



COMPANY PROFILE



©RapidTech LLC dba National Environmental Systems
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www.nes-inc.biz





HISTORY AND COMMITMENT

Since 1989, National Environmental Systems has served the Remediation Professionals responsible for cleaning up our nation's hazardous waste sites. As we approach this goal, much of the focus of the Environmental Industry is turning towards Pollution Prevention (P2). The transfer of technology from clean-up to prevention is well underway and at NES we have the resources to adapt to that changing environment. Historically recognized as a leader in remediation system design and fabrication, NES now offers a wide range of pollution prevention and wash-water treatment equipment specializing in water re-use technologies.

Over the years, we have taken great pride and commitment in delivering quality Remediation Systems. We have now expanded that commitment and are working diligently to rapidly adapt to the changing market while maintaining a reputation for the best customer service in our industry.

At NES, we understand that engineering disciplines are unique. We employ professionals to help bridge the gaps that inevitably exist between these disciplines. Integrating environmental, electrical, and mechanical disciplines requires a team approach and as such, our engineers and scientists are here to assist you with your system design, installation, start-up, and service.

System Expertise

- Soil Vapor Extraction & Air Sparge
- Dual Phase Extraction
- Groundwater Treatment
- Sub-Slab Depressurization & Ventilation
- Air & Oxygen Injection
- Wash-Water Reclamation, Treatment, & Re-Use

Professional Staff Resources

- Mechanical engineers design integrated system enclosures, equipment skids, wash-water reclamation pads, size pumps, air strippers, blowers, compressors, separators, and many other components along with the associated piping and valve configurations.
- Electrical engineers calculate power requirements, design automated equipment controls and telemetry, provide NEC guidance, and manage our UL listing program.
- Environmental scientists review site laboratory data and permitting requirements for various regulatory agencies to ensure the designed system meets specifications.
- On-site technical specialists review critical design elements to ensure that operation and maintenance activities are streamlined.





Facility Resources

National Environmental Systems has a fully equipped manufacturing facility at our Attleboro, MA location. We are a registered Massachusetts Manufacturer which allows us to procure raw material at OEM rates and quantities. Our shop facilities also feature:

- Space to accommodate the fabrication of multiple systems on a simultaneous schedule
- Facility space at 20,000 ft²
- Average annual capacity 75 integrated systems
- Facility shop power 120/208/240/480 VAC, 3 phase, 1600 amp service
- UL Listed panel fabrication shop (UL 508A & UL 698)
- Professional electrical, plumbing, welding, and carpentry staff
- Production manager, purchasing manager, shipping/receiving manager
- Integrated project engineering, manufacturing, and field service scheduling

Customer Service

National Environmental Systems delivers systems and components with a one year limited warranty. Our systems are delivered with a full hard-copy Operation & Maintenance Manual and an electronic copy included as a back-up that can be sent to the home office. We offer unlimited telephone support and will deliver replacement components as rapidly as possible to your site or office. NES service engineers have performed start-up services for customers throughout the US and overseas. Each system can be supported with on-site start-up services.

- Our service engineers will coordinate with mechanical and electrical site contractors.
- NES is fully insured by a comprehensive Pollution, Product Liability, Professional Liability and Workers' Compensation Policy.
- Service engineers have full 40 hour OSHA training (Hazardous Waste 29 CFR 1910.120), NFPA training (Arc Flash 70E), & arrive on-site with full PPE.
- Our service engineers are fully equipped with the experience and tools to ensure that system start-up is accomplished successfully and rapidly.





Fabrication Facility

National Environmental has a fully equipped manufacturing facility at our Attleboro, Massachusetts location. We are a registered Massachusetts Manufacturer which allows us to procure raw material at OEM rates and quantities.



Shop Features:

- Shop size accommodates the production of multiple systems on a simultaneous schedule.
- UL Panel fabrication shop (UL 508A & UL 698)
- Shop manager, purchasing agent, shipping/receiving
- Professional electrical, plumbing, welding, and carpentry staff.
- Integrated project engineering and manufacturing schedule



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Fabrication Options



Cargo Box Systems

Choosing a Steel Enclosure (Cargo Box) is a cost effective solution for housing remediation systems. This pre-fabricated enclosure is desirable when large components are required for the system design. These enclosures are also ideally suited for the creation of separate rooms for various functions or electrical classifications.

Shed Systems

Selecting a Wooden Shed for an Integrated Remediation System is desirable for sites where the system is in public view. Shed systems can be painted to blend with existing architecture and outfitted with sound attenuation to minimize visual and noise impacts associated with equipment operation. Shed Systems are available in various sizes and stamped engineering drawings are available upon request. The shed is built on a steel base frame to ensure stability during transportation.

Trailer Systems

Trailer Mounted Systems are well-suited for site clean-ups which are anticipated to progress rapidly. Selecting a trailer mounted remediation system is also the preferred option for users who perform emergency services.

Skid Mounted Equipment

Selecting Skid Mounted Equipment for site remediation is the preferred option when an existing structure has capacity and infrastructure in place. This selection provides a cost savings and a degree of configuration flexibility.



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Resources

Professional Staff Resources

The combined NES staff experience on multiple projects with various client specified performance metrics fosters an atmosphere emphasizing Value Added Engineering.



Vendor / Partner Resources

NES sources raw materials using various techniques. We require our component vendor representatives to annually attend a review meeting with design engineers and purchasing staff to discuss pertinent sourcing issues including: quality, availability – lead-time, OEM pricing, and technology improvements. NES also stresses to clients the importance of value engineering, insofar as the selection of components should be based on operational objectives in addition to cost issues. This allows our repair and warranty claim rates to remain well below industry norms.





Equipment Handling / Delivery



NES routinely arranges and executes delivery of our equipment to various client locations.



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Site Integration



NES was selected to fabricate an integrated SVE/Groundwater Treatment system for an industrial multi-national company in Massachusetts. The design approach and equipment selection was based on an expedited delivery schedule driven by regulatory deadlines and a pending property transaction.

Design Parameters

Site Contaminants	Chlorinated solvents
SVE System	500 scfm at 48 inches wc vacuum at the inlet manifold legs with carbon for vapor treatment
Groundwater Treatment	40 gpm
Site Power	480 VAC, 3 phase
NEC Area Classification	Non-Classified system interior and exterior

System Equipment

SVE	Rotary lobe positive displacement blower (15 hp)
Well Pumps (Quantity 8)	Sized for 5 gpm each (1/2 hp)
Groundwater Holding Tank	Capacity 500 gallons
Solids Filtration	Multiple bag filter units
Air Stripper	Low profile 6 tray unit (blower 7.5 hp)
Water Polishing	Liquid phase carbon
Off-Gas Treatment	Vapor phase carbon for SVE and vapor phase carbon for air stripper
Controls	PLC with remote operation, remote notification, data-logging, and VFD operation for adjusting SVE blower performance
System Enclosure	Steel cargo shipping container (exterior 40 feet x 8 feet x 9.5 feet)





Key Performance Indicators (KPIs)

At NES, Key Performance Indicators are measured for two objectives:
Client Satisfaction & Attainment of Regulatory Compliance Goals

Client Satisfaction is measured utilizing the following criteria:

- Client Retention & Contract Renewals
- Budget Adherence

Attainment of Regulatory Compliance Goals is measured utilizing:

- Meeting water & contaminant reduction criteria
- Maintaining system up-time
- Reducing impact on host site
- Controlling system Operation & Maintenance expenditures

NES consistently designs and builds systems for industry with a successful start-up percentage that exceeds 95%. Our workmanship warranty rate approaches zero percent. Our value added approach allows us to recommend components for which warranty repair rates are minimized.

NES welcomes the opportunity to collaborate with Clients on development of systems to address unique clean-up goals, address on-going or new regulations, and to develop more cost-effective strategies.



Project Objectives: Treat Groundwater for Multiple Contaminants using UV, Chem-Ox, and Carbon Adsorption Technologies in a footprint limited to the size of a parking space.

