stream crossings _____	b. number of replacement stream crossings _____



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C. Other Applicable Standards and Requirements

- This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

- Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

a. Yes No **If yes, include proof of mailing or hand delivery of NOI to:**

Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581

August 1, 2017
b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

c. Submit Supplemental Information for Endangered Species Review*

- Percentage/acreage of property to be altered:
 - (a) within wetland Resource Area _____
percentage/acreage
 - (b) outside Resource Area _____
percentage/acreage
 - Assessor's Map or right-of-way plan of site
- Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **
 - (a) Project description (including description of impacts outside of wetland resource area & buffer zone)
 - (b) Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/>). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



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C. Other Applicable Standards and Requirements (cont'd)

- (c) MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/ mesa/ mesa_fee_schedule.htm). Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

Projects altering 10 or more acres of land, also submit:

- (d) Vegetation cover type map of site
- (e) Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following
1. Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/ mesa/ mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)
 2. Separate MESA review ongoing. a. NHESP Tracking # _____ b. Date submitted to NHESP _____
 3. Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.
3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
- a. Not applicable – project is in inland resource area only b. Yes No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.



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Provided by MassDEP:
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C. Other Applicable Standards and Requirements (cont'd)

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
 a. Yes No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
 b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
 a. Yes No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
 a. Yes No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
 a. Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
 1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
 2. A portion of the site constitutes redevelopment
 3. Proprietary BMPs are included in the Stormwater Management System.
 b. No. Check why the project is exempt:
 1. Single-family house
 2. Emergency road repair
 3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

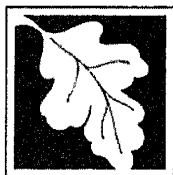
D. Additional Information

- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



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D. Additional Information (cont'd)

3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. List the titles and dates for all plans and other materials submitted with this NOI.

Emergency Certification Form

a. Plan Title

Sturbridge Conservation Commission

Rebecca Gendreau (Agent)

b. Prepared By

c. Signed and Stamped by

12/20/2019

N/A

d. Final Revision Date

e. Scale

Figure 2 Site Plan (From IRA Plan)

9/6/2019

f. Additional Plan or Document Title

g. Date

5. If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. Attach NOI Wetland Fee Transmittal Form

9. Attach Stormwater Report, if needed.

E. Fees

1. Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

2219

2. Municipal Check Number

6/2/2020

3. Check date

2218

4. State Check Number

6/2/2020

5. Check date

Young Ho

6. Payor name on check: First Name

Oh (Trustee)

7. Payor name on check: Last Name



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

1. Signature of Applicant

6/2/2020

2. Date

3. Signature of Property Owner (if different)

4. Date

5. Signature of Representative (if any)

6/4/2020

6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Applicant Information

1. Location of Project:

53 Caron Road Sturbridge
 a. Street Address b. City/Town
 2218 \$512.50
 c. Check number d. Fee amount

2. Applicant Mailing Address:

Young-Ho Oh
 a. First Name b. Last Name
 c. Organization
 53 Caron Road
 d. Mailing Address
Sturbridge MA 01566
 e. City/Town f. State g. Zip Code
(508) 740-9779
 h. Phone Number i. Fax Number j. Email Address

3. Property Owner (if different):

Tia Oh
 a. First Name b. Last Name
 53 Caron Road Nominee Realty Trust
 c. Organization
 53 Caron Road
 d. Mailing Address
Sturbridge MA 01566
 e. City/Town f. State g. Zip Code
(508) 740-9779
 h. Phone Number i. Fax Number j. Email Address

B. Fees

Fee should be calculated using the following process & worksheet. **Please see instructions before filling out worksheet.**

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Hazardous Cleanup	1	\$1,050	\$1,050.00

Step 5/Total Project Fee: \$1,050.00

Step 6/Fee Payments:

Total Project Fee:	<u>\$1,050.00</u>
State share of filing Fee:	<u>\$512.50</u>
City/Town share of filling Fee:	<u>\$537.50</u>
	a. Total Fee from Step 5
	b. 1/2 Total Fee less \$12.50
	c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
 Box 4062
 Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)



Town of Sturbridge

Conservation Commission

STURBRIDGE CONSERVATION COMMISSION AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act and the Town of Sturbridge Wetland Bylaws

I, Dr. Young - Ho Oh, hereby certify under the pains and penalties of perjury that on (date) June 4, 2020, I gave notification to abutters in compliance with the second paragraph of the Massachusetts General Laws Chapter 131, § 40, and the DEP Guide to Abutter Notification as well as the Town of Sturbridge Wetland Bylaws, in connection with the following matter:

- A Notice of Intent OR
- A Request for Determination OR
- An Abbreviated Notice of Resource Area Delineation

that was filed under the Massachusetts Wetlands Protection Act and the Town of Sturbridge Bylaws, by CMG Environmental, Inc. with the Sturbridge Conservation Commission on (date) June 4, 2020 for the property located at

53 Caron Road, Sturbridge, MA

The form of the Notification and a list of abutters to whom it was given and their addresses are included in the application file.

(signature of applicant) (date)

Dr. Young-Ho Oh
(name of applicant-printed or typed)

Parcel ID	Owner	Owner Address	Owner City	State	Zip	Property Address
195-02141-031	CEDAR LAKE LLC	798 MAIN STREET	SOUTH WINDSOR	CT	06074	31 CARON ROAD
195-02131-049	CELUZZA ANTHONY E JR TR	49 CARON ROAD	STURBRIDGE	MA	01566	49 CARON ROAD
195-02131-051	HENNESSEY JAMES T & LAUREN M TR	51 CARON ROAD	STURBRIDGE	MA	01566	51 CARON ROAD
696-02038-025	HOLMES THOMAS M	25 WOODSIDE CIRCLE	STURBRIDGE	MA	01566	25 WOODSIDE CIRCLE
195-02131-055	JANCI DENISE B TRUSTEE	55 CARON ROAD	STURBRIDGE	MA	01566	55 CARON ROAD
195-02131-057	MAURO STEVEN W	14 CROSS STREET 1R	SOUTH GRAFTON	MA	01560	57 CARON ROAD
696-02038-027	MITCHELL DAVID F	27 WOODSIDE CIRCLE	STURBRIDGE	MA	01566	27 WOODSIDE CIRCLE
195-02141-047	STROM K DUNCAN	PO BOX 550	STURBRIDGE	MA	01566	47 CARON ROAD
696-02038-029	TURLEY KEITH P	29 WOODSIDE CIRCLE	STURBRIDGE	MA	01566	29 WOODSIDE CIRCLE
696-02028-037	ZWIEBEL RAKEFET	31 WOODSIDE CIRCLE	STURBRIDGE	MA	01566	37 WOODSIDE CIRCLE
	BOARD OF ASSESSORS					
Above persons listed are record owners as they appear on the most recent applicable tax list.						
Assessors are not responsible for errors or omissions. RE: M.G.L. - Chapter 40A, Section 11						
Abutters List -	Conservation Commission - 200'					
RE: 53 CARON ROAD						
Certified Copy						
Assessor:	<i>Adam P. Murphy</i>					
Date:	5-6-2020					



Town of Sturbridge

Conservation Commission

Notification to Abutters under the MA Wetlands Protection Act and the Town of Sturbridge Wetland Bylaw Regulations

In accordance with the second paragraph of Massachusetts General Laws, Chapter 131, § 40, as well as the Town of Sturbridge Wetland Bylaws, you are hereby notified of the following permit application for work within a wetland resource area and/or within the 200-foot buffer zone to a resource area:

- A. The name of the applicant is: Dr. Young - Ho Oh
- B. The address of the lot(s) where the activity is proposed is: 53 Caron Road
- C. The nature of the activity proposed includes: Heating Fuel Oil Spill Response Clean-Up
- D. The applicant has filed the following in accordance with the Wetlands Protection Act (MGL c. 131, § 40), and/or the Town of Sturbridge Wetland Bylaws.
- Notice of Intent seeking permission to conduct work within a wetland, water body or resource area
 - Request for Determination seeking permission to conduct work within a buffer zone to a wetland, waterbody or resource area
 - Abbreviated Notice of Resource Area Delineation seeking to confirm the wetland resource area boundaries.
 - Request to amend an existing Order of Conditions for DEP File #300-_____
- E. Copies of the application may be examined at the Sturbridge Conservation Department, 301 Main Street, Center Office Building, Sturbridge, MA between the hours of **9:00 a.m. – 3:30 p.m. Monday through Friday**. Additional times may available by appointment. Please call ahead to check for availability. (508) 347-2506
- F. Copies of the application may be obtained from either the applicant: _____
or the applicant's representative: CMG Environmental, Inc., by calling telephone # (774) 241-0901
on the following days of the week: Mon. - Fri. between the hours of 9:00 AM and 4:00 PM.

**The Public Hearing for this application will be held in the Center Office Building, 301 Main Street,
2nd Floor on July 7, 2020 at 6:00 pm.**

PLEASE NOTE: Notice of this Public Hearing will be published as follows:

- In The Southbridge Evening News at least five days in advance of the hearing
- In the Town Hall at the Town Clerks office, not less than 48 hours in advance of the hearing
- On the Town's Meeting Calendar not less than 48 hours in advance of the hearing (www.town.sturbridge.ma.us)
- On the Conservation Commission webpage not less than 48 hours in advance of the hearing

You may contact the Sturbridge Conservation Commission Office (508) 347-2506 or the Department of Environmental Protection Central Regional Office at 508-792-7650 with questions in regards to the Notice of Intent application process or the Wetlands Protection Act.



Town of Sturbridge

Conservation Commission

Filing Fee Worksheet

Under M.G.L. c 131, § 40 and the Town of Sturbridge Wetland Bylaw

Applicant Dr. Young - Ho Oh

Applicant Representative CMG Environmental, Inc.

Project location 53 Caron Road, Sturbridge, MA

TOTAL STATE FEE REQUIRED FOR PROJECT

(Only subject to NOI and ANRAD filings—See Wetland Fee Transmittal Form):

State Fee Category(s) Hazardous Cleanup

Total State Fee for project (include Riverfront Area adjustment if applicable) \$1,050.00

State share of State Fee \$512.50

Local share of State Fee \$537.50

TOTAL ADDITIONAL LOCAL FEE REQUIRED FOR PROJECT*:

(See Sturbridge Wetland Bylaw Regulations Section 4.17)

- Standard NOI Fee = \$50.00 _____ (check if applicable)
- Standard RDA Fee = \$25.00 _____ (check if applicable)
- Standard ANRAD Fee = \$00.10 per foot for resource area delineation _____ (check if applicable).
feet _____ x \$00.10 = \$ _____
- Standard DELINEATION Fee = \$00.10 per foot for resource area delineation _____ (for all projects).
feet _____ x \$00.10 = \$ _____
- (for all projects that do not include an approved wetland delineation boundary by the Commission within 3 years prior to application submittal)
- REPLICATION Monitoring Fee = \$200.00 _____ (check if applicable)
(for all projects that include wetland alteration and wetland replication)

CUMULATIVE TOTAL FEES:

Total State Fee: \$1,050.00

Total Town Share of State Fee: \$537.50

Total Local Fee: \$50.00

*Please Note:

For each NOI and ANRAD filing, please submit two (2) checks to the Town of Sturbridge, one for the town's portion of the state fee and one for the local fee(s). RDA filings only have a Local Fee at this time.

The advertising fee is not included in the calculation. The Applicant will pay the Southbridge News directly.



Town of Sturbridge

Barbara A. Barry, Finance Director

Department/Board/Committee: Conservation

Please verify outstanding tax/fee status for the following property owner:

Property Owner: 53 Caron Road Nominee Realty Trust

Property Location: 53 Caron Road

- The license/permit may be released.
 The license/permit may not be released.

Barbara A. Barry
Finance Director

5/6/2020
Date

NOI Supplemental Information

Attachments:

- Emergency Certification Form, prepared by Town of Sturbridge Conservation Commission, dated December 20, 2019.
- Immediate Response Action Status Report, prepared by CMG Environmental, Inc., dated November 12, 2019.
- Immediate Response Action Status Report #2, prepared by CMG Environmental, Inc., dated May 5, 2020
- Figure 2 Site Plan (From IRA Plan), prepared by CMG Environmental, Inc., IRA Plan dated September 6, 2019.
- USGS Figure 1, prepared by CMG Environmental, Inc.
- National Flood Hazard Layer FIRMette, obtained from FEMA online map resources
- MassWildlife's Natural Heritage & Endangered Species Program (NHESP) Map, obtained from MassGIS online resources.



2019-157

Town of Sturbridge

Conservation Commission

December 20, 2019

Mr. Jerry Clark
CMG Environmental, Inc.
67 Hall Road
Sturbridge, MA 01566

Re: 53 Caron Road, Sturbridge, MA

Dear Mr. Clark:

Enclosed plead find an Emergency Certification Form extending the remediation activities for 53 Caron Road, Sturbridge, MA. This extension is being issued to allow for continued remediation work at the site through February 22, 2020.

As a reminder, all remediation work shall be completed under the direction of a Licensed Site Professional, and sedimentation controls shall be installed and remain in place until the site is stabilized. **Prior to the start of excavation activities, a pre-activity meeting of the Conservation Agent, LSP and contractor shall be held, please contact the Conservation Department to coordinate the meeting.** A report summarizing the continued remediation work should be submitted to the Sturbridge Conservation Commission within one week of completion.

Kindly note that an "after-the-fact" Notice of Intent is required for all completed and continued activities for this project and must be submitted within 21 days from the issuance of this Emergency Certification, by January 10, 2020. The application can be obtained at the Conservation Commission office located at 301 Main Street, Center Office Building, Sturbridge, MA; or at the following link https://www.sturbridge.gov/sites/sturbridgema/files/uploads/noi_packet_combined_pdfs_0.pdf from the Town of Sturbridge website. Please feel free to contact the Conservation Department with any questions or comments related to this filing.

Thank you for your anticipated cooperation.

Respectfully,

Rebecca Gendreau
Conservation Agent

CC: Dino DelleChiaie, MassDEP
Young-Ho Oh, Owner 53 Caron Road



WPA Emergency Certification Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

C. General Conditions

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Emergency Certification or subject to enforcement action.
2. This Emergency Certification does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of property rights.
3. This Emergency Certification does not relieve the applicant or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. Any work conducted beyond that described above, and any work conducted beyond that necessary to abate the emergency, shall require the filing of a Notice of Intent.
5. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Emergency Certification at reasonable hours to evaluate compliance with this Certification, and may require the submittal of any data deemed necessary by the Conservation Commission or the Department for that evaluation.
6. This Emergency Certification shall apply to any contractor or any other person performing work authorized under this Certification.
7. No work may be authorized beyond 30 days from the date of this certification without written approval of the Department.

D. Special Conditions

Follow all special conditions in the Emergency Certification issued on October 22, 2019. As previously disclosed, a Notice of Intent must be submitted for all completed and continued activities. This must be submitted within 21 days of issuance of this Emergency Authorization.

E. Appeals

The Department may, on its own motion or at the request of any person, review: an emergency certification issued by a conservation commission and any work permitted thereunder; a denial by a conservation commission of a request for emergency certification; or the failure by a conservation commission to act within 24 hours of a request for emergency certification. Such review shall not operate to stay the work permitted by the emergency certification unless the Department specifically so orders. The Department's review shall be conducted within seven days of: issuance by a conservation commission of the emergency certification; denial by a conservation commission of the emergency certification; or failure by a conservation commission to act within 24 hours of a request for emergency certification. If certification was improperly granted, or the work allowed thereunder is excessive or not required to protect the health and safety of citizens of the Commonwealth, the Department may revoke the emergency certification, condition the work permitted thereunder, or take such other action as it deems appropriate.

ENVIRONMENTAL
SERVICES



ENGINEERING
SERVICES

INITIAL IMMEDIATE RESPONSE
ACTION STATUS REPORT RELEASE
TRACKING NUMBER 2-20941

RESIDENTIAL RELEASE

53 CARON ROAD
STURBRIDGE, MASSACHUSETTS

NOVEMBER 12, 2019

PREPARED FOR:

DR. YOUNG-HO OH
53 CARON ROAD
STURBRIDGE, MA 01566

PREPARED BY:


CMG ENVIRONMENTAL, INC.
CMG ID 2019-137

67 HALL ROAD
STURBRIDGE, MA 01566
PHONE (774) 241-0901
FAX (774) 241-0906

747 FARMINGTON AVENUE
NEW BRITAIN, CT 06053
PHONE (866) 304-7625

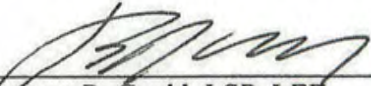
SIGNATURE OF REPORT AUTHORS

The undersigned employees of CMG Environmental, Inc. (CMG) prepared and reviewed this report. Please direct any requests for additional information regarding the content of this document to these individuals.




Sandra N. Rushlo
Environmental Scientist

November 12, 2019
Date



Benson R. Gould, LSP, LEP
Licensed Site Professional #9923

November 12, 2019
Date



Gerald M. Clark
Principal

11/12/19
Date

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Figure 1 – Site Location

Figure 2 – Site Plan

Figure 3 – Priority Resource Map

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Table 1 – Drinking Water Quality Results

Table 2 – Indoor Air Testing Data

Table 2A – Indoor Air Risk

1.0 INTRODUCTION

CMG Environmental, Inc. (CMG) has prepared this Immediate Response Action (IRA) Status Report for a portion of the property located at 53 Caron Road in Sturbridge, Massachusetts (the Property). Figure 1 (Site Location Map) depicts the Property in relation to streets and other topographic features.

This IRA Status Report addresses release tracking number (RTN) 2-20941. CMG followed regulations set forth by the Massachusetts Department of Environmental Protection (DEP) in the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000) in preparing this IRA Status Report.

1.1 PURPOSE

The purpose of an IRA is to address urgent releases or threats of release at a ‘disposal site’¹ that trigger two-hour notifications pursuant to 310 CMR 40.0311 or 40.0312, or 72-hour notifications per 40.0313 or 40.0314.

The purpose of an IRA Status Report is to document IRA activities completed since submittal of the last IRA Report (in this case, the September 6, 2019 IRA Plan), in accordance with 310 CMR 40.0425.

1.2 SITE LOCATION & IDENTIFICATION

The Property is located at 53 Caron Road, Sturbridge MA 01566. It is on the easterly side of the north end of Caron Road, approximately ¼ mile north of its intersection with Valley Road. Sturbridge Assessor’s Map 195 identifies the Property as Block 2131, Lot 53, which consists of 13,503 square feet (approximately 0.31 acres) of land.

CMG defines “the Site” (disposal site) as the area between the house and Cedar Pond to the east where we identified fuel oil impacts to soil, groundwater, and surface water. The Site is at 42°07'33" north latitude (42.12571 °N), 72°05'20" west longitude (-72.08894 °E). The UTM (Universal Transverse Mercator) coordinates in the middle of the Site are 4,667,850 meters north and 740,600 meters east in Zone 18. Figure 2 (Site Plan) depicts the limits of the RTN 2-20941 ‘disposal site’ in relation to Property boundaries and other features.

1.3 CURRENT PROPERTY OCCUPANTS & USE

The Property consists of an owner-occupied single-family residence with a detached garage and finished basement.

1.4 RELEASE AT SITE

The residence uses fuel oil, stored in a 275-gallon aboveground storage tank (AST) located outside the south wall of the house within a wooden shed, for heating. On July 8, 2019, the homeowner observed the AST to be empty and called Southbridge Tire Company (STC) in Southbridge, Massachusetts, which provides fuel oil to the Property. STC contacted CMG to report a release

¹ Defined at 310 CMR 40.0006 as “any structure, well, pit, pond, lagoon, impoundment, ditch, landfill or other place or area, excluding ambient air or surface water, where uncontrolled oil and/or hazardous material [OHM] has come to be located as a result of any spilling, leaking, pouring, abandoning, emitting, emptying, discharging, injecting, escaping, leaching, dumping, discarding or otherwise disposing of such [OHM].”

from the AST, which they calculated as approximately 150 gallons. CMG inspected the Site and observed the source of the release to be an aboveground copper fuel line for the AST. We also noted an oil sheen coming from a retaining wall along Cedar Lake, measured at 21' from the release area.

1.5 IRA APPROVAL

At 2:30 p.m. on July 8, 2019, CMG verbally reported the 2-hour release identified as RTN 2-20941 to DEP on behalf of Dr. Young-Ho Oh, the homeowner. We presented a verbal IRA Plan to Mr. Dino DelleChiaie of DEP at that time, and DEP granted verbal approval to deploy absorbents to the surface water and remove impacted soil between the AST and the retaining wall along the lake, with dewatering as necessary. DEP requested that CMG contact the Sturbridge Fire Department, Conservation Commission & Board of Health, which we did later that day.

This IRA Plan provides written documentation of our verbal IRA Plan approved by DEP, as required by 310 CMR 40.0420(7).

On August 13, 21 & 23, 2019, DEP modified the IRA Plan based on discussions with CMG. Section 2.2 summarizes our activities and discussions.

1.6 POTENTIALLY RESPONSIBLE PARTY INFORMATION

PRP² Name: Dr. Young-Ho Oh, homeowner

Address: 53 Caron Road
Sturbridge, MA 01566

Contact: Dr. Young-Ho Oh
508-740-9779

2.0 RESPONSE ACTION STATUS [40.0425]

The MCP requires submittal of an initial written IRA Status Report within 120 days of the date that the person conducting IRA activities first notified DEP of their intention to conduct an IRA. CMG verbally notified DEP of Dr. Young-Ho Oh's intention to conduct an IRA at the time of release notification, on July 8, 2019.

2.1 IRA ACTIVITIES CONDUCTED SINCE IRA PLAN SUBMITTAL [40.0425(3)(a)]

AUGUST 30, 2019

CMG inspected the Site; when we arrived the recovery tank was approximately $\frac{3}{4}$ full with a heavy sheen of up to $\frac{1}{8}$ " of oil. We adjusted the pump to bring it higher within the tank so as not to collect as much water.

SEPTEMBER 3, 2019

CMG inspected the harbor boom, which were in good condition, with no obvious sheen on the water inside or outside the boom. The recovery tank was full with approximately $\frac{1}{4}$ " of oil on the

² "PRP" = Potentially Responsible Party, defined at 310 CMR 40.0006 as "a person who is potentially liable pursuant to M.G.L. c. 21E" (Massachusetts General Law Chapter 21E, the Massachusetts Oil and Hazardous Material Release Prevention Act).

water surface; NEDT pumped it later on this date. CMG returned to the Site later and set the pump higher. We opined that the pump was running too often and accumulating excess water.

SEPTEMBER 4, 2019

CMG inspected the booms, which were in good condition, with no sheen outside the harbor boom. There was a slight sheen inside the boom. We observed that the recovery tank was about $\frac{3}{4}$ full. CMG noted emulsified oil on the water surface within the tank (approximately $\frac{1}{8}$ " thick but not of consistent thickness). We observed a heavy sheen in the recovery well with large blobs of oil, not of measurable thickness. CMG turned off the pump to evaluate the oil recharge. We returned approximately $8\frac{1}{2}$ hours later and noted little to no oil recovery.

SEPTEMBER 5, 2019

CMG was on-Site to inspect the boom and oil recharge. We observed approximately 1" of oil on the water surface in the recovery well. CMG turned the pump back on and inspected the boom. We did not note any obvious sheen inside the boom or outside the harbor boom. CMG measured approximately $\frac{1}{8}$ " of emulsified oil in the recovery tank; NEDT pumped the tank again.

SEPTEMBER 6, 2019

NEDT pumped the recovery tank in the morning before CMG arrived at the Site. We noted that the booms were in good condition, no sheen outside the harbor boom, a slight sheen inside the harbor boom, and the pump was running.

SEPTEMBER 7, 2019

CMG observed the booms to be in good condition with no sheen outside, a slight sheen inside the boom, and the pump was working properly.

SEPTEMBER 9, 2019

On this day, CMG noted the tank was full, with approximately $\frac{1}{4}$ " of floating oil; we called NEDT for pump out. The boom were in good condition, with no sheen anywhere.

SEPTEMBER 11, 2019

CMG inspected the recovery well and noted approximately $\frac{1}{16}$ " of oil on the water and the pump was working. We did not note any sheen in the lake or inside the harbor boom.

SEPTEMBER 12, 2019

CMG inspected the recovery well and measured the top of the water at 7.2' deep, and the top of the oil layer at 6.98' deep (approximately 2.6" thick) using an interface probe. We lowered the pump to evaluate recharge, which appeared substantial; CMG left the pump at this depth. The boom were in good condition with no sheen on the water inside or outside of the boom.

SEPTEMBER 13, 2019

On this date CMG observed the tank to be $\frac{3}{4}$ full with a foamy, inconsistent layer of oil. The recovery well had a heavy sheen on the water surface. In addition, CMG noted a sheen on the water contained inside the harbor boom. NEDT arrived later on this date to pump the tank.

SEPTEMBER 16, 2019

CMG inspected the Site and changed the absorbent boom inside the harbor boom; we did not observe any sheen inside or outside of the harbor boom. CMG measured a $\frac{1}{4}$ "-thick layer of

emulsified oil on the water in the recovery tank, which was full; NEDT pumped the tank out. CMG measured a layer of oil in the recovery well approximately 0.6" thick. NEDT was on-Site to install a second recovery well, designated RW-2, which was 18" in diameter. NEDT vacuumed to 42" below ground surface and encountered water at approximately 27" below grade. CMG noted large globs of oil forming on the water surface.

SEPTEMBER 17, 2019

CMG found the pump running in RW-1 with globs of oil on the water surface. RW-2 had small beads of oil. The recovery tank was $\frac{3}{4}$ full; we requested NEDT pump it out the following day. There was no sheen on the water in the lake.

SEPTEMBER 18, 2019

CMG arrived on-Site for inspection and met with NEDT and a structural engineer. NEDT pumped out the recovery tank, which had frothy emulsified oil of inconsistent thickness. CMG was unable to measure the thickness but estimated it at $\frac{1}{16}$ - $\frac{3}{16}$ " thick. We observed small globs of oil in RW-1, also not measurable; RW-2 had a light oil sheen. There was no sheen on the lake water inside or outside the boom.

SEPTEMBER 20, 2019

CMG observed the recovery tank to be $\frac{1}{4}$ full; NEDT pumped it out. RW-1 had dime- to quarter-sized blobs of oil on the water. RW-2 had a light sheen. There was no oil on the lake outside of the harbor boom; inside there was a light sheen visibly emanating from the wall along the lake.

SEPTEMBER 23, 2019

NEDT pumped the tank again on this day. The pump in RW-1 was working and the water had small globs of oil. CMG established checkpoints (CPs) between the rock wall and the headwall separating the house from the lake. These points are approximately 3' southeast of the rock wall and 9' northwest of the headwall; CP-F, CP-G, and CP-H are located approximately 3', 13', and 20' northeast of the house, respectively. CP-F had a heavy floating mass of oil in some areas, up to $\frac{1}{8}$ " thick. CP-G had a $\frac{1}{4}$ " thick layer of oil; CP-H had no oil. CMG observed the boom to be in good condition, with a sheen inside but no sheen outside.

SEPTEMBER 24, 2019

CMG noted globs of oil of inconsistent thickness on the water in RW-1. CP-F had oil up to $\frac{1}{8}$ " thick, CP-G had a layer approximately $\frac{1}{8}$ - $\frac{1}{4}$ " thick, and CP-H had none. The recovery tank had $\frac{1}{8}$ " of foamy oil on the water surface. RW-2 had a sheen of oil. There was no sheen outside the harbor boom, with a slight sheen inside of inconsistent thickness.

SEPTEMBER 25, 2019

CMG observed the booms to be in good condition with no sheen outside the harbor boom and a slight sheen inside. The tank was almost full with $\frac{1}{4}$ " of oil on the water; NEDT pumped the tank on September 26. The pump was running in RW-1 with globs of oil; RW-2 had a slight sheen.

SEPTEMBER 26, 2019

CMG observed the recovery tank to be full, with a $\frac{1}{4}$ " layer of oil across 80% of the surface. RW-1 had small globs of oil over approximately 10% of the 18" diameter surface. RW-2 had a sheen. CP-F & CP-G had approximately $\frac{1}{16}$ " thick layers of oil; CP-H had no oil. We noted the

boom was in good condition, no sheen outside the harbor boom, and a light sheen by the wall within the boom.

SEPTEMBER 27, 2019

NEDT pumped the recovery tank in the morning. CMG observed the harbor boom to be in good condition, with a slight sheen inside and no sheen outside the boom. RW-1 had small dots of oil; RW-2 had a slight sheen. CP-F had a 1/16"-thick layer, CP-G had 1/4", and there was no oil at CP-H.

SEPTEMBER 30, 2019

NEDT pumped the recovery tank out; the pump was operational. CMG noted quarter-sized blobs of oil over approximately 25% of the surface of RW-1. RW-2 had a light sheen. We observed a 1/16"-thick layer of oil at CP-F and a 1/8"-thick layer at CP-G, and we installed absorbent pads in each. CP-H still had no visible oil.

OCTOBER 1, 2019

CMG collected a groundwater sample from the recovery tank, which was 3/4 full, for disposal characterization. RW-1 had quarter-sized globs of oil on the surface; the pump was running. RW-2 had an oil sheen. CP-F, -G & -H had pads in them. The boom were in good condition with no sheen outside of the harbor boom, and a slight sheen inside.

OCTOBER 3, 2019

CMG inspected RW-1; the pump was off and the well was full, with a light oil sheen on the water. RW-2 had a faint oil sheen. CP-F had pink coloration on the pads, CP-G had a slight pink color on the pads, and CP-H was clean.

OCTOBER 7, 2019

CMG observed a layer of oil 1/8" thick in RW-1, but only a very faint sheen on RW-2. CP-F & CP-G had tiny beads of oil; CP-H had none. The pump was off pending approval from Global Cycle to dispose of recovered water. The boom were all good, with no sheen inside or outside.

OCTOBER 8, 2019

CMG noted that RW-1 had approximately 1" of oil on the water surface; since the pump was shut off the well is accumulating oil. RW-2 had a very light sheen, as did CP-F and CP-G. Checkpoint CP-H did not have any oil; all the boom were in good condition with no sheen.

OCTOBER 11, 2019

NEDT pumped the recovery tank on this day. CMG observed large, inconsistent globs of oil in RW-1. There was a very light sheen on RW-2, as well as on CP-F & CP-G. There was no sheen on CP-H. There was a heavy sheen inside of the boom; CMG requested NEDT change the boom.

OCTOBER 14, 2019

CMG inspected the recovery tank, which was full; NEDT pumped it out. RW-1 had quarter-sized globs of oil; RW-2 had no sheen. CP-F & CP-G each had a slight sheen, and CP-H was clear. There was no sheen outside the new harbor boom, with a slight sheen inside.

OCTOBER 16, 2019

CMG observed large globs of oil on the water surface of RW-1, and no sheen in RW-2. CP-F had small dots (smaller than dime-size) of oil; CP-G had a light sheen and CP-H had no sheen. The recovery tank was full; NEDT pumped it out later that day.

OCTOBER 17, 2019

CMG inspected RW-1, which had a heavy sheen with large globs of oil; RW-2, however, had no sheen. CP-F had a heavy sheen, CP-G had a light sheen, and CP-H had no sheen. The booms were good and we did not observe any sheen on the lake.

OCTOBER 18, 2019

CMG found the recovery tank to be full, with a ¼"-thick layer of oil on the water; NEDT arrived later to pump the tank. We noted a heavy sheen with globs of oil in RW-1, a light sheen in RW-2, and a light sheen in CP-F and CP-G. CP-H did not have any sheen. NEDT changed out the boom; there was no sheen on the lake.

OCTOBER 21, 2019

NEDT pumped the tank prior to CMG's arrival. We noted a sheen in RW-1 with quarter-sized dots of oil on the water surface. RW-2 had no sheen, nor did CP-H; there was a sheen at CP-F and at CP-G. The boom were in good condition, with no sheen on the water inside or outside of the boom.

OCTOBER 23, 2019

CMG noted the tank was full and requested that NEDT pump it out. RW-1 had a heavy sheen with small droplets of oil. RW-2 and CP-F each had a light sheen, CP-G had a very light sheen, and CP-H had nothing. There was no sheen on the water of the lake, and booms were in good condition.

OCTOBER 24, 2019

NEDT pumped the tank prior to CMG's arrival. CMG decided to shut off the pump for several days to evaluate the degree of oil recharge. We noted a heavy sheen with small globs of oil in RW-1. CMG did not observe any sheen at RW-2 or CP-H, a heavy sheen at CP-F, and a light sheen at CP-G. We did not see any sheen on the lake, and the booms were in good condition.

OCTOBER 29, 2019

When CMG arrived at the Site, the pump was off; we manually ran it until it was dry. Prior to pumping, RW-1 had a layer approximately 1/16" thick over the entire surface. RW-2 had a light sheen, as did CP-F and CP-G; H had no sheen. The boom and the lake were both good.

OCTOBER 31, 2019

CMG arrived at the Site and the pump was off; we ran it through two cycles and found the recharge was consistent. We noted a heavy sheen with globs of oil, approximately 1/16" thick, in RW-1, and a light sheen in RW-2. CP-F had a heavy sheen, CP-G had a very faint sheen, and CP-H had no sheen. CMG observed the boom to be in good condition; the lake had a very slight sheen near the wall close to the house.

NOVEMBER 1, 2019

CMG inspected the pump, which was off; we ran it and noted that it recharged with a heavy sheen and large globs of oil. There was a 1/16"-thick layer of oil in RW-1 and a very faint sheen in

RW-2. We noted CP-F had a heavy sheen, CP-G had a very faint sheen, and CP-H had no sheen. The boom were good and the lake had a slight sheen near the wall closest to the house.

NOVEMBER 4, 2019

On this day, CMG found all recovery wells and observation holes dry. The Town of Sturbridge was drawing the lake down; the boom were still in place but we repositioned them based on the new water level.

2.2 SIGNIFICANT NEW INFORMATION OR DATA [40.0425(3)(b)]

CMG has inspected the Site on an almost daily basis since our IRA Plan. We have completed the first few steps of our September 6, 2019 IRA Plan, including installation of a second recovery well, monitoring the recovery wells and tank, and monitoring boom and sheen on the lake surface. The wells continue to recover oily water, and we have observed product in the recovery tank. This information indicates that IRA activities are not complete, but the measures undertaken so far are gradually improving Site conditions.

2.3 REMEDIATION WASTE [40.0425(3)(c)]

CMG is coordinating off-Site disposal of contaminated groundwater. We will coordinate disposal of impacted soil once we begin soil boring and excavation activities.

2.4 REMEDIATION SYSTEM MONITORING DATA [40.0425(3)(d)]

CMG has not operated any remedial systems at the Site to date apart from product recovery.

2.5 MITIGATION OF CRITICAL EXPOSURE PATHWAY [40.0425(5)]

The MCP defines Critical Exposure Pathway (CEP) at 310 CMR 40.0006(12) as:

... those routes by which [OHM] released at a disposal site are transported, or are likely to be transported, to human receptors via:

- (a) vapor-phase emissions of measurable concentrations of [OHM] into the living or working space of a pre-school, daycare, school or occupied residential dwelling; or
- (b) ingestion, dermal absorption or inhalation of measurable concentrations of [OHM] from drinking water supply wells located at and servicing a pre-school, daycare, school or occupied residential dwelling.

CMG has not identified a CEP associated with the RTN 2-20941 release.

2.6 ADDITIONAL INFORMATION [40.0425(3)(d)]

CMG is not aware of any additional IRA information that DEP has deemed appropriate and necessary to review and evaluate this IRA Plan.

2.7 LICENSED SITE PROFESSIONAL (LSP) OPINION [40.0425(3)(e)]

CMG prepared a Form BWSC105 ["Immediate Response Action (IRA) Transmittal Form"] using the eDEP electronic submittal system. Section E of this form presents the LSP Opinion regarding this IRA Status Report for RTN 2-20941. Section I of this form presents the certification required by 310 CMR 40.0425(3)(e). CMG has attached a .pdf copy of this IRA Status Report to the Form BWSC105 submitted electronically.

3.0 LIMITATIONS & CONDITIONS

3.1 METHODOLOGY

CMG Environmental, Inc. followed guidelines set forth by the DEP in the MCP and employed a “level of diligence reasonably necessary to obtain the quantity and quality of information adequate to assess” the disposal site in accordance with the Response Action Performance Standard promulgated at 310 CMR 40.0191.

Moreover, CMG followed guidelines set forth by DEP in the MCP. We specifically complied with IRA requirements set forth at 310 CMR 40.0410 through 40.0429.

3.2 SCOPE OF SERVICES

Dr. Young-Ho Oh authorized CMG to conduct IRA activities, including preparation of this IRA Status Report, on July 11, 2019. We performed the following scope of services between September & November 2019:

- Conducted inspections of the Site several times a week to evaluate the presence of NAPL or oily sheen and to recover oil;
- Deployed absorbent boom, harbor boom, and snare boom in the lake to contain the fuel oil;
- Supervised NEDT in skimming oil off the lake surface and replacing boom;
- Supervised installation of a recovery well within secondary containment, placed boom around it, and installed a submersible pump connected to a recovery tank with automatic shutoff to recover fuel oil;
- Prepared an IRA Status Report transmittal form for Dr. Oh’s electronic certification and eDEP submittal; and
- Prepared this IRA Status Report.

3.3 GENERAL LIMITATIONS

CMG conducted IRA response actions in accordance with generally accepted engineering and hydrogeologic practices. CMG makes no other warranty, express or implied. CMG cannot provide absolute assurance that we have identified any and all recognized environmental conditions (including DEP reportable conditions) at the Site.

Where CMG included visual or other observations in this report, they represent conditions visibly and/or physically observed at the time of the inspection, or verified through interviewing or by record review, and may not be indicative of past or future Site conditions.

Please be advised that environmental conditions at the Site and surrounding properties may change in time. CMG does not render an opinion as to environmental Site conditions that change after the date of the environmental studies reported herein.

3.4 SPECIFIC CONDITIONS OF THE IRA STATUS REPORT

CMG based the conclusions of this report, in large part, on information provided by the client, their agents, or third parties, including state or local officials. CMG assumes no responsibility for the accuracy and completeness of this information.

CMG based the conclusions discussed herein solely and in reliance upon information collected during activities detailed in our Scope of Services (see Section 3.2 above).

CMG's subsurface investigation included the qualitative analysis of soil and NAPL conditions from a limited number of locations at the Site. However, CMG did not intend this study to be an exhaustive investigation of subsurface conditions at the Property. CMG restricted the scope of services for this investigation due to time and/or cost constraints, and though we did undertake a limited amount of analytical testing, currently unrecognized subsurface conditions may exist at the Property. Increasing exploration (such as placement of test pits, completion of additional soil borings with subsequent collection of soil samples for laboratory analysis, installation of additional groundwater monitoring wells with subsequent collection of groundwater samples for laboratory analysis, and conducting surface geophysical survey techniques) may better delineate subsurface conditions.

CMG's Site inspection included observing the Site and surrounding area. However not all Site boundaries were clearly delineated, making it difficult to distinguish certain Site features from those of the surrounding area. Therefore, the location of certain Site features described in this Report and depicted on the figures may be approximate.

3.5 RELIANCE

CMG prepared this IRA Status Report for the sole use of Dr. Oh, his successors and assigns to address DEP reporting obligations regarding assessment and remediation activities associated with RTN 2-20941. CMG does not authorize use of this information by others for any reason, except with our prior written consent.

4.0 REFERENCES

INTERVIEWS

Homeowner Dr. Young-Ho Oh, several occasions beginning July 8, 2019.

New England Disposal Technologies, Inc.: President Michael Robertson, several occasions beginning July 8, 2019.

STURBRIDGE

Assessor's Office: records reviewed online at <https://www.sturbridge.gov/assessor>.

MASSACHUSETTS

Department of Environmental Protection: Cleanup Sites Search, records reviewed online at <http://db.state.ma.us/dep/cleanup/sites/search.asp>.

Department of Environmental Protection: Massachusetts Contingency Plan regulations (310 CMR 40.0000), April 25, 2014 revision.

Division of Water Pollution Control regulations (314 CMR 4.00): December 27, 1996 revision.

Geographic Information Systems: MassDEP Priority Resource Map Viewer information downloaded August 30, 2019 from <http://maps.massgis.state.ma.us/21E/viewer.htm>.

UNITED STATES

Geological Survey: "East Brookfield, Massachusetts" 7.5-minute series topographic quadrangle, dated 2018.

PREVIOUS ENVIRONMENTAL REPORTS

CMG Environmental, Inc.: "Immediate Response Action Plan," dated September 6, 2019.

FIGURES

FIGURE 1 – SITE LOCATION

FIGURE 2 – SITE PLAN

FIGURE 3 – PRIORITY RESOURCE MAP

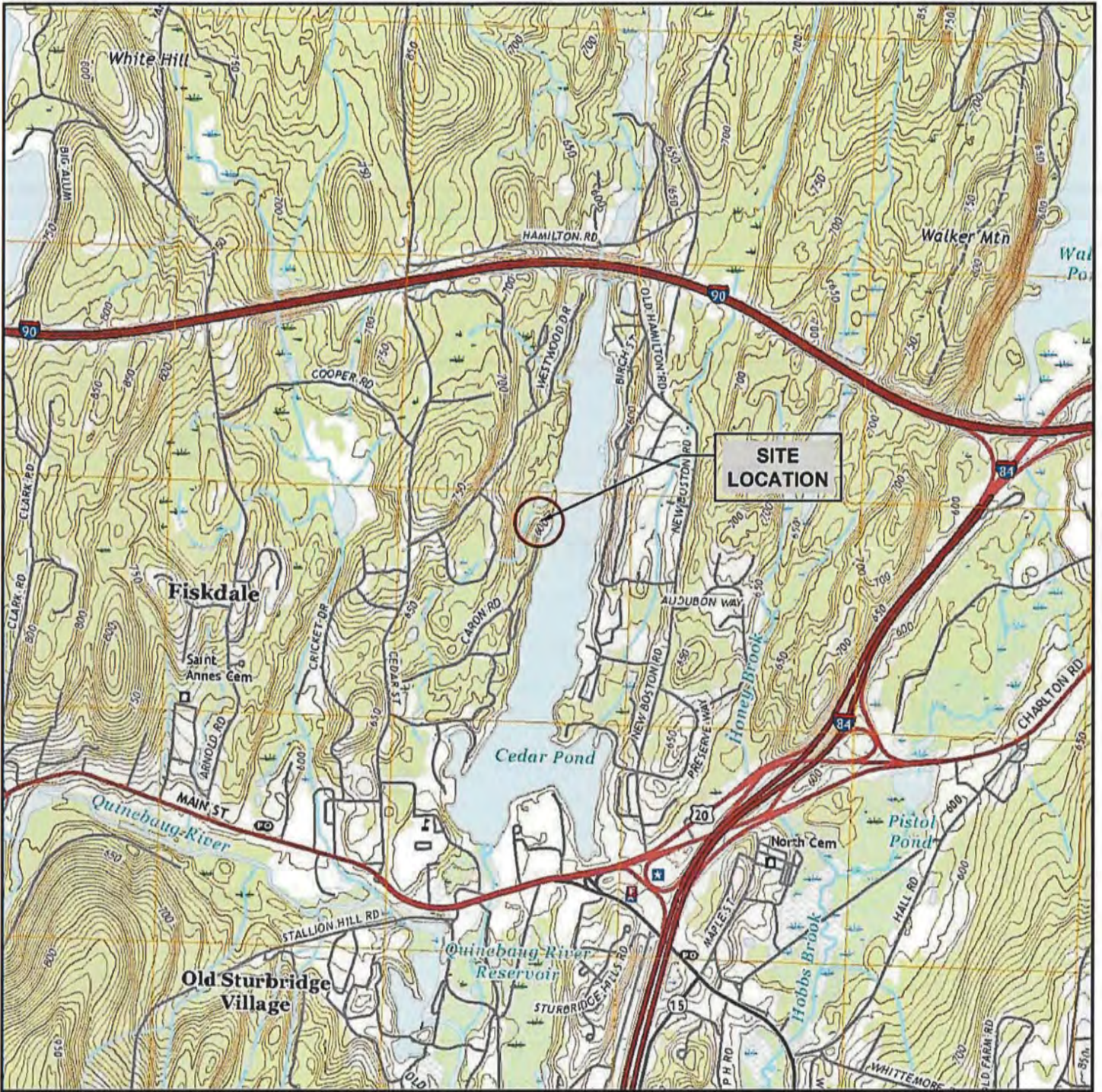
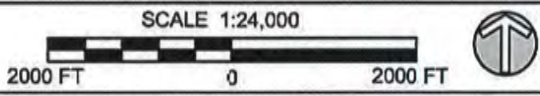
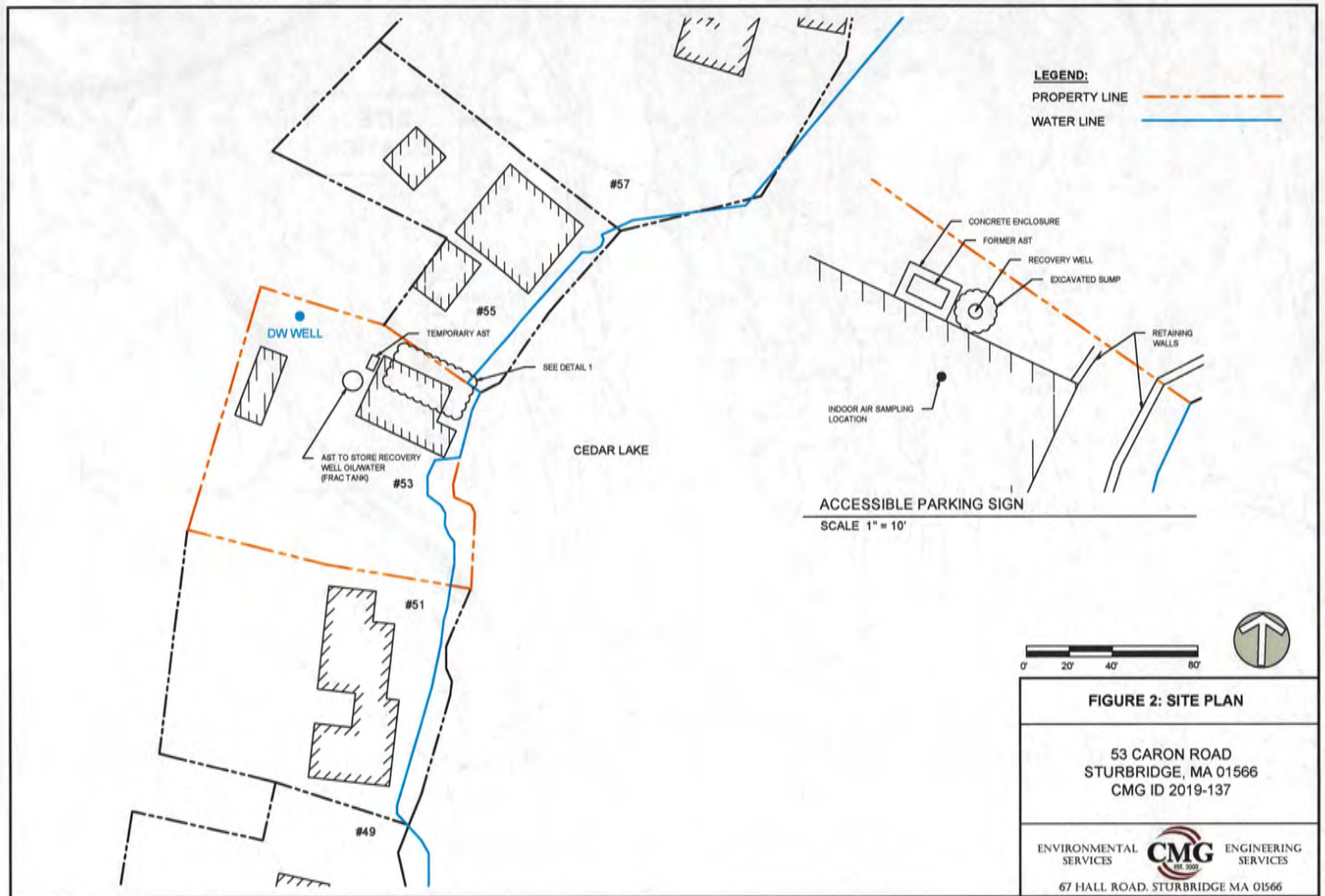


FIGURE 1: SITE LOCATION

53 CARON ROAD
 STURBRIDGE, MA 01566
 CMG ID 2019-137



ENVIRONMENTAL SERVICES **CMG** ENGINEERING SERVICES
EST. 2002
 67 HALL ROAD, STURBRIDGE MA 01566



MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:

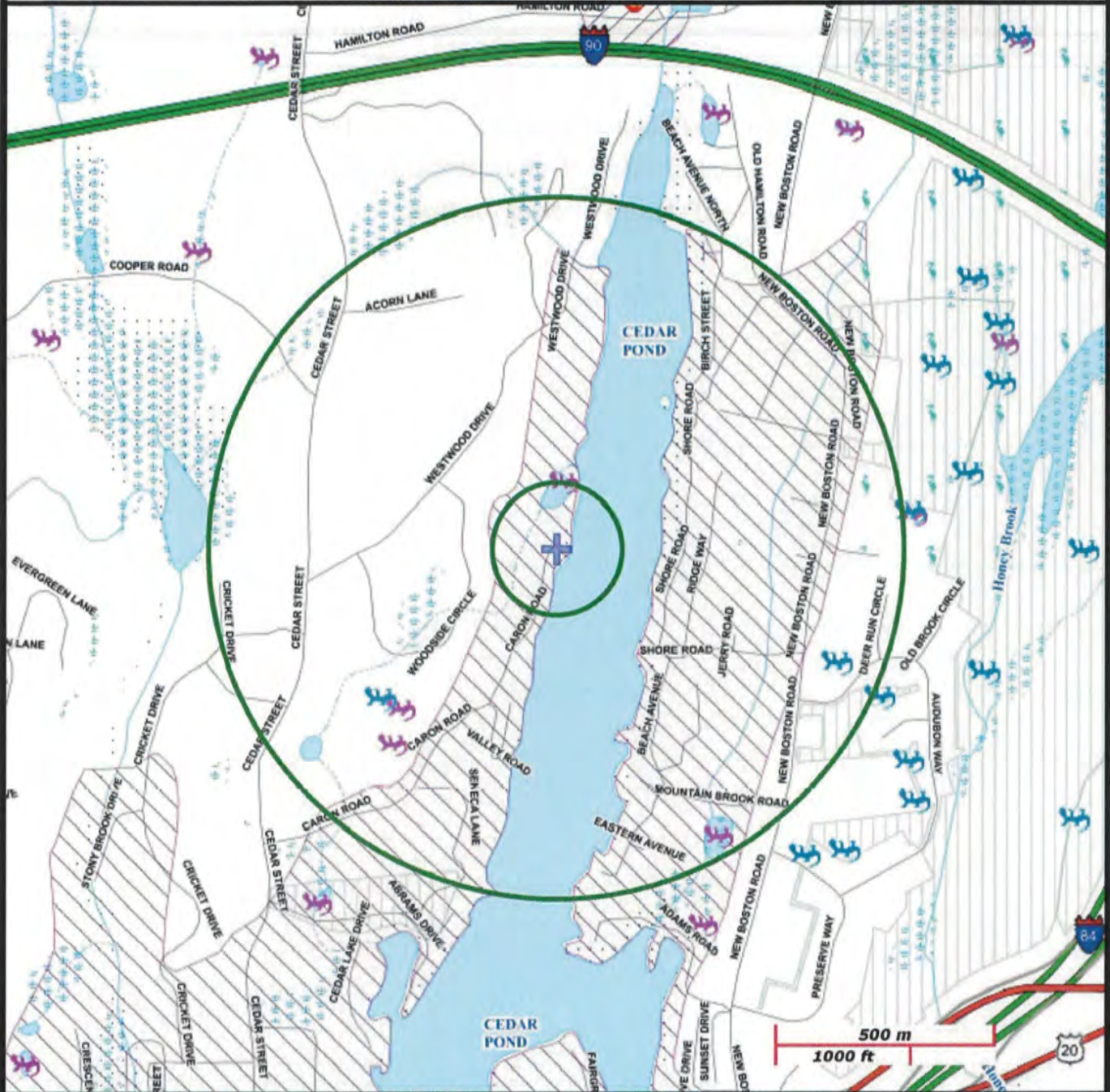
53 CARON ROAD STURBRIDGE, MA
 2-000020941
 NAD83 UTM Meters:
 4667843mN, 740622mE (Zone: 18)
 August 30, 2019

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<https://www.mass.gov/orgs/massdeps-bureau-of-geographic-information>



MassDEP

Commonwealth of Massachusetts
 Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail	PWS Protection Areas: Zone II, MPA, Zone A
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct	Hydrography: Open Water, PWS Reservoir, Tidal Flat
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam	Wetlands: Freshwater, Saltwater, Cranberry Bog
Aquifers: Medium Yield, High Yield, EPA Sole Source	FEMA 100yr Floodplain; Protected Open Space; ACEC
Non Potential Drinking Water Source Area: Medium, High (Yield)	Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential
	Solid Waste Landfill; PWS: Com. GW, SV, Emerg., Non-Com

FIGURE 3: PRIORITY RESOURCE MAP
 53 CARON ROAD, STURBRIDGE MA
 CMG ID 2019-137



67 HALL ROAD, STURBRIDGE MA 01566

TABLES

TABLE 1 – DRINKING WATER QUALITY RESULTS

TABLE 2 – INDOOR AIR TESTING DATA

TABLE 2A – INDOOR AIR RISK

TABLE 1

DRINKING WATER QUALITY RESULTS (µg/L)

CMG 2-20941

Test	Parameter	MA Drinking Water Standards	EPA Drinking Water Standards	DEP GW-1 Groundwater Standards	51 Caron Road	53 Caron Road	55 Caron Road
					7/12/2019	7/12/2019	7/12/2019
VOCs	All Volatile Organic Compounds	Varies	Varies	Varies	All BRL	All BRL	All BRL
EPH	C ₉ -C ₁₈ Aliphatics	700	700	700	BRL<190	BRL<190	BRL<190
	C ₁₉ -C ₃₆ Aliphatics	14,000	14,000	14,000	BRL<190	BRL<190	BRL<190
	C ₁₁ -C ₂₂ Aromatics	200	200	200	BRL<190	BRL<190	BRL<190
PAHs	All Polynuclear Aromatic Hydrocarbons	Varies	Varies	Varies	All BRL	All BRL	All BRL

Notes BRL = Below laboratory Reporting Limit
 EPA Drinking Water Standards are ORSG Guidance Levels, except as noted below:
 * EPA Drinking Water Primary Standard
 † EPA Drinking Water Secondary Standard
 ORSG = Office of Research & Standards Guideline

TABLE 2

INDOOR AIR TESTING DATA

RTN 2-20941

APH Parameter	Table I-A Residential Threshold Values (TV _r)		Basement Hall August 14-15, 2019	
	µg/m ³	ppbv	µg/m ³	ppbv
C ₅ -C ₈ Aliphatics	58		170	
C ₉ -C ₁₂ Aliphatics	68		53	
C ₉ -C ₁₀ Aromatics	10		<i>BRL</i> <10	
1,3-Butadiene	(0.094)*	(0.042)*	<i>BRL</i> <1.11	<i>BRL</i> <0.500
Methyl tertiary butyl ether (MTBE)	39	11	<i>BRL</i> <1.80	<i>BRL</i> <0.500
Benzene	2.3	0.72	<i>BRL</i> <0.64	<i>BRL</i> <0.200
Toluene	54	14	<i>BRL</i> <1.88	<i>BRL</i> <0.500
Ethylbenzene	7.4	1.7	<i>BRL</i> <2.17	<i>BRL</i> <0.500
<i>m,p</i> -Xylene			<i>BRL</i> <4.34	<i>BRL</i> <1.00
<i>o</i> -Xylene			<i>BRL</i> <2.17	<i>BRL</i> <0.500
Xylenes (total)	20	4.6	<i>BRL</i> <2.17	<i>BRL</i> <0.500
Naphthalene	0.60	0.11	<i>BRL</i> <0.52	<i>BRL</i> <0.100

TV_r = Indoor air threshold values (residential setting) from DEP Vapor Intrusion Guidance, Appendix I Table I-A (10/14/16)

*DEP has not published screening values for 1,3-butadiene. In 1990 DEP published a Threshold Effects Exposure Limit (TEL) value of 1.20 µg/m³ (0.54 ppbv) for 1,3-butadiene (not updated since then).

EPA more recently (April 2019) published a residential air screening level of 9.4×10⁻² µg/m³ (4.2×10⁻² ppbv) for 1,3-butadiene.

Blue highlight = Exceeds DEP threshold value

TABLE 2A

INDOOR AIR RISK

RTN 2-20941

**Resident - Indoor Air: Table RAIH-1
Exposure Point Concentration (EPC)
Based on Resident Age 1-6 (Cancer and Noncancer)**

ShortForm Version 10-12
Vlookup Version v0315

ELCR (all chemicals) =
HI (all chemicals) = 0.94

****Do not insert or delete any rows****

Click on empty cell below and select OHM using arrow.

Oil or Hazardous Material	EPC (µg/m ³)	ELCR _{air}	HQ _{air}
ALIPHATICS C5 to C8	170		8.5E-01
ALIPHATICS C9 to C12	53		8.8E-02
AROMATICS C9 to C10	<i>BRL<10</i>		
BENZENE	<i>BRL<0.64</i>		
TOLUENE	<i>BRL<1.88</i>		
ETHYLBENZENE	<i>BRL<2.17</i>		
XYLENES (Mixed Isomers)	<i>BRL<2.17</i>		
METHYL TERT BUTYL ETHER	<i>BRL<1.80</i>		
NAPHTHALENE	<i>BRL<0.52</i>		

53 Caron Road
Sturbridge MA
August 24-15, 2019

ENVIRONMENTAL
SERVICES



ENGINEERING
SERVICES

IMMEDIATE RESPONSE ACTION
STATUS REPORT #2
RELEASE TRACKING NUMBER 2-20941

RESIDENTIAL RELEASE

53 CARON ROAD
STURBRIDGE, MASSACHUSETTS

MAY 5, 2020

PREPARED FOR:

DR. YOUNG-HO OH
53 CARON ROAD
STURBRIDGE, MA 01566

PREPARED BY:

CMG ENVIRONMENTAL, INC.
CMG ID 2019-137

67 HALL ROAD
STURBRIDGE, MA 01566
PHONE (774) 241-0901
FAX (774) 241-0906

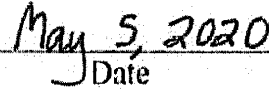
747 FARMINGTON AVENUE
NEW BRITAIN, CT 06053
PHONE (866) 304-7625

SIGNATURE OF REPORT AUTHORS

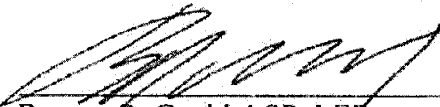
The undersigned employees of CMG Environmental, Inc. (CMG) prepared and reviewed this report. Please direct any requests for additional information regarding the content of this document to these individuals.



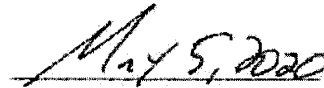
Sandra N. Rushlo
Environmental Scientist



Date



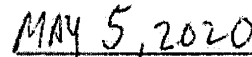
Benson R. Gould, LSP, LEP
Licensed Site Professional #9923



Date



Gerald M. Clark
Principal



Date

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Appendix A – Waste Disposal Documentation

Appendix B – Laboratory Certificates of Analysis & Chain-of-Custody Documentation

1.0 INTRODUCTION

CMG Environmental, Inc. (CMG) has prepared this Immediate Response Action (IRA) Status Report for a portion of the property located at 53 Caron Road in Sturbridge, Massachusetts (the Property). Figure 1 (Site Location Map) depicts the Property in relation to streets and other topographic features.

This IRA Status Report addresses release tracking number (RTN) 2-20941. CMG followed regulations set forth by the Massachusetts Department of Environmental Protection (DEP) in the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000) in preparing this IRA Status Report.

1.1 PURPOSE

The purpose of an IRA is to address urgent releases or threats of release at a ‘disposal site’¹ that trigger two-hour notifications pursuant to 310 CMR 40.0311 or 40.0312, or 72-hour notifications per 40.0313 or 40.0314.

The purpose of an IRA Status Report is to document IRA activities completed since submittal of the last IRA Report (in this case, the September 6, 2019 IRA Plan), in accordance with 310 CMR 40.0425.

1.2 SITE LOCATION & IDENTIFICATION

The Property is located at 53 Caron Road, Sturbridge MA 01566. It is on the easterly side of the north end of Caron Road, approximately ¼ mile north of its intersection with Valley Road. Sturbridge Assessor’s Map 195 identifies the Property as Block 2131, Lot 53, which consists of 13,503 square feet (approximately 0.31 acres) of land.

CMG defines “the Site” (disposal site) as the area between the house and Cedar Pond to the east where we identified fuel oil impacts to soil, groundwater, and surface water. The Site is at 42°07'33" north latitude (42.12571 °N), 72°05'20" west longitude (-72.08894 °E). The UTM (Universal Transverse Mercator) coordinates in the middle of the Site are 4,667,850 meters north and 740,600 meters east in Zone 18. Figure 2 (Site Plan) depicts the limits of the RTN 2-20941 ‘disposal site’ in relation to Property boundaries and other features.

1.3 CURRENT PROPERTY OCCUPANTS & USE

The Property consists of an owner-occupied single-family residence with a detached garage and finished basement.

1.4 RELEASE AT SITE

The residence uses fuel oil, stored in a 275-gallon aboveground storage tank (AST) located outside the north wall of the house within a wooden shed, for heating. On July 8, 2019, the homeowner observed the AST to be empty and called Southbridge Tire Company (STC) in Southbridge, Massachusetts, which provides fuel oil to the Property. STC contacted CMG to report a release from the AST, which they calculated as approximately 150 gallons. CMG inspected the Site and

¹ Defined at 310 CMR 40.0006 as “any structure, well, pit, pond, lagoon, impoundment, ditch, landfill or other place or area, excluding ambient air or surface water, where uncontrolled oil and/or hazardous material [OHM] has come to be located as a result of any spilling, leaking, pouring, abandoning, emitting, emptying, discharging, injecting, escaping, leaching, dumping, discarding or otherwise disposing of such [OHM].”

observed the source of the release to be an aboveground copper fuel line for the AST. We also noted an oil sheen on surface water emanating from a retaining wall along Cedar Lake, measured at 21' from the release area.

1.5 IRA APPROVAL

At 2:30 p.m. on July 8, 2019, CMG verbally reported the 2-hour release identified as RTN 2-20941 to DEP on behalf of Dr. Young-Ho Oh, the homeowner. We presented a verbal IRA Plan to Mr. Dino DelleChiaie of DEP at that time, and DEP granted verbal approval to deploy absorbents to the surface water and remove impacted soil between the AST and the retaining wall along the lake, with dewatering as necessary. DEP requested that CMG contact the Sturbridge Fire Department, Conservation Commission, and Board of Health, which we did later that day.

This IRA Plan provides written documentation of our verbal IRA Plan approved by DEP, as required by 310 CMR 40.0420(7).

On August 13, 21 & 23, 2019, DEP modified the IRA Plan based on discussions with CMG. Section 2.2 summarizes our activities and discussions.

CMG prepared a written IRA Plan for RTN 2-20941, which Dr. Young-Ho Oh submitted via eDEP on September 6, 2019, that documented our approved verbal IRA Plan. CMG deemed this IRA Plan tacitly approved on September 27, 2019 following completion of the 21-day presumptive approval period set forth at 310 CMR 40.0420(9), since DEP did not issue any written denial of our plan during this interval.

1.6 POTENTIALLY RESPONSIBLE PARTY INFORMATION

PRP² Name: Dr. Young-Ho Oh, homeowner

Address: 53 Caron Road
Sturbridge, MA 01566

Contact: Dr. Young-Ho Oh
508-740-9779

2.0 RESPONSE ACTION STATUS [40.0425]

The MCP requires submittal of additional IRA Status Reports every six months following submittal of the first such report. CMG submitted the initial IRA Status Report on November 12, 2019. This report is the second IRA Status Report for RTN 2-20941.

2.1 IRA ACTIVITIES CONDUCTED SINCE PREVIOUS STATUS REPORT [40.0425(3)(a)]

2.1.1 INSPECTIONS

CMG inspected the Site approximately once a week between March 13 & May 1, 2020. Table 3 summarizes our observations, including NAPL measurements and other observations.

² "PRP" = Potentially Responsible Party, defined at 310 CMR 40.0006 as "a person who is potentially liable pursuant to M.G.L. c. 21E" (Massachusetts General Law Chapter 21E, the Massachusetts Oil and Hazardous Material Release Prevention Act).

2.1.2 SOIL EXCAVATION & SAMPLING

CMG and New England Disposal Technologies, Inc. (NEDT) of Sutton, Massachusetts began soil excavation activities at the Site on January 14, 2020. During excavation activities, CMG collected soil samples and field-screened them for total organic vapors (TOV) to guide excavation. Table 4 (following the Figures) summarizes field-screening data; Appendix B includes Phoenix certificates of analysis and chain-of-custody documentation.

CMG submitted select soil samples from the excavation to Phoenix Environmental Laboratories, Inc. of Manchester, Connecticut (Phoenix). We requested analysis of volatile petroleum hydrocarbons (VPH) with target volatile organic compound (VOC) identifications and extractable petroleum hydrocarbons (EPH) with target polynuclear aromatic hydrocarbon (PAH) identifications.

Phoenix identified VPH and EPH parameters at concentrations exceeding Method 1 risk characterization (MIRC) standards for both S-1/GW-1 & S-1/GW-2 areas. The laboratory also identified the VOC naphthalene and PAH 2-methylnaphthalene above S-1/GW-1 standards. Table 5 summarizes soil analytical results. Appendix B includes Phoenix certificates of analysis and chain-of-custody documentation.

2.1.3 DRINKING WATER SAMPLING

On March 13, 2020, CMG collected a drinking water sample from the outside faucet on the west side of the house at 55 Caron Road. We submitted the sample to Phoenix for analysis of VOCs, EPH and PAHs. Phoenix did not detect any petroleum constituents in this drinking water sample; this is consistent with the drinking water samples collected at 51, 53 & 55 Caron Road in July 2019. Table 1 summarizes drinking water sampling; Appendix B includes Phoenix certificates of analysis and chain-of-custody documentation.

2.1.4 INDOOR AIR SAMPLING

CMG set a 24-hour SUMMA canister in the finished lower level hallway on December 16, 2019. We retrieved the canister on December 17, 2019 and submitted it to Phoenix for analysis of air phase hydrocarbons (APH). Phoenix detected C₅-C₈ aliphatics, C₉-C₁₂ aliphatics, C₉-C₁₀ aromatics, and naphthalene at concentrations exceeding the DEP threshold values for residential air. These concentrations are also significantly higher than those detected in August 2019. Table 2 summarizes indoor air testing data; Appendix B includes Phoenix certificates of analysis and chain-of-custody documentation.

CMG completed a DEP Method 3 risk characterization 'ShortForm' for ambient indoor air residential exposure Imminent Hazard evaluation (sf12raih.xlsx; see Table 2A). This ShortForm calculated a hazard index value of 4.4 for the December 2019 air testing, which is less than the Imminent Hazard threshold value of 10 set forth at 310 CMR 40.0955(2)(c)2. CMG also completed a ShortForm for residential ambient indoor air risk characterization (sf12ra.xlsx; see Table 2B). This ShortForm calculated a hazard index value of 8.8, which is well above the 'significant risk' threshold value of 1.

2.1.5 HAND BORINGS

CMG completed hand borings at 55 Caron Road to determine the extent of contamination on that property. We collected samples for TOV readings (see Table 4) and laboratory analysis. CMG submitted the samples to Phoenix and requested analysis of VPH & EPH with their target identifications. Phoenix identified VPH C₉-C₁₂ aliphatics and naphthalene in the sample designated

“55C-N27, W6.5” at concentrations well below MIRC standards. Phoenix did not identify any other petroleum constituents in any of the 55 Caron Road samples above laboratory reporting limits. Table 5 summarizes soil quality data; Appendix B includes Phoenix certificates of analysis and chain-of-custody documentation.

2.2 SIGNIFICANT NEW INFORMATION OR DATA [40.0425(3)(b)]

CMG obtained the following significant new information or data:

- The RTN 2-20941 release does not appear to have impacted drinking water at the Site and abutting properties,
- The release significantly impacted Site soil, and
- The release has not significantly impacted soil at the abutting 55 Caron Road property.

2.3 REMEDIATION WASTE [40.0425(3)(c)]

CMG has supervised excavation and stockpiling of soil at the Site pending off-Site disposal. To date, NEDT has transported 26.06 tons (approximately 17 cubic yards) of this soil to Ondrick Materials & Recycling, LLC for off-Site recycling under Bill of Lading (BOL) procedures per 310 CMR 40.0035. Appendix A includes copies of the weight tickets for this soil.

2.4 REMEDIATION SYSTEM MONITORING DATA [40.0425(3)(d)]

CMG has not operated any remedial systems at the Site to date apart from product recovery.

2.5 MITIGATION OF CRITICAL EXPOSURE PATHWAY [40.0425(5)]

The MCP defines Critical Exposure Pathway (CEP) at 310 CMR 40.0006(12) as:

... those routes by which [OHM] released at a disposal site are transported, or are likely to be transported, to human receptors via:

- (a) vapor-phase emissions of measurable concentrations of [OHM] into the living or working space of a pre-school, daycare, school or occupied residential dwelling; or
- (b) ingestion, dermal absorption or inhalation of measurable concentrations of [OHM] from drinking water supply wells located at and servicing a pre-school, daycare, school or occupied residential dwelling.

Detection of petroleum constituents in ambient indoor air (see Table 2) constitutes a CEP associated with the RTN 2-20941 release. CMG has mitigated this CEP through closing off the basement bedroom where we obtained the December 2019 air sample, and increased ventilation throughout the Site residence.

2.6 ADDITIONAL INFORMATION [40.0425(3)(d)]

CMG is not aware of any additional IRA information that DEP has deemed appropriate and necessary to review and evaluate this IRA Plan.

2.7 LICENSED SITE PROFESSIONAL (LSP) OPINION [40.0425(3)(e)]

CMG prepared a Form BWSC105 [“Immediate Response Action (IRA) Transmittal Form”] using the eDEP electronic submittal system. Section E of this form presents the LSP Opinion regarding this IRA Status Report for RTN 2-20941. Section I of this form presents the certification

required by 310 CMR 40.0425(3)(e). CMG has attached a .pdf copy of this IRA Status Report to the Form BWSC105 submitted electronically.

3.0 LIMITATIONS & CONDITIONS

3.1 METHODOLOGY

CMG Environmental, Inc. followed guidelines set forth by the DEP in the MCP and employed a “level of diligence reasonably necessary to obtain the quantity and quality of information adequate to assess” the disposal site in accordance with the Response Action Performance Standard promulgated at 310 CMR 40.0191.

Moreover, CMG followed guidelines set forth by DEP in the MCP. We specifically complied with IRA requirements set forth at 310 CMR 40.0410 through 40.0429.

3.2 SCOPE OF SERVICES

Dr. Young-Ho Oh authorized CMG to conduct IRA activities, including preparation of this IRA Status Report, on July 11, 2019. We performed the following scope of services between November 2019 & May 2020:

- Conducted frequent inspections of Site boom and the adjacent lake;
- Excavated impacted soil at the Site and collected soil samples for field-screening and laboratory analysis of VPH & EPH;
- Advanced several hand borings at the adjacent property to determine if the release had impacted soil there;
- Collected a drinking water sample at the adjacent property for laboratory analysis;
- Compared results of laboratory analysis of drinking water and soil samples to applicable MIRC standards;
- Coordinated off-Site disposal of impacted soil under BOL protocol;
- Prepared an IRA Status Report transmittal form for Dr. Oh’s electronic certification and eDEP submittal; and
- Prepared this IRA Status Report.

3.3 GENERAL LIMITATIONS

CMG conducted IRA response actions in accordance with generally accepted engineering and hydrogeologic practices. CMG makes no other warranty, express or implied. CMG cannot provide absolute assurance that we have identified any and all recognized environmental conditions (including DEP reportable conditions) at the Site.

Where CMG included visual or other observations in this report, they represent conditions visibly and/or physically observed at the time of the inspection, or verified through interviewing or by record review, and may not be indicative of past or future Site conditions.

Please be advised that environmental conditions at the Site and surrounding properties may change in time. CMG does not render an opinion as to environmental Site conditions that change after the date of the environmental studies reported herein.

3.4 SPECIFIC CONDITIONS OF THE IRA STATUS REPORT

CMG based the conclusions of this report, in large part, on information provided by the client, their agents, or third parties, including state or local officials. CMG assumes no responsibility for the accuracy and completeness of this information.

CMG based the conclusions discussed herein solely and in reliance upon information collected during activities detailed in our Scope of Services (see Section 3.2 above).

CMG's subsurface investigation included the qualitative analysis of soil and NAPL conditions from a limited number of locations at the Site. However, CMG did not intend this study to be an exhaustive investigation of subsurface conditions at the Property. CMG restricted the scope of services for this investigation due to time and/or cost constraints, and though we did undertake a limited amount of analytical testing, currently unrecognized subsurface conditions may exist at the Property. Increasing exploration (such as placement of test pits, completion of additional soil borings with subsequent collection of soil samples for laboratory analysis, installation of additional groundwater monitoring wells with subsequent collection of groundwater samples for laboratory analysis, and conducting surface geophysical survey techniques) may better delineate subsurface conditions.

CMG's Site inspection included observing the Site and surrounding area. However not all Site boundaries were clearly delineated, making it difficult to distinguish certain Site features from those of the surrounding area. Therefore, the location of certain Site features described in this Report and depicted on the figures may be approximate.

3.5 RELIANCE

CMG prepared this IRA Status Report for the sole use of Dr. Oh, his successors and assigns to address DEP reporting obligations regarding assessment and remediation activities associated with RTN 2-20941. CMG does not authorize use of this information by others for any reason, except with our prior written consent.

4.0 REFERENCES

INTERVIEWS

Homeowner Dr. Young-Ho Oh, several occasions beginning July 8, 2019.

New England Disposal Technologies, Inc.: President Michael Robertson, several occasions beginning July 8, 2019.

STURBRIDGE

Assessor's Office: records reviewed online at <https://www.sturbridge.gov/assessor>.

MASSACHUSETTS

Department of Environmental Protection: Cleanup Sites Search, records reviewed online at <http://db.state.ma.us/dep/cleanup/sites/search.asp>.

Department of Environmental Protection: Massachusetts Contingency Plan regulations (310 CMR 40.0000), April 25, 2014 revision.

Division of Water Pollution Control regulations (314 CMR 4.00): December 27, 1996 revision.

Geographic Information Systems: MassDEP Priority Resource Map Viewer information downloaded August 30, 2019 from <http://maps.massgis.state.ma.us/21E/viewer.htm>.

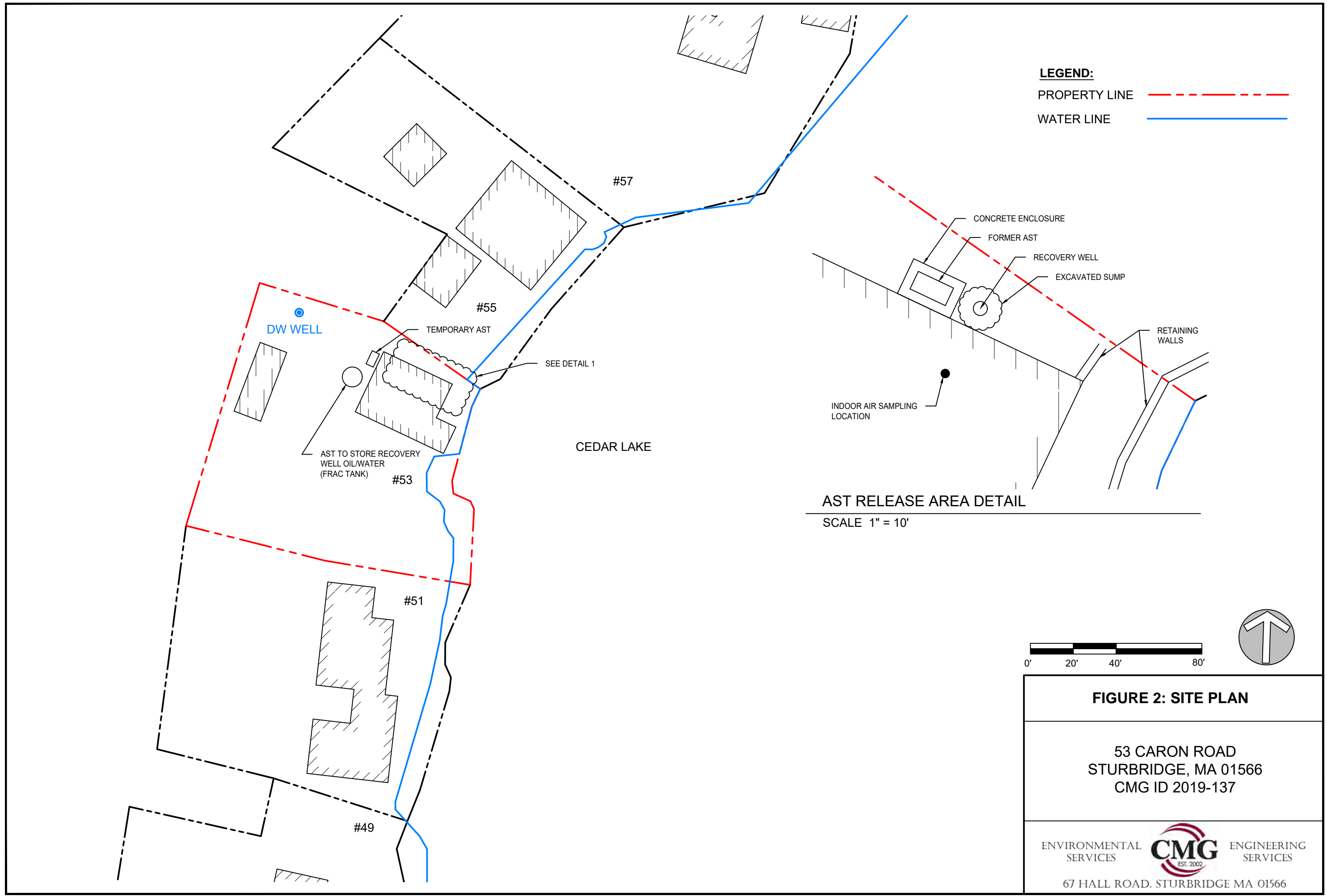
UNITED STATES



Geological Survey: "East Brookfield, Massachusetts" 7.5-minute series topographic quadrangle, dated 2018.

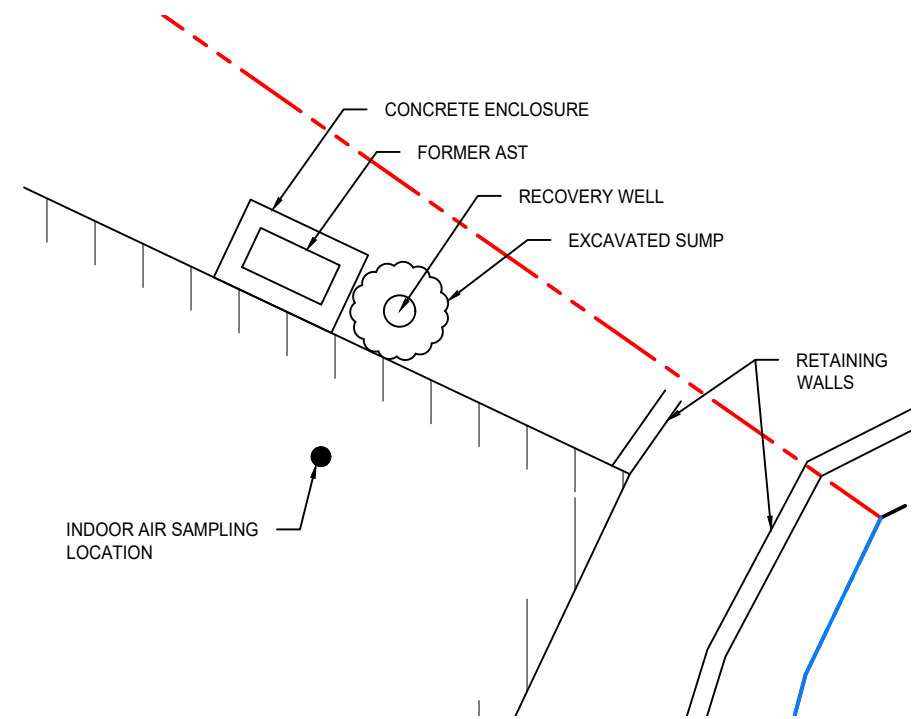
PREVIOUS ENVIRONMENTAL REPORTS

CMG Environmental, Inc.: "Immediate Response Action Plan," dated September 6, 2019.

CMG Environmental, Inc.: "Initial Immediate Response Action Status Report," dated November 12, 2019.



LEGEND:
 PROPERTY LINE 
 WATER LINE 



AST RELEASE AREA DETAIL

SCALE 1" = 10'

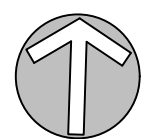
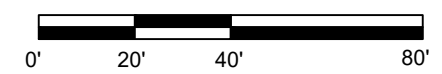


FIGURE 2: SITE PLAN

53 CARON ROAD
 STURBRIDGE, MA 01566
 CMG ID 2019-137

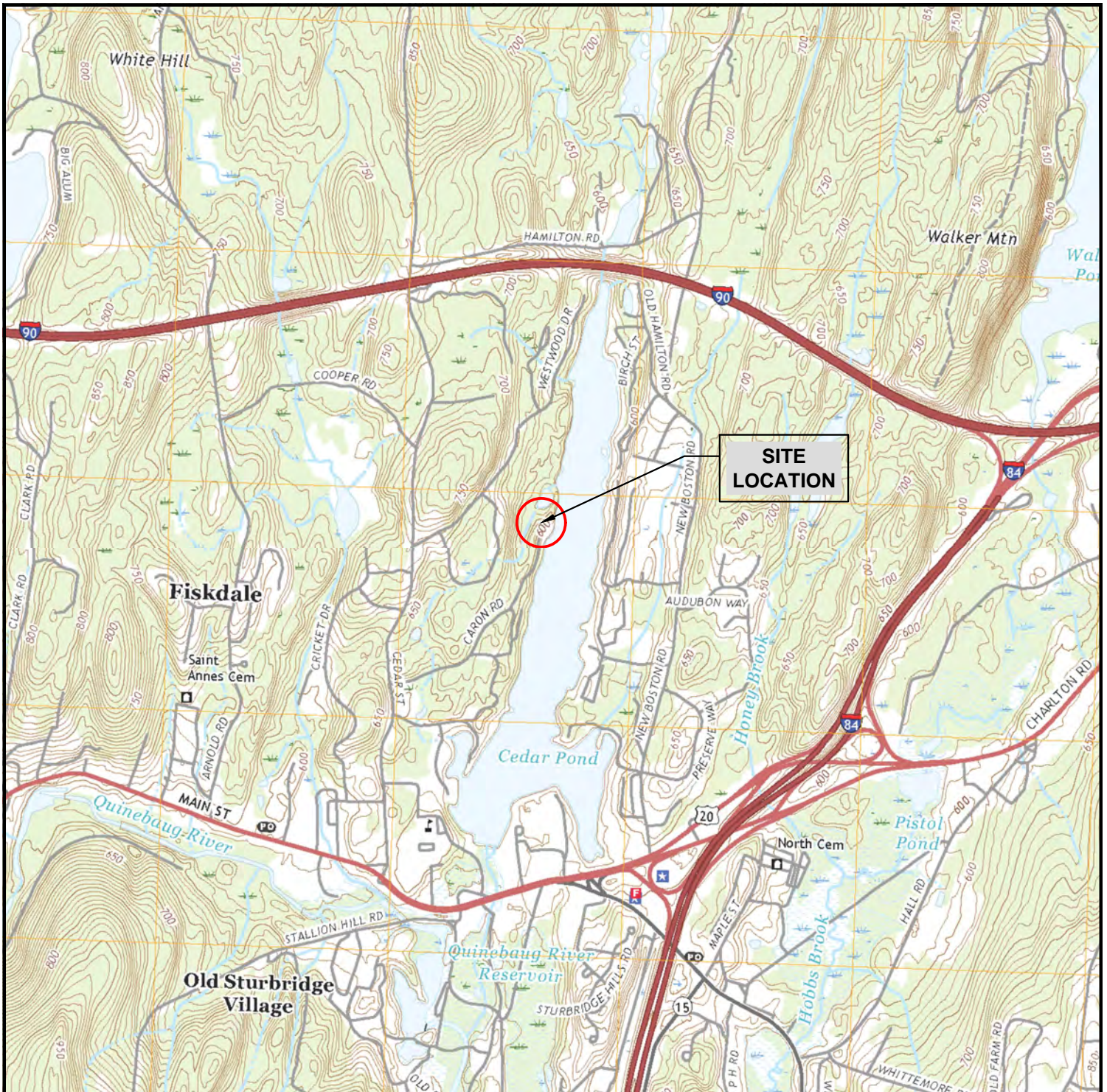
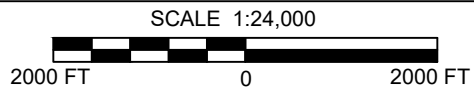


FIGURE 1: SITE LOCATION

53 CARON ROAD
 STURBRIDGE, MA 01566
 CMG ID 2019-137



ENVIRONMENTAL
 SERVICES



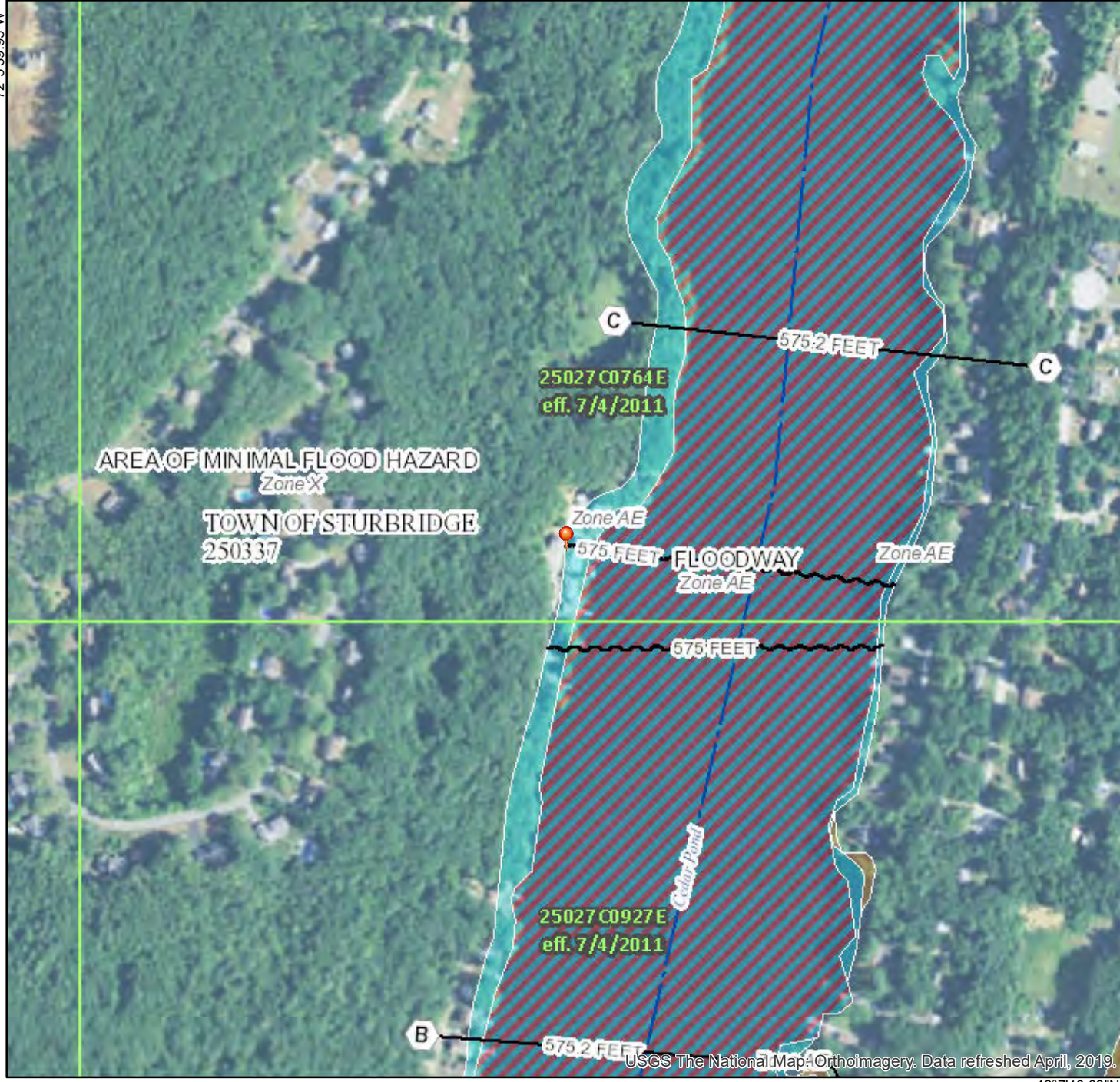
ENGINEERING
 SERVICES

67 HALL ROAD, STURBRIDGE MA 01566

National Flood Hazard Layer FIRMette



42°7'45.38"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway	

OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee. See Notes. Zone X
	Area with Flood Risk due to Levee Zone D

OTHER AREAS	NO SCREEN	Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall

OTHER FEATURES	20.2	Cross Sections with 1% Annual Chance Water Surface Elevation
	17.5	Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

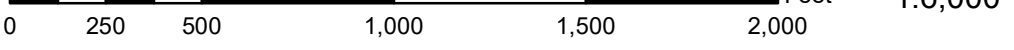
MAP PANELS	Digital Data Available
	No Digital Data Available
	Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/4/2020 at 1:18:31 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



72°5'39.95"W

72°5'2.49"W

53 Caron Road



NHESP Natural Communities
 NHESP Natural Communities

NHESP Priority Habitats of Rare Species
 NHESP Priority Habitats of Rare Species

NHESP Estimated Habitats of Rare Wildlife
 NHESP Estimated Habitats of Rare Wildlife

Detailed Features

Orthos 2019
 2019 Color Orthos (USGS)