



The Environmental Remediation Group

Statement of Qualifications

Thermal, Reimagined.



OPERATING TEMPERATURE

15 °C

40 °C

75 °C

100 °C

200 °C

300 °C

400 °C

1erg.com

Huntington Beach, California

2026 · UEI JDDQTCU37W94 · CAGE 3GHF6 · NAICS 562910



WHO WE ARE

A thermal remediation company, built around its own technology.

ERG designs, builds and operates thermal and heat-based remediation systems for chlorinated solvents, petroleum hydrocarbons, SVOCs and other contaminants that resist conventional treatment. We work from low temperature, heat-enhanced approaches at 35 °C to 400 °C source zone treatment, and we price most work as a firm fixed price, so the performance risk sits with us.

US 12,523,373

Patent issued for HETR™ hybrid energy thermal conduction heating

15 to 400 °C

Treatment range across ERG's thermal platforms and methods

110+

Thermal remediation projects implemented by ERG's team

25

Thermal projects delivered by ERG using ERH, TCH and SEE

OUR APPROACH

The site and the endpoint choose the remedy.

At ERG, we start from the cleanup objective, the geology and the contaminant chemistry, then select the temperature, the heating method and the supporting mechanisms that reach that objective efficiently and at the lowest lifecycle cost practicable. When another approach reaches the goal more efficiently, we say so.

01

Start with the endpoint and site considerations

Closure criteria, schedule, budget, logistics and site constraints set the design. The heating method follows from them, not the other way around.

02

Match the mechanism to the site

Biodegradation, hydrolysis, desorption, volatilization and physical degradation each run in their own temperature window. We heat only as far as the endpoint requires.

03

Carry the performance risk

Most ERG projects are firm fixed price. The team that designs the system builds it, operates it and answers for the result. ERG offers guaranteed remediation contract options on most sites.

HOW WE OPERATE

Owner operators

ERG is independent and engineering driven. The people who design your system build it, operate it in the field and carry the performance responsibility.

Transparent costs

Fixed prices built from a design you can review, with the assumptions written down.

Honest assessments

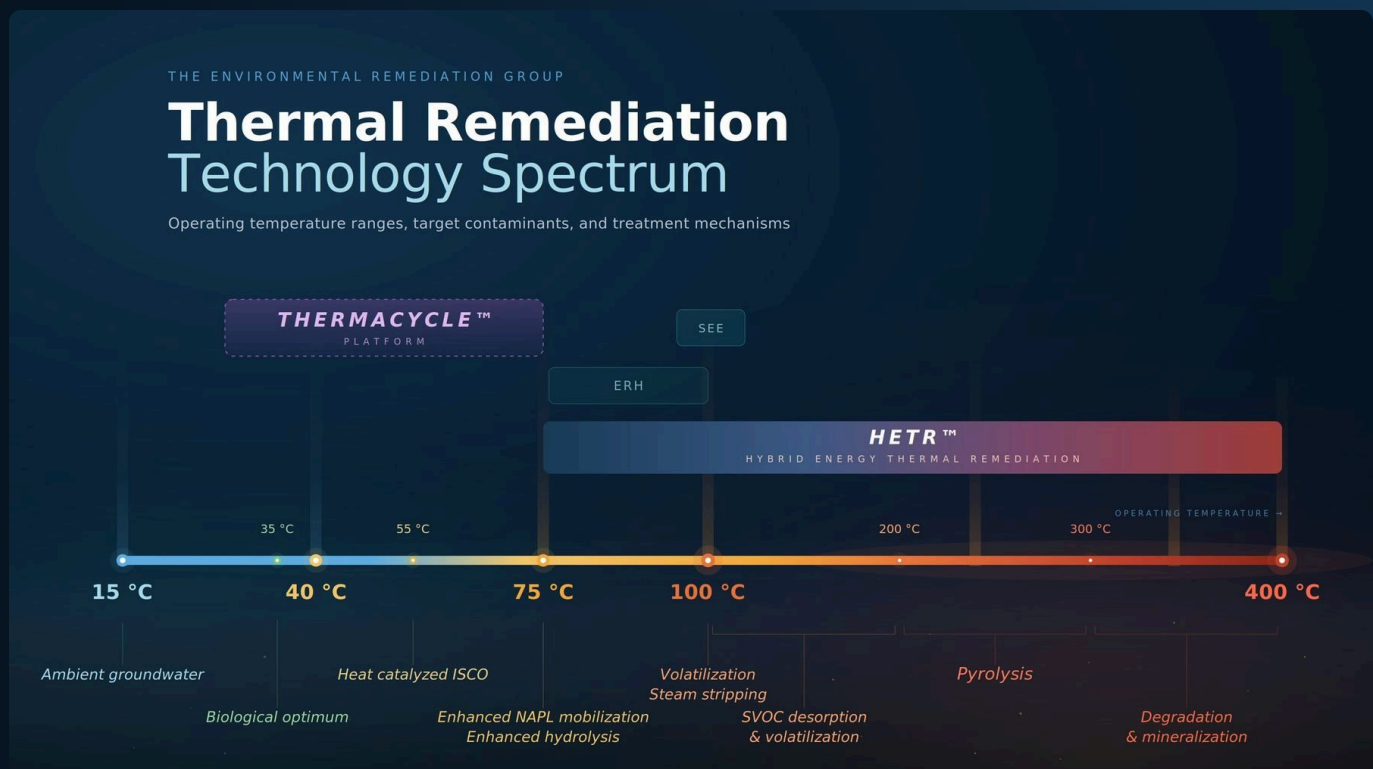
We tell clients what the data say, including when thermal is not the right tool for their site.



TECHNOLOGY SPECTRUM

Every mechanism has a temperature window.

From ambient groundwater to 400 °C, each step up the scale switches on a different set of treatment mechanisms. Our designs target the optimal temperature window for each project, reducing energy consumption and project cost while improving overall efficacy.



Operating ranges of ThermoCycle®, ERH, SEE and HETR™, and the treatment mechanisms each range activates.

Electrical resistance heating (ERH)

Electrodes pass controlled current through the soil, heating saturated and lower permeability zones evenly to a maximum near 100 °C.

Steam enhanced extraction (SEE)

Steam sweeps highly transmissive zones at up to 100 °C, paired with multiphase or groundwater extraction for hydraulic control.

Heat-enhanced bioremediation

ThermoCycle® raises groundwater temperature by 30 to 40 °F, moving the site's own microbial community toward its optimum to restart a stalled program, with electron donors and nutrients dosed through the same loop.

Thermal conduction heating (TCH)

Heaters in sealed wells raise the formation to 400 °C and above regardless of permeability or moisture, reaching SVOCs and high boiling point compounds. HETR™ is ERG's patented TCH platform.

Ex situ thermal

Excavated soil is treated on site in heated piles or cells using TCH, at temperatures above 350 °C when the contaminants require it.

Combined remedies and optimization

Thermal source zone treatment sequenced in space and time with biological, chemical and physical mechanisms, with ThermoCycle® as the backbone, or heat applied through existing wells to move a stalled system to closure.



— PLATFORM · HIGH TEMPERATURE

**High Temperature. Low Carbon. No Compromises.**

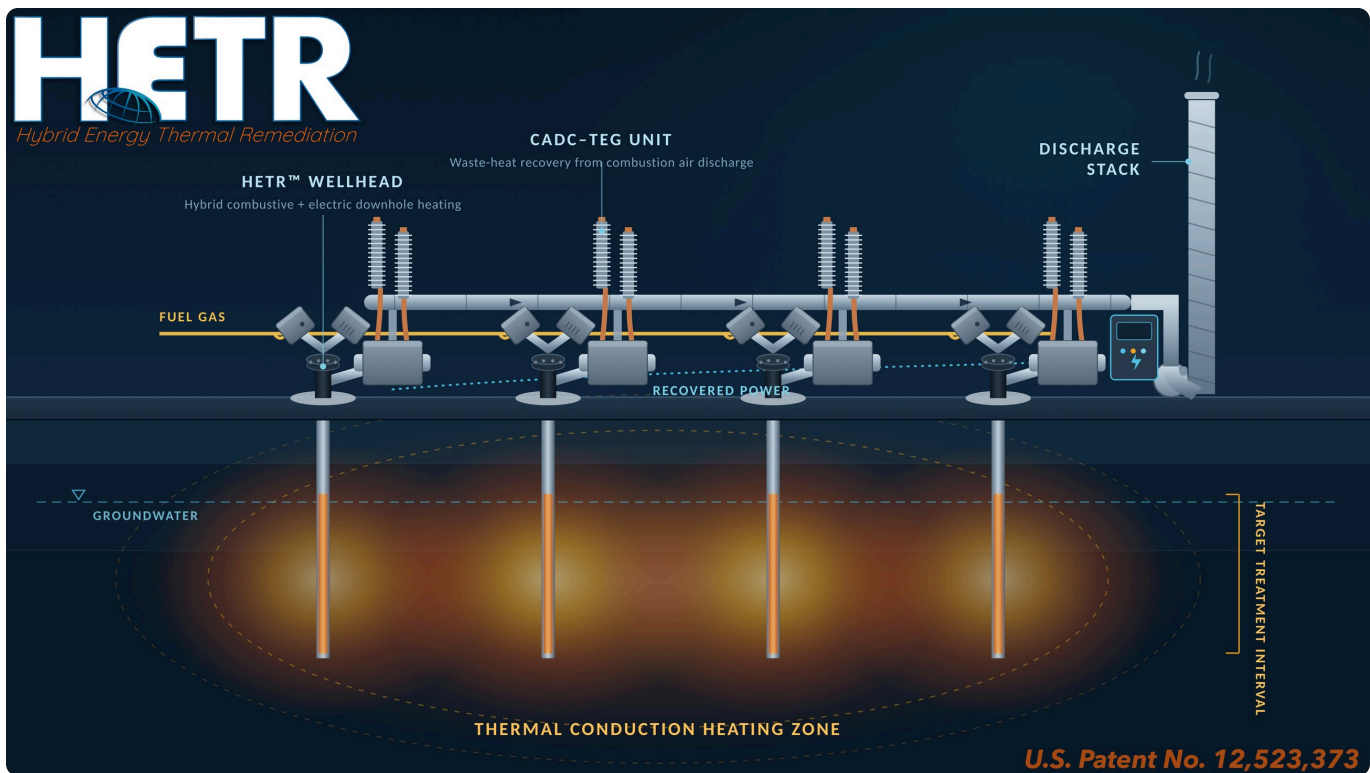
PATENT

U.S. Patent 12,523,373

HETR™ (Hybrid Energy Thermal Remediation) is ERG's patented thermal conduction heating platform. It heats the subsurface with multiform energy from combustive and/or electrical sources, so the energy supply fits the site instead of the site fitting the energy supply.

100 to 400 °CSubsurface treatment
target**400 to 550 W/ft**Sustained heat flux to the
formation**8 to 17 ft**

Heater well spacing

100 to 500 WThermoelectric generation
per well, 24/7

Conceptual HETR™ wellfield, with CADC-TEG units recovering waste heat from the combustion air discharge as electrical power.

— HOW HETR™ DIFFERS

Multiform energy

Grid connected, partial grid or fully off grid, so it deploys where conventional electric TCH would need a new utility service.

Thermoelectric recovery

Each well generates 100 to 500 W around the clock while it heats, offsetting grid demand.

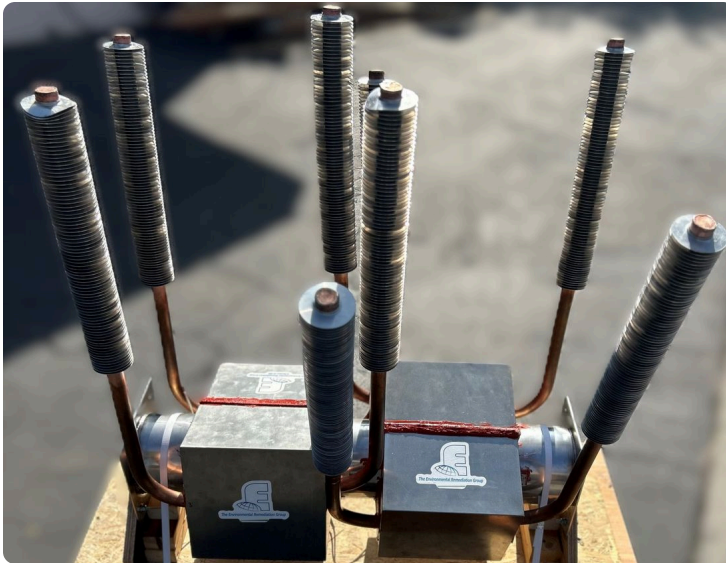
4D heat control

Heat input differentiated along and across wells, boosted at discrete depths, or displaced to a deep zone without heating everything above it.



HETR™ IN THE FIELD

Field proven. Patented. Scaling now.



HETR™ heater assembly during fabrication.

3

full-scale implementations completed or in progress

500+

HETR™ wells planned across 2026 projects

U.S. 12,523,373

Patent issued January 2026

BEST APPLIED WHEN

- Low permeability lithology (clays) limits alternative approaches
- Aggressive source removal is required, or low cleanup goals require thermal certainty
- DNAPL or high mass zones are present
- Infrastructure constraints demand energy flexibility

MODEL SPECIFICATIONS

MODEL	ENERGY OUTPUT	HEAT FLUX	TEG	POWER
FDG-HETR-150X	8.8 to 44 kW	4.5 to 23 kW	100 to 500 W	None to 115V/1Ø
FDG-HETR-250X	24 to 74 kW	11 to 36 kW	200 to 600 W	None to 115V/1Ø



HETR™ wellhead with burner and control enclosures at Carson Plaza, Carson, California.

COMPLETED PROJECT

Carson Plaza, closed for unrestricted land use

In the final phase of a combined remedy beneath an operating dry cleaner, a focused eight-well HETR™ wellfield operated with soil vapor extraction to treat the residual source zone. DTSC issued No Further Action for unrestricted land use in August 2026. The full case study is on page 11.



— PLATFORM · LOW TO MID TEMPERATURE

ThermaCycle®

Adaptive Heat. Every Mechanism. One Platform.

STATUS

Registered trademark
Patent pending

ThermaCycle® is ERG's closed-loop, recirculating groundwater heating platform for low to mid temperature in situ remediation. Heat and amendments share one loop, so a single skid can run biological, chemical and physical mechanisms in sequence as the site moves toward closure.

90 to 150 °F

Subsurface operating envelope

100 to 180 °F

Injection temperature

5 to 50 gpm

Adjustable flow, no hardware change

8.5 × 12 ft

Factory-tested skid



ThermaCycle® recirculation enclosure, heaters, controls and amendment tank, operating at an active commercial site in Southern California.

— THE THERMAL MECHANISM STACK

**One platform. Seven mechanisms.
No system redesigns.**

- Heat-enhanced biodegradation
- Thermally enhanced desorption and extraction
- In situ chemical oxidation and reduction
- Biological amendment and bioaugmentation
- Accelerated hydrolysis of susceptible VOCs
- NAPL mobilization
- Co-solvent and surfactant flushing

— BEST APPLIED WHEN

- Lithology has higher hydraulic conductivity (1×10^{-4} to 1×10^{-2})
- Hydraulic control is critical
- Bioremediation can be accelerated
- The timeline has more flexibility and project cost matters most
- Conventional high temperature ISTR is not the right fit
- An existing bioremediation, recirculation, pump and treat, DPE or MPE system has stalled



THERMACYCLE® OPERATING MODES

Configured to the mechanism.

Heat-enhanced bioremediation

A 30 to 40 °F temperature boost holding the subsurface near 90 to 100 °F, at expanded flow across large plume footprints, with electron donors and nutrients dosed inline.

Hydrolysis and free product recovery

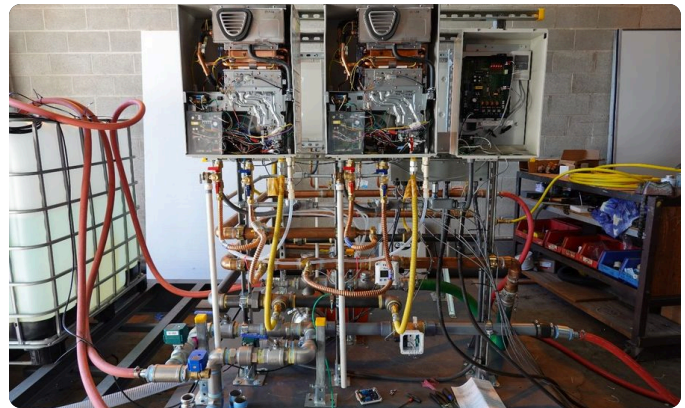
5 to 20 gpm at a temperature delta of up to 105 °F, for VOCs that hydrolyze with heat and for recoverable product.

DNAPL mobilization

130 to 170 °F injection at a temperature lift of up to 105 °F, with co-solvent and surfactant dosing to mobilize and recover dense non-aqueous phase liquid.

BUILT FOR THE FIELD

- All-metal 8.5 × 12 ft enclosure with crane lift rigging
- Allen-Bradley PLCs on an Ignition SCADA backbone, with real-time telemetry, remote control and automated alarms
- Magnetic flow meters, pressure and temperature transducers, and onboard data logging
- Inline dosing ports for surfactants, co-solvents, electron donors and nutrients



Recirculation manifolds inside the skid, and the heater and manifold skid during shop assembly and testing.

A THERMAL ENHANCEMENT TO CONVENTIONAL REMEDIES

Pump and treat

Heat increases solubility and desorption rates: more mass per gallon pumped and shorter runtime.

Bioremediation

Groundwater at about 30 to 40 °C accelerates biodegradation while keeping the existing microbial community.

ISCO

Elevated temperature activates persulfate without iron catalyst or pH adjustment.

Hydrolysis

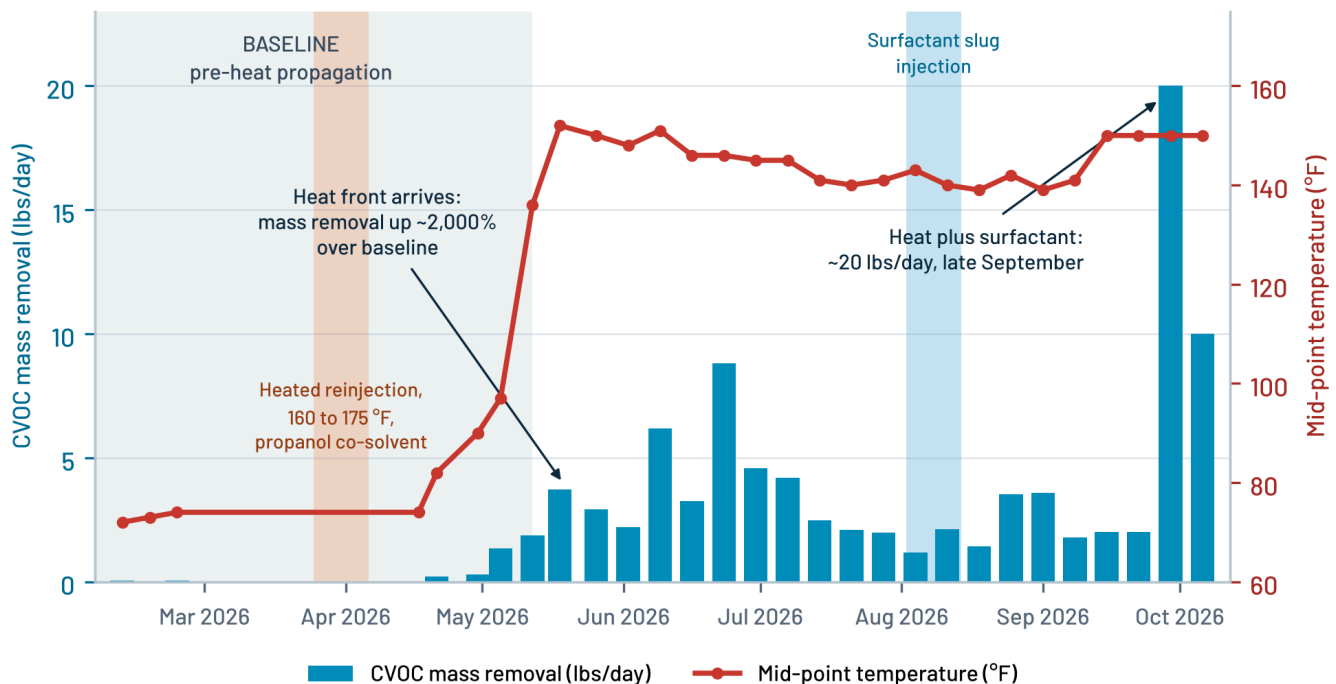
Recirculation delivers heat to the target interval with better contact and hydraulic control.



THERMACYCLE® IN OPERATION

PCE and TCE DNAPL at 110 to 125 ft, beneath a working parking lot.

ThermaCycle® is operating at an active commercial site in Southern California. Phase 1 focused on the most heavily impacted DNAPL source zone to confirm the optimal operating parameters and treatment strategy, with thermal front propagation of about 2 ft per day at a sustained injection temperature of about 160 °F. Phase 2 now expands treatment to the larger DNAPL impacted deep source zone.



Weekly CVOC mass removal rate and mid-point temperature, February to early October 2026. Removal stayed near zero through the baseline period, before the heat front reached the treatment interval, then rose about 2,000% once ThermaCycle® heat arrived.

PHASE 1 · HEAT

Heating raised dissolved phase mass removal about 2,000% over pre-heating levels, recovering hundreds of pounds of mass in the dissolved aqueous phase and hundreds of pounds more by physical DNAPL extraction.

PHASE 1 · HEAT PLUS SURFACTANT

When mass removal began to fall, combined heat and surfactant returned removal to about 2,000% of baseline, polishing residuals in the Phase 1 area. Removal reached about 20 lbs per day in late September.

PHASE 2 · Q4 2026

Treatment expands to the larger deep DNAPL source zone, with 6 to 10 additional wells brought online in the fourth quarter of 2026.

PHASE 3 · 2027

Once DNAPL removal and sorbed soil mass reduction are complete, ThermaCycle® shifts to lower temperature heat-enhanced bioremediation of the much larger dissolved phase plume.



TEAM EXPERIENCE

Behind every ERG design.

ERG's team has implemented more than 110 thermal remediation projects worldwide, across every established heating method. ERG has delivered 25 thermal projects using ERH, TCH and SEE. The counts below include projects completed by ERG team members at prior firms.

ERH · 1995 TO 2019

79

Electrical resistance
heating projects

TCH · 2016 TO
PRESENT**24**

Thermal conduction
heating projects:
electric, fuel fired and
HETR™

SEE · 2000 TO 2020

10

Steam enhanced
extraction projects

COMBINED

7

Combined source zone
remedies integrating
thermal with
complementary
technologies



HISTORY

Twenty years of building and running remediation systems.

ERG began as a remediation design, build and operate firm and was relaunched in 2022 as a thermal remediation company built around its own technology.

2006

ERG founded by James Keegan, Danny Baysa and Skye Green. The founding team's work included the first full-scale integrated SVE, MPE and ERH system, and the first use of ERH at a commercial site in California.

2017 to 2018

Jackson Park, NAVFAC Northwest. ERH treats 21,900 cubic yards and reduces dissolved TPH-G and BTEX by 99%.

2022

Rob D'Anjou and Allen Swift relaunch ERG as a thermal remediation company.

2026

U.S. Patent 12,523,373 issued in January for HETR™. ThermaCycle® registered, patent pending.

2026

Carson Plaza closed. DTSC issues No Further Action for unrestricted land use.



CASE STUDY · ELECTRICAL RESISTANCE HEATING

Jackson Park NEX Gas Station Leak Area

SOURCE AREA REMEDIATION · NAVFAC NORTHWEST · BREMERTON, WASHINGTON

The Jackson Park NEX Gas Station Leak Area lies within a CERCLA site near Bremerton, Washington. Gasoline range petroleum hydrocarbons (TPH-G) with appreciable BTEX impacted the upper 55 feet of Vashon Till soil and perched groundwater.

Under contract to Tetra Tech EC, Inc. (TtEC), ERG remediated the source area with continuous electrical resistance heating and periodic dual-phase extraction, partnering with Global Remediation Solutions (GRS) to build and operate the in situ thermal remediation system. GRS was then led by Michael Dodson, Robert D'Anjou and Allen Swift.

Seventy-six electrodes on 15 ft centers in a three phase array treated 21,900 cubic yards to 52 ft below ground surface. The system removed about 19,000 lbs of contaminants of concern and reduced dissolved TPH-G and BTEX concentrations by 99%. The project was completed in 2018.



The 76-electrode ERH wellfield at the Jackson Park NEX Gas Station Leak Area.

PROJECT DATA**CLIENT**

NAVFAC Northwest, through Tetra Tech EC, Inc.

CONTRACT

N62470-13-D-4808

TECHNOLOGY

ERH with periodic DPE/MPE

ELECTRODES

76, three phase array, 15 ft centers

TREATMENT VOLUME

21,900 cubic yards

DEPTH

Treated to 52 ft bgs within a 55 ft interval

CONTAMINANTS

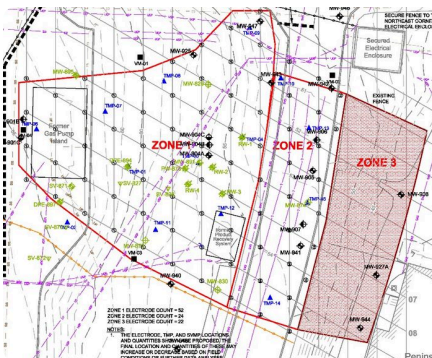
TPH-G and BTEX

REGULATORY DRIVER

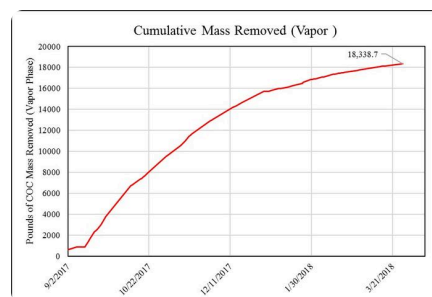
EPA and NAVFAC NW (CERCLA)

19,000 lbsContaminants removed,
vapor and dissolved**21,900 yd³**Soil treated in the vadose
and saturated zones**99%**Reduction in dissolved TPH-G
and BTEX**2018**

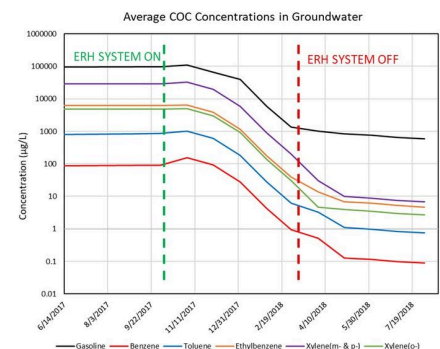
Project completed



Electrode layout and treatment zones.



Cumulative mass removed in the vapor phase, September 2017 to March 2018.



Average groundwater concentrations before, during and after ERH.



CASE STUDY · COMBINED THERMAL REMEDY

Carson Plaza

COMBINED IN SITU REMEDIATION BENEATH AN OPERATING DRY CLEANER · CARSON, CALIFORNIA

Soil and groundwater beneath an operating dry cleaner and strip mall were impacted with PCE, TCE, DCE and vinyl chloride to 30 feet below ground surface. Soil at 16 feet reached 860 µg/kg PCE and 1,700 µg/kg TCE, and groundwater hot spots reached 4,600 µg/L PCE and 18,000 µg/L TCE.

The site was remediated in phases while the businesses stayed open. Vapor extraction, dual-phase extraction and limited groundwater extraction came first. Targeted electrical resistance heating then accelerated mass removal, followed by chemical oxidant injection with continued vapor extraction. In the final phase, a focused eight-well HETR™ thermal conduction heating wellfield operated with soil vapor extraction to treat the residual source zone.

Working under a guaranteed performance contract to reach MCLs, the remedy reduced concentrations about 99% across soil, groundwater and soil vapor. After groundwater reached non-detect, oversight transferred from the Los Angeles Regional Water Quality Control Board to DTSC, which issued a No Further Action determination for unrestricted land use on August 24, 2026, the strongest closure outcome available.

PROJECT DATA**PHASES**

SVE/DPE, then ERH/MPE, then ISCO, then HETR™/SVE

TREATMENT AREA

13,270 sq ft

INTERVAL

0 to 30 ft bgs

VOLUME

12,300 cubic yards

CONTAMINANTS

PCE, TCE, DCE, vinyl chloride

CONTRACT

Guaranteed performance to MCLs

AGENCIES

LARWQCB, then DTSC

~99%

Reduction in soil, groundwater and soil vapor

ND

Groundwater reached non-detect

Aug 2026

DTSC No Further Action

Unrestricted

Land use, including residential



Vapor extraction and treatment, thermal and vapor extraction wellheads, and a HETR™ wellhead with burner and control enclosures.



OUR PEOPLE

Hands-on leaders, start to finish.

Senior staff are directly involved in system design, implementation and performance evaluation from planning through closure.

**Rob D'Anjou****PRESIDENT · PRINCIPAL IN CHARGE**

Rob is an entrepreneur, inventor and the technical lead behind ERG. He is the lead inventor of HETR™ (U.S. Patent 12,523,373) and ThermaCycle®, directs ERG's research and development, and remains directly involved in the design of every ERG system.

Before relaunching ERG in 2022, Rob designed and led thermal and combined remedies at GRS, TerraTherm and GEO Remediation. Over his career he has led more than 50 thermal and combined remedy projects in 21 states and on four continents, removing more than 6,000,000 lbs of VOCs and SVOCs. That work includes the first successful in situ thermal remediation projects in Australia and Singapore, a 300 to 500 °C in situ project at a former manufactured gas plant, and high temperature ex situ projects that treated more than 60,000 cubic yards of soil.

M.S. Geosciences · Ph.D. (ABD) Biogeochemistry, University of Massachusetts Amherst

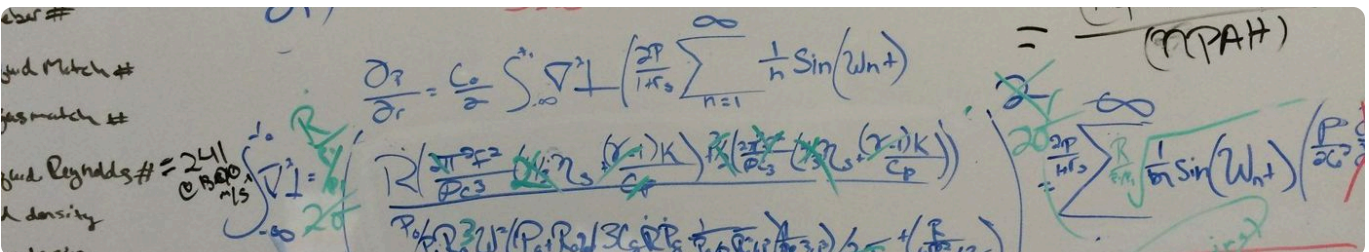
**Allen Swift****CHIEF EXECUTIVE OFFICER**

Allen runs ERG's business. He sets strategy, builds the consultant, agency and teaming relationships that bring ERG its work, leads pursuits, prices and negotiates contracts, and stays engaged through delivery so clients come back. He joined ERG in December 2022 to lead its domestic and international growth.

Allen has more than 30 years in environmental remediation, much of it growing thermal remediation businesses. Since 2010, when he helped introduce an in situ thermal remediation company to the North American market, he has led sales, marketing and strategic planning across federal, state, local and private sectors, on projects ranging from single dry cleaner sites to some of the largest and most complex thermal remediations completed. He is a co-inventor of HETR™ and ThermaCycle®.

Backed by 16 more professionals

ERG's leadership and project team is supported by 16 additional professionals, including project managers, staff scientists, engineers and field construction crews.



Heat transfer calculations on an ERG engineering whiteboard.



ENGINEERING, OPERATIONS AND PROJECT DELIVERY

The team that builds and runs the system.

**Danny Baysa****CHIEF OPERATING OFFICER**

Danny directs ERG's field operations: wellfield and system construction, startup, operation and decommissioning. He has built or led operations on more than 20 in situ thermal remediation projects spanning ERH, TCH and SEE, and most recently ERG's patented HETR™ and patent pending ThermaCycle® technologies.

A founding member of ERG in 2006, Danny has more than 30 years of environmental field experience, has supervised field work on more than 500 projects and has served as Site Safety and Health Officer on more than 200.

U.S. Navy Quality Assurance School · OSHA 30 Construction · 40 Hour HAZWOPER

**Skye Green, PE****ENGINEERING DIRECTOR**

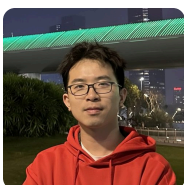
Skye leads engineering for ERG systems: process design, permitting, and the agency approvals needed to build and operate them. She has served in an engineering or project management role on more than 20 thermal remediation projects.

A founding member of ERG in 2006, Skye has practiced environmental engineering since 1998 and has led more than 250 site assessment and remediation projects.

California PE (Civil) C63756 · M.S. Civil Engineering, UCLA · B.S. Environmental Engineering, UC Irvine

**Bob Flatley****SENIOR PROJECT MANAGER**

Bob manages ERG projects from regulatory strategy and subcontracting through system installation, operation and final site restoration. In more than 35 years of hands-on remediation for federal, state, utility, industrial and commercial clients under CERCLA, RCRA, TSCA and NRC programs, he has led 33 in situ and ex situ thermal projects, including projects in Australia and Singapore, directed projects from \$10K to \$10M, and supported programs up to \$30M.

**Cheyney Zhou, PE****PROJECT ENGINEER III**

Over the past six years, Cheyney has contributed to the design and operation of twelve (12) in situ thermal remediation projects, and he is a lead inventor of the ThermaCycle® technology platform. Before joining ERG, he worked as a Project Engineer with several civil and environmental engineering firms.

California Professional Civil Engineer · M.S. Civil and Environmental Engineering, Carnegie Mellon University · B.S. Environmental Engineering, The Ohio State University



WHO WE WORK WITH

Built to work inside your project team.

Environmental consultants

Most of our private sector work comes through consultants. We provide thermal feasibility evaluations, pilot tests, design and fixed-price implementation within your client relationship. ERG does not sell Phase I and II assessments, RI/FS or other upstream consulting.

Federal, state and local agencies

ERG responds to public solicitations directly and as a teaming partner, and has delivered thermal remediation under NAVFAC contract vehicles.

Owners and responsible parties

For a cleanup that has stalled or is costing more each year, we evaluate whether heat can shorten the path to closure and what it will cost, working with your consultant of record.

HOW WE DELIVER

Feasibility through closure

Bench and pilot testing, design, permitting, construction, operation, monitoring and decommissioning, by one accountable team.

Firm fixed price

Most ERG work is priced lump sum from a design you can review, with guaranteed remediation contract options on most sites.

Optimization

Where an extraction or bioremediation system has plateaued short of closure, ERG applies heat through the wells already in place.

FIRM DATA

FIRM NAME The Environmental Remediation Group (ERG)	UEI JDDQTCU37W94	CAGE CODE 3GHF6
NAICS 562910	MAILING ADDRESS 9121 Atlanta Ave., Suite 820 Huntington Beach, CA 92646-6309	LEGAL ENTITY Civil-Environmental-Survey Group, Inc., dba The Environmental Remediation Group

CORE CAPABILITIES

In situ thermal remediation (ERH, TCH, SEE, HETR™, ThermoCycle®) · ex situ thermal remediation · heat-enhanced bioremediation · engineered combined thermal remedies · thermal optimization of existing systems · bench and pilot testing · design, build and operate delivery, including vapor and multiphase extraction, hydraulic control and treatment within each thermal system.



The Environmental Remediation Group

— NEXT STEP

Have a contaminated site? Let's engineer the closure.

Send us the basics: contaminants, depth, geology and the cleanup goal. A principal will review the site and tell you whether heat fits, which approach, and what a full evaluation involves.

BUSINESS DEVELOPMENT

Allen Swift

Chief Executive Officer
aswift@1erg.com
(206) 271-1514

TECHNICAL

Rob D'Anjou

President
rdanjou@1erg.com

1erg.com

Request a preliminary site evaluation at 1erg.com/evaluate.html