QUALITY CONTROL PLAN
FOR
DEMOLITION OF BUILDING 401
NIAGARA FALLS STORAGE SITE
Lewiston, New York

Contract No. DACW49-03-R-0033

Submitted By:

Sevenson Environmental Services, Inc.

2749 Lockport Road

Niagara Falls, New York 14305

COMPLETION OF INDEPENDENT TECHNICAL REVIEW

The Contractor has completed the **(Quality Control Plan)** of (Demolition of Building 401 @ the Niagara Falls Storage Site, Lewiston, New York). Notice is hereby given than an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project, as defined in the Quality Control Plan. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing Corps' policy.

_____/Signature/_____ Date: _____
Design Team Leader

_____/Signature/ Jennifer A Singer Date: 9/18/03
Design Team Members

_____/Signature/ Robert S. Eaton Date: 9/17/03
Independent Technical Review Team Leader

_____/Signature/ [signature] Date: 9/18/03
Independent Technical Review Team Members

CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows:

(Describe the major technical concerns, possible impact, and resolution)

As noted above, all concerns resulting from independent technical review of the project have been considered.

[signature] (Signature) Date: 9/18/03

Principal W/CONTRACTOR firm

COMPLETION OF INDEPENDENT TECHNICAL REVIEW

Item No: 4.2

Submittal Title: Quality Control Plan

Significant concerns and the explanation of the resolution are as follows:

(Describe the major technical concerns, possible impact, and resolution)

-Restructured chain of command in organization chart

-Testing laboratory must be Army Corps of Engineers approved

-Restructure page sequencing

-Change Quality Control Daily Report (QCDR) to Daily Quality Control Report (DQCR)

-Army Corps of Engineers must be notified minimum 48 hours prior to all inspections

-Submittal Register must be Army Corps of Engineers approved

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4.2 Contractor Quality Control Plan

4.2.1 CONTENT OF THE CQC PLAN

A contractor Quality Control Plan (QCP) will be implemented to ensure compliance with the specifications for remedial and construction procedures employed during the performance of site work required as detailed on the Contract Drawings and in the Contract Specifications. The quality control measures as presented herein will include construction procedures, staffing, types of material and equipment to be used, and methods of performing, documenting, and enforcing quality control operations of both the prime contractor and subcontractors (including inspection and testing).

Maintenance of the QCP will be the responsibility of the Quality Control Manager (QCM). The QCM will be responsible for ensuring that all materials and work comply with the Contract Specifications. Testing firms will be at the disposal of the QCM to ensure contract compliance of the various aspects of the work. The QCM will report any deviations from the QCP to Sevenson's Corporate Project Manager.

During the pre-work conference, a coordination meeting will be held between Sevenson and the USACE. At this meeting, all aspects of Sevenson's QCP will be discussed and a mutual understanding of the system details will be developed. A List of Definable Features of Work that will require inspection will be established and agreed upon at this meeting. This list may be changed as new features of work are established.

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4.2.2 PROJECT ORGANIZATION

The functional responsibilities of key technical personnel actively involved at the site are summarized below in point form. Resumes of these personnel and a Quality Control Staff Organizational Chart are included in this plan.

a) Alfred R. LaGreca, Corporate Project Manager

1. Corporate Quality Control and Quality Assurance;
2. Managerial guidance to technical group;
3 Technical representation at meetings; and
4. Liaison between technical group and client.

b) Jack Brueckl, Site Project Manager

1. Site Responsible Person;
2. Site Security Officer; and
3. Maintain Project Schedule.

c) Dana Draper, Quality Control Manager

1. Ensure total compliance of the field work to project specifications; and Quality Control Plan.
2. Prepare, submit, and maintain daily and weekly project submittals to the Client.

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d) Paul J. Hitcho, PhD, Certified Industrial Hygienist

1. Development and implementation of the Site Safety & Health Plan;
2. Preconstruction indoctrination of all on-site personnel;
3. Review and revise Site Safety & Health Plan as necessary; and
4. Oversee Site Safety & Health Officer's activities.

e) Paul Jung, Health Physicist/Radiological Safety Officer

1. Development and implementation of the Radiological Control Plan
2. Implement and monitor Radiological Control Plan on a daily basis.
3. Review and report radiological analytical results

f) Mark Nicklas , Site Safety and Health Officer (SSHO)

1. Implement and monitor SSHP on a daily basis;
2. Conduct Air Monitoring Program; and
3. Review and report analytical results.

g) (To be determined), Project Superintendent

1. Responsible for all site construction activities;
2. Coordination of subcontractor activities; and
3. Ensure compliance of the field work to the project specifications.

h) Kenneth Paisley, Technical Manager

1. Coordinate transport and disposal services.

4.2.3 CONTRACTOR'S GENERAL QUALITY CONTROL PLAN

Areas to be addressed under the QCP will include all on-site and off-site construction operations.

a) Basis: The basis of the QCP will be nationally recognized standards published by the American Society for Testing and Materials (ASTM) and the New York State Department of Transportation (DOT) as applicable. In addition, specifications within the QCP reflect the experience gained by Sevenson in completing projects of a similar nature.

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b) Implementation: The QCM will be responsible for controlling the QCP to ensure that good quality materials are provided for the proposed demolition and that good workmanship is provided. Sevenson's QCM will report directly to the Corporate Project Manager and will complete daily site inspections to ensure compliance with the contract specifications. The QCM will complete daily reports for all field testing and material manufacturer specifications which will be submitted to the USACE on a daily basis. The QCM will be responsible for ensuring that all materials and work complies with the contract plans and specifications.

c) Reporting: The QCM will record his daily control activities on a daily report maintained on-site at all times. All site activities, site inspections, and field testing of materials will be recorded along with any unacceptable site occurrences on a daily basis. Each daily entry into the report will be signed by the QCM as verification to its correctness. The Daily Quality Control Report (DQCR) will be submitted to the USACE on a daily basis. The Quality Control Daily Report will be reviewed by the QCM and USACE at the completion of each workday.

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d) Inspections: To ensure that all construction activities completed on-site comply with the project specifications, the QCM will complete, in conjunction with the USACE and the Site Safety & Health Officer, three phases of site inspections for each feature of work, which include the following:

1. Phase I - Preparatory Inspection

This will be performed prior to beginning work on each definable feature of work. It will include a review of contract requirements; a check to ensure that all materials and/or equipment have been tested, submitted, and approved; a check to ensure that provisions have been made to provide required control testing; examination of the work area to ascertain that all preliminary work has been completed; and a physical examination of materials, equipment and sample work to ensure that they conform to approved shop drawings or submittal data and that all materials and/or equipment are on hand. Additionally, the following items will be discussed during the preparatory inspection:

i. A review of the appropriate activity hazard analysis to assure safety requirements are met.

ii. A discussion of the procedures for constructing the work including repetitive deficiencies. Documentation of construction tolerances and workmanship standards for that phase of work.

iii. A check to ensure that the portion of the QCP for the work to be performed has been accepted by the USACE.

Subsequent to the preparatory inspection and prior to commencement of work, Sevenson will instruct each applicable worker as to the acceptable level of workmanship required in order to meet the Contract Specifications.

2. Phase II - Initial Inspection

This will be performed as soon as a representative portion of the particular feature of work has been accomplished and will include examination of the quality of workmanship and review of control testing for compliance with contract requirements, use of defective or damaged materials, omissions, and dimensional requirements.

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3. Phase III - Follow Up Inspection

These will be performed daily to ensure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. Final follow-up inspections will be conducted and test deficiencies corrected prior to the initiation of new features of work.

The QCM will notify the USACE, at least 48 hours in advance, of any inspections. Notification will be recorded in the DQCR which will be submitted to the USACE at the end of each workday.

4.2.4. **TESTING**

Testing will be performed as required at the frequency specified for each phase of the demolition. All testing for materials supplied, and/or encountered during work activities will be performed by a testing firm (procured by Sevenson) and approved by USACE prior to commencing site work.

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Sevenson anticipates utilizing a local laboratory (Waste Stream Technology Inc.) as their industry approved testing laboratory. Material supplied with suppliers' specifications may be tested to verify they comply with the specifications if determined necessary by the QCM. The need for additional testing will be determined by the QCM and USACE representative following a detailed review of the suppliers' specifications and material inspection and will be performed as required by the Contract Specifications. The QCM will reject all materials which do not meet the Contract Specifications.

The QCM will perform the following activities and record and provide the following data:

a) Verify that testing procedures comply with Contract Requirements;

b) Verify that facilities and testing equipment are available and comply with testing standards;

c) Check test instrument calibration data against certified standards; and

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d) Verify that recording forms, including all of the test documentation requirements, have been prepared.

The QCM will stop work on any item or feature of work pending satisfactory correction of any deficiency noted by his quality control staff or by the USACE. Construction will not proceed upon any feature of work containing uncorrected work. If recurring deficiencies in an item or items indicate that the quality control system is inadequate, corrective actions will be taken as directed by the USACE. If Sevenson fails or refuses to comply promptly, the USACE may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders will be the subject of either an extension of time or reimbursement for additional costs or damages. All infractions will be logged on the QCDR.

4.2.5 **COMPLETION INSPECTION**

At the completion of all work or any increment thereof established by a completion time stated in the paragraph entitled Commencement, Prosecution, and Completion of Work or stated elsewhere in the specifications, the QCM will conduct a completion inspection of the work and develop a punchlist of items which do not conform to the approved plans and specifications. Such a list will be included in the DQCR and will

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include the estimated date by which the items will be corrected. The QCM or his staff will make a second completion inspection to ascertain that all punch list items have been corrected and so notify the USACE. The completion inspection and any corrections required by this paragraph will be accomplished within the time stated for completion of the entire work or any particular increment thereof. Sevenson will correct all deficiencies within a trade before any new definable features of work in that trade are begun. Failure to accomplish corrections as indicated may result in the USACE suspending work in the trade involved.

4.2.6 **DOCUMENTATION**

Information recorded on the DQCR will include the following:

a) Description of trades working on the project;

b) Numbers of personnel present on site;

c) Weather conditions;

d) Types and numbers of tests performed;

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e) Results of testing;

f) Nature of defects or cause for rejection;

g) Proposed remedial action;

h) Corrective action taken;

i) Delays encountered;

j) Contractor/subcontractor and their area of responsibility,

k) Operating equipment with hours worked, idle, or down for repair;

l) Work performed each day, giving location, description, and by whom;

m) Test and/or control activities performed with results and references to specifications/drawing requirements. Identification of the control phase deficiencies noted along with corrective action;

n) Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements;

o) Submittals reviewed, with contract reference, by whom, and action taken;

p) Off-site surveillance activities, including actions taken;

q) Job safety evaluations stating what was checked, results, and instructions or corrective actions taken;

r) Instructions given/received and conflicts in plans and/or specifications; by whom; and action taken;

s) Sevenson's verification statement

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t) Numbered Sequentially;

u) Equipment on-site

Any concerns or deviations from the required material specifications and the actions taken to correct the problems will be noted on the report.

4.2.7 REVISIONS TO WORK

The QCM will be responsible to ensure total compliance of the field work to the Project Specifications. Should Sevenson require modifications or revisions to the specifications, the QCM will make the request, in writing, to the USACE. The QCM must receive approval from the USACE prior to allowing the modifications or revisions to occur in the field. The QCM will record all such requests and list on the DQCR

4.2.8 REGISTERED LAND SURVEYOR

All survey work by Sevenson (if applicable) will be performed by a registered Land Surveyor(Sub-Contractor), as required by the project.

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4.2.9 RECORD MEASUREMENTS

Sevenson will prepare as-built drawings (if applicable) in accordance with the requirements of the Contract Specifications. As a minimum, Sevenson will keep a contract set of record drawings which will be submitted to the USACE on request during work progress and will be finally handed to the USACE upon completion of the project.

4.2.10 SUBMITTALS

Sevenson will develop and submit a submittal register for USACE approval. The submittal register will coincide with the contract schedule to ensure the timely submissions of items to be incorporated into the project, including items from material suppliers and subcontractors. Submittal dates will be documented in the register and will be reviewed by the QCM for contract compliance. Prior to submittal, all items will be checked and approved by the QCM to ensure compliance with the contract documents in accordance with the Contractor Submittal Requirements Summary.

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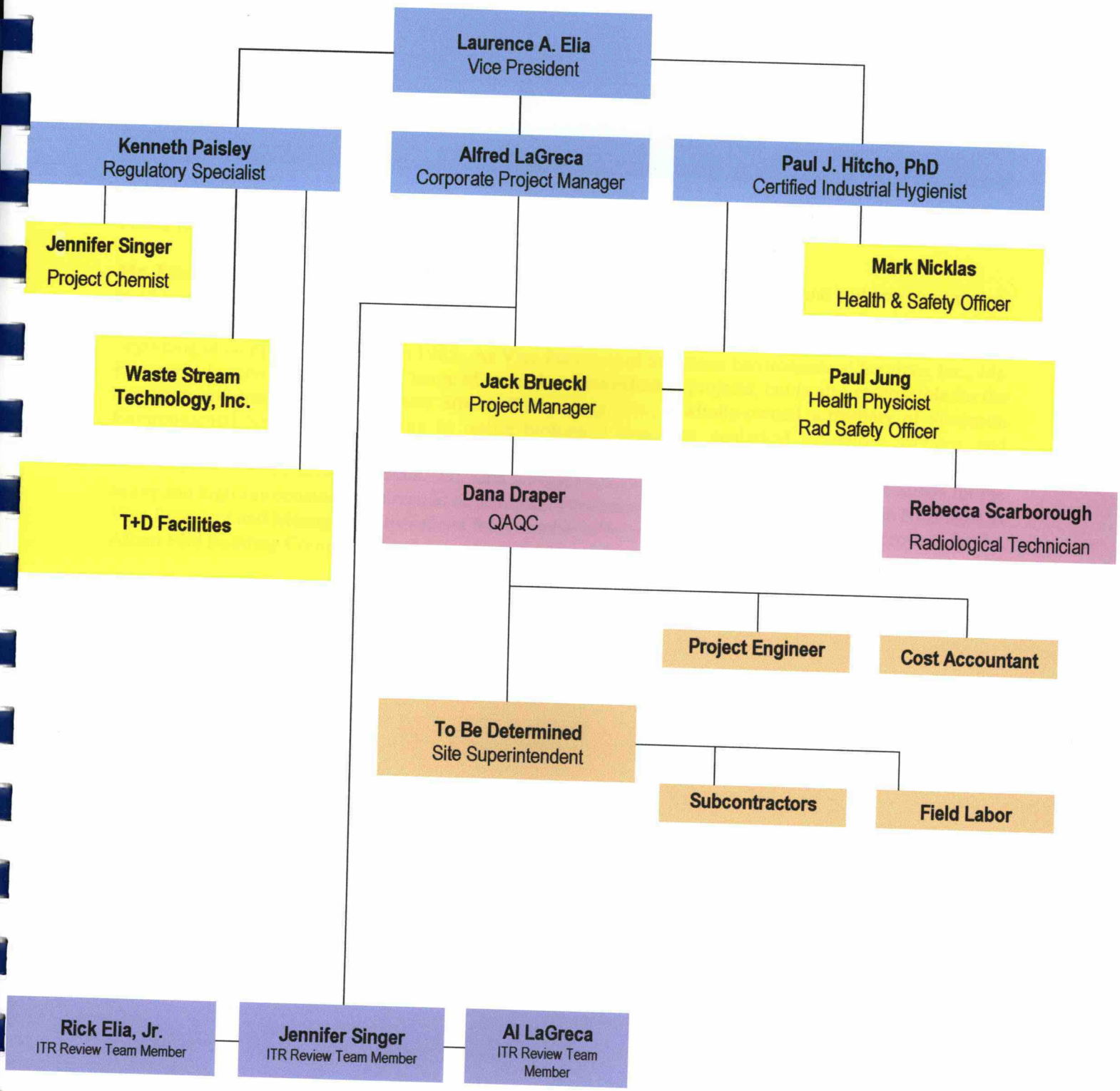
4.2.11 DEFICIENCY TRACKING

Deficiencies in workmanship, submittals, etc. will be tracked by utilizing the "list of outstanding deficiencies" form. This form will be completed and attached to the DQCR. Deficiencies will also be tracked weekly until all deficiencies have been corrected.

Organization Chart



Sevenson Environmental Services, Inc.

Name:	**LAURENCE A. ELIA**
Education:	AB, BE, Engineering, Dartmouth College, 1973
Position:	**Vice President, Sevenson Environmental Services, Inc.** **President and Chief Executive Officer,** **Sevenson Environmental, Ltd.**

PROFESSIONAL EXPERIENCE

Mr. Elia is a civil engineer with project management experience in heavy, highway, and building construction, in addition to possessing knowledge of all aspects of hazardous waste site remediation. As President and CEO of Sevenson Environmental, Ltd., Mr. Elia has been in charge of all operations of that company since the beginning of company operations in 1985. As Vice President of Sevenson Environmental Services, Inc., Mr. Elia not only serves as Officer-in-Charge of several site remediation projects, but is also responsible for the operation and management of Waste Stream Technology, Inc., a wholly-owned subsidiary of Sevenson Environmental Services specializing in onsite biological treatment, analytical laboratory services, and treatability studies. Mr. Elia also oversees the operation of Sevenson's Midwest office specializing in onsite chemical fixation of leachable metals. Mr. Elia previously served as Officer-in-Charge of operations for the heavy and highway construction division of Sevenson Construction Corp. He spent five years in Nicaragua as Vice President and Manager of Operations for a number of heavy and highway construction projects for the Albert Elia Building Company, Inc.

Name:	**ALFRED R. LAGRECA**
Education:	BS, Civil Engineering SUNY at Buffalo, 1973
Project Assignment:	**Chief Estimator/Corporate Project Manager**

PROFESSIONAL EXPERIENCE

Mr. LaGreca is Chief Estimator and a Corporate Project Manager for Sevenson Environmental Services, Inc., and Vice President for Sevenson's general construction company affiliate, SCC Contracting, Inc. He is responsible for estimating, scheduling, staffing, engineering, and construction activities on projects as well as negotiations and interfacing with clients. Mr. LaGreca's experience in heavy civil and general building construction makes him an important member of Sevenson's remedial action program management team. He has served Sevenson for twenty-seven years in a variety of capacities from Estimator and Project Manager to Chief Estimator and Corporate Project Manager on both government and private sector projects. His experience has included:

- **Federal Creosote Superfund Site, Manville, NJ**: Corporate Project Manager for the excavation, characterization, transportation and disposal of approximately 150,000 cy of creosote contaminated soils. Additional remedial measures included the installation of 35,000 sf of soldier pile and lagging and 45,000 sf of sheet pile as protective shoring for deep excavation (35' depths); extraction well system installed to aid site dewatering, and installation and O+M of a portable WWTP. 50 MM gallons of water have been treated thus far. Odor control measures implemented. Extensive site restoration.

- **Spring Valley Site, (Phase I and II), Washington, DC**: Corporate Project Manager for the remediation of 25 residential properties contaminated with arsenic. Sensitivity of the project required implementation of a detailed Community Relations Plan. Extensive restoration work required.

- **Saltville Disposal Superfund Site, OU2, Saltville, VA**: Corporate Project Manager for the remediation of Ponds 5 and 6 requiring extensive earthwork and construction of a 120 acre multi-layer cap. Additional work tasks included the installation of an upgradient groundwater interceptor system comprised of 10,000 LF force mains and pump chambers.

- **South Jersey Clothing Co. Site, Minotola, NJ**: Corporate Project Manager for construction of a 500 gpm (maximum) groundwater recovery and treatment plant; installation of extraction, injection and monitoring wells; SVE system installation; and underground installation of 1 mile of 6" dual containment pipe in a mixed commercial/residential area. Project included a second contract for 5 years O&M of the two systems.

- **Genzale Plating Superfund Site, NY**: Project Manager responsible for RIFS, estimating, scheduling, staffing, resource selection and vendor identification for this superfund project. After viewing the proposed conceptual design drawings, Mr. LaGreca realized that the sheet piling requirements for excavation were unrealistic to achieve due to the close proximity of residences. This initial

estimated task order cost was $6 million. Mr. LaGreca incorporated a "surgical" excavation technique based on locating hot spots using Geoprobe7 information. The result was a $4.8 million contract cost reduction.

A detailed community relations plan was established that met the needs of the company and residents, but also allowed remediation to proceed uninterrupted.

- **Industrial Welding Site, NY**: Corporate Project Manager. This fast-tracked design/build project consisted of demolition of an American Legion Post, construction of a collection system, and construction of a 5-acre multi-layer landfill cap. In addition to his duties of overall staffing and coordinating equipment and material resources for this project, Mr. LaGreca worked with Sevenson's on-site project manager to ensure that the project was built to specifications, on time and within budget.

- **Dallas Area Rapid Transit, Dallas, TX:** Project Manager for the construction of a 6-acre treatment cell for bioremediation of 40,000 cys hydrocarbon-contaminated soils. Work also involved installation of a series of injection and extraction wells for in-situ treatment of contaminated groundwater.

- **New Lyme Landfill Superfund Site, Ashtabula, OH:** Project Manager for construction of a groundwater and leachate collection and treatment facility. Also responsible for the operation and maintenance of the facility as well as of the extraction well system. The plant has run smoothly due to Mr. LaGreca=s role which involved participation in progress meetings, QA audits, and assurance that administrative items such as certified payrolls, invoices, etc. are being were addressed.

- **Circuitron Corporation Superfund Site, NY**: Project Manager responsible for the identification of contaminated media as a precursor to ACM abatement and removal, demolition of former manufacturing facilities, and contaminated soil excavation and removal at former electronics manufacturing facility.

- **Vestal Well 1-1 Superfund Site, NY**: Project Manager responsible for the construction and operation of a SVE system. Mr. LaGreca worked with local businesses during construction to insure that their facilities remained open with little or no disruptions. SVE system operations continued for three years under this task order. The fourth year of operation was transferred to Sevenson=s LTRA contract with the Army Corps of Engineers Kansas City District.

- **Love Canal Superfund Site, Niagara Falls, NY**: Project Manager for the start up and operation and maintenance of leachate treatment facility for the New York State Department of Environmental Conservation. This three-year contract required Sevenson to coordinate all operations, maintenance, and repairs to the plant facility and analytical equipment, including coordinating carbon changes.

- **Love Canal Superfund Site, Niagara Falls, NY:** Project Manager for the design and construction of the first permanent leachate treatment facility built at a Superfund site in the United States.

- **Love Canal Superfund Site, Niagara Falls, NY:** Project Manager for the construction of a 3,000 sf building to house laboratory equipment for the analysis of leachate generated on site.

- **Aidex Superfund Site, IA**: Estimated and provided key pre-construction submittals for this project involving the excavation and disposal of pesticide contaminated soils; characterization of various wastes; decontamination of structures; and temporary water treatment system installation, operation and maintenance.

- **City of North Tonawanda Wastewater Treatment Plant, North Tonawanda, NY:** Project Manager for the construction of a 3,000-gpm municipal wastewater treatment plant. Work included concrete, structural steel, and mechanical components, as well as installation of treatment equipment, including clarifiers, settling tanks, and sand filters.

- **Town of Amherst Wastewater Treatment Plant, Amherst, NY:** Project Manager for the construction of a 4,000-gpm municipal wastewater treatment plant. Required construction of new building and installation of sludge thickeners, settling tanks, clarifiers, carbon beds, and filter presses.

- **Niagara County Raw Water Pump Station and Treatment Plant, Niagara County, NY:** Project Manager for construction of a pump station, and expansion of a municipal wastewater treatment plant. Expansion included installation of concrete holding tanks, carbon beds, and chlorination system.

- **Town of Grand Island Pump Station, Grand Island, NY:** Project Manager for the construction of a municipal water pumping station. Project included installation of steel sheet pile along the Niagara River and construction of intake piping and pump station.

Name:	**JOHN M. BRUECKL**
Education:	BS, Civil Engineering Tri-State University, 1980 AAS, Civil Technology Erie Community College, 1977
Project Assignment:	**Project Manager**

PROFESSIONAL EXPERIENCE

Mr. Brueckl is a Project Manager for Sevenson Environmental Services, Inc., and for Sevenson's general construction company affiliate, SCC Contracting, Inc. He is responsible for estimating, scheduling, staffing, engineering, and construction activities, as well as for negotiations and interfacing with clients. His 23 years of experience combines remedial action with heavy and highway (bridge, roadway, utilities) construction work. Mr. Brueckl has served Sevenson in a variety of capacities from surveyor through Project Manager. His experience has included:

- **Former MGP Site Remediation, Long Branch, NJ:** Project Manager for the excavation, segregation, stockpiling of 160,000 tons of contaminated soils from an inactive MGP site and adjacent railway, residential and church properties for offsite disposal. Construct temporary structure for excavation and material handling operations. Realignment and modifications to an existing stream includes installation of coffer dams and bypass pumping system; removal of sediment from 1,500 linear feet of stream; and installation of natural and synthetic layer cap over stream bed to prevent further contaminant migration. Install 8 acre multi-layer cap and concrete retaining wall to support capping system. Demolish buildings and structures within cap boundaries including gas holder and spray pond, foundations, piping and appurtances. Odor suppressant foam used during excavation and material handling activities. Site dewatering and water treatment. Extensive restoration to stream and properties.

- **Fields Brook Superfund Site, Ashtabula, OH**: Project Manager for remedial action of the sediment and floodplains/wetlands operable unit. Project requires excavation, handling, transport and placement into an on-site landfill 30,000 cy of material removed over 22 miles of creek. Additional tasks include: operation and maintenance of on-site wastewater treatment facility, backfilling and revegetating floodplain areas, restoring stream banks with erosion-resistant materials, installation of landfill cover system and excavation, transport and placement of approximately 10,000 cy of DNAPL material which will be thermally treated on-site..

- **Commercial Oil Services Site, Phase 2, Oregon, OH**: Project Manager for this CERCLA site requiring the solidification of 140,000 cy of oily lagoon sludge; construction of an onsite landfill; placement of solidified material into cell; install RCRA cap; construct leachate treatment facility, collect and treat 2MM gallons of leachate, 2 year O+M facility of water treatment facility.

- **PCB Sediment Removal, Toledo, OH:** Project Manager for the excavation, stabilization, transportation, and disposal of 11,000 cyds of PCB contaminated sediments.

- **PCB Sediment Removal River Raisin, Monroe, MI:** Project Manager for the dredging, decanting, and solidification of 30,000 cy of PCB contaminated river sediments. Construction of a 150 gpm PCB/TSS wastewater treatment facility. Construction of a 3.5 acre sediment containment unit for landfilling of solidified sediments. Construction of an interim cap over solidified sediments.

- **PCB Sediment Removal, Russelville, KY:** Project Manager for the excavation, characterization, transport and disposal of 66,000 cy of PCB contaminated sediments from creek and flood plain areas along Town Branch Creek. Installation of a 200 gpm wastewater treatment system. Installation of rip rap and complete site restoration.

- **Mixed Waste Pond Closure, Lima, OH:** Project Manager for the construction of 2 onsite disposal cells; excavation and stabilization of mixed waste sludge; transfer stabilized material to cells; cap cells and restore site.

- **Austin Avenue Radiation Site, Lansdowne, PA:** Project Manager for this CERCLA site requiring dismantlement of 20 historic homes and 1 commercial property contaminated with low level radioactive waste. 10 homes restored to original. 15,000 cyds LLRW soil and debris transported and disposed of offsite.

- **Metaltec/Aerosystems Superfund Site, Franklin, NJ:** Project Manager for cleanup involving the onsite thermal treatment of 12,000 tons of soil from a dewatered excavation.

- **Montclair Radium Superfund Site, Montclair, NJ:** Project Manager for the excavation, transport, and disposal of low-level radium-contaminated soils and debris from a residential area. Also for the demolition of four houses and restoration of eight additional homes.

- **Confidential Client, Wellsville, NY:** Project Manager for the remediation of an oil separator unit, including the removal, treatment, and disposal of aqueous-phase and sludge wastes.

- **Blosenski Landfill Superfund Site, Chester County, PA:** Project Manager for the remediation of a mixed municipal-industrial waste landfill site. Work included excavation, removal, staging, sampling, analysis, and

disposal of over 500 drums.

- **Route 5 Skyway Rehabilitation Project, Buffalo, NY:** Project Manager for the rehabilitation of all bridge pier substructures and removal and replacement of concrete.

- **Sealand Restoration Superfund Site, Lisbon, NY:** Project Manager for the remediation of a former commercial hazardous waste landfill. Work involved excavation and transport of contaminated soils to an offsite incineration facility; sampling, staging, and disposal of buried drums; installation of a wastewater collection and treatment system; and site restoration.

- **Hyde Park Boulevard Reconstruction, Niagara Falls, NY:** Project Manager for a road rehabilitation project that required reconstruction of a five-mile section of a four-lane city roadway.

- **North- and Southbound Grand Island Bridges, Grand Island, NY:** Project Manager for the rehabilitation of bridge pier substructures and removal and replacement of concrete.

- **Aidex Superfund Site, Council Bluffs, IA:** Project Manager for the excavation, characterization, transport, and disposal of contaminated soil; decontamination of all site structures; and operation and maintenance of a temporary onsite water storage and treatment facility.

- **Pollution Abatement Services Superfund Site, Oswego, NY:** Project Manager for the excavation, staging, analysis, and disposal of 1,100 buried drums; construction of a bentonite slurry wall; installation of a groundwater and leachate collection system; installation of an HDPE liner; construction of an 8.3-acre cap; and site restoration.

- **South Grand Island Bridge, Grand Island, NY:** Project Manager for the rehabilitation and modification of the South Grand Island Bridge's northbound lanes. Construction activities required extensive removal of deteriorated road surfaces and railings and installation of new railings, curbs, and highway surfaces.

- **Orleans County Medium-Security Prison, Albion, NY:** QC Manager for the construction of a 500-bed medium-security prison. Construction activities included installation of storm and sanitary sewer lines, construction of 17 buildings, and landscaping.

- **IBM Corporation, Poughkeepsie, NY:** Project Manager for the

excavation, transport, and disposal of contaminated soils and site restoration.

- **Buffalo General Hospital, Buffalo, NY:** Project Manager for all construction activities required to complete a major hospital building expansion.

- **Sylvester Superfund Site (Gilson Road), Nashua, NH:** QC Manager for the construction of a soil-bentonite slurry wall and installation of a clay and HDPE cap.

Name:	**DANA DRAPER, JR.**
Education:	BS, Environmental Studies SUNY at Buffalo
	Construction Quality Management for Contractor's Training, May 1997
Project Assignment:	**CQC Systems Manager/Health and Safety Officer**

PROFESSIONAL EXPERIENCE

Mr. Draper, a CQC Systems Manager and a Site Health and Safety Officer with Sevenson Environmental Services, Inc., has more than 6 years experience in the site remediation field. He assists Sevenson's CIH in training field personnel (including OSHA-mandated training courses) and conducting informational meetings. He is responsible for the repair and maintenance of all health-and-safety related field instruments, as well as for the implementation and enforcement of site-specific health and safety plans. In addition to his health and safety experience, Mr. Draper is experienced in such specialized aspects of remedial construction as soil excavation and drum handling, staging, and sampling. His project experience is as follows:

- **South Jersey Clothing, Minotola, NJ**: CQC Systems Manager for construction of a 500 gpm (maximum) groundwater recovery and treatment plant; installation of extraction, injection and monitoring wells; SVE system installation; and underground installation of 1 mile of 6" dual containment pipe in a mixed commercial/residential area.

- **Genzale Superfund Site, Long Island, NY**: Site Health and Safety Officer for drum characterization and installation of a solvent vapor extraction system. Level C protection.

- **Circuiton Superfund Site, Long Island, NY**: Site Health and Safety Officer for tank removal, soil excavation, and building demolition. Level C protection.

- **Vestal Superfund Site, Vestal, NY**: Site Health and Safety Officer for installation of a solvent vapor extraction system. Level C protection.

- **Confidential Client, Elmira, NY**: Site Health and Safety Officer for excavation of PCB contaminated soil. Level C protection.

- **Confidential Client, Glens Falls, NY**: Site Health and Safety Officer for the removal of PCB-contaminated sediment from a tunnel emptying into the Hudson River. Project included confined-space entry and sediment solidification. Level C protection.

- **Confidential Client, North Tonawanda, NY**: Site Safety and Health Officer for the removal of NAPL-contaminated soil and sediment from a creek bed emptying into the Niagara River. Work involved confined-space entry, trenching and excavation, water treatment, and soil stabilization. Stabilization was carried out under a containment structure, with extensive air monitoring. Level B and C protection.

- **Summit National, Deerfield, OH**: Site Safety and Health Officer for the construction of a leachate collection system and thermal incineration facility. Work involved trenching, excavation, and confined-space entry. Level C protection.

- **Confidential Client, Saltville, VA**: Site Safety and Health Officer for the removal of PCB-contaminated soil and debris. Work involved trenching, excavation, and soil sampling. Level C protection.

Name:	**KENNETH O. PAISLEY, CHMM**
Education:	BS, Biology Bloomsburg University, 1988
Certifications:	Certified Hazardous Materials Manager Construction Quality Control Management for Contractor's Training, March 2000
Project Assignment:	**Director of Technical Affairs/ Regulatory Compliance Specialist**

PROFESSIONAL EXPERIENCE

Mr. Paisley brings to Sevenson Environmental Services, Inc. a background in the technical and regulatory issues surrounding hazardous waste site remediation. He has worked in the nuclear/chemical waste industry; has served as a waste approval coordinator and a technical representative for regulatory issues at a TSD facility; and as a project manager on remediation projects. This diverse background enables Mr. Paisley to interface effectively with hazardous waste generators, project management, regulatory agencies, and subcontractors. As Director of Technical Affairs, Mr. Paisley is responsible for regulatory compliance matters on all Sevenson projects. He provides support services to project management on technical issues pertinent to proper waste handling techniques. He also develops and manages waste characterization plans consisting of sampling protocol, analytical requirements, and final waste disposition. In addition, he sources and evaluates all analytical, transportation, and disposal subcontractors. Mr. Paisley's project experience is as follows.

- **Cumberland Bay Site (NYS Superfund), Plattsburgh, NY**: Technical Affairs Manager for the dredging, dewatering, treatment, and disposal of approximately 90,000 cubic yards of PCB sludges from a 34 acre area of Lake Champlain. In addition, 20,000 cubic yards of shoreline were excavated for disposal. Duties included the placement, staffing and coordination of an on-site laboratory to perform immunoassay testing to determine PCB concentrations in waste prior to off-site disposal. Planned and coordinated all other site analytical testing including the placement of real-time monitors to determine Total Suspended Solids (TSS) content outside of sheet-piled areas and at water discharges. Arranged for and coordinated the shipment of all site waste to either non-hazardous or TSCA landfills, as applicable.

- **Purolator Products, Inc. Elmira, NY** - Technical Affairs Manager for the excavation and disposal of 12,000 tons of RCRA hazardous soils and solids and 21,000 tons of non-RCRA hazardous soils from a currently

operating automotive supply manufacturer. Prepared and supervised implementation of an insitu sampling program to determine waste classification. Coordinated transportation and disposal via landfilling, chemical oxidation, and incineration. Supervised the operation and permit compliance of a 50,000 gallon batch water treatment plant.

- **Rockwell International, Russelville, KY** - Technical Affairs Manager for the excavation and disposal of 80,000 tons of non-RCRA hazardous sediments and 21,000 tons of PCB sediments from the dredging and removal of approximately 1.5 miles of streambank. Coordinated with the owner=s on-site Engineer to conduct a pre-excavation and post-excavation sampling to determine the depth and lateral extent of dredging/excavation activities. Supervised the operation and permit compliance of a continuous discharge water treatment plant at the site.

- **Carter Industrial Site, Detroit, MI:** Technical Affairs Manager for the excavation and off-site disposal of 35,000 tons of PCB contaminated soils and debris, 20,000 tons of non RCRA hazardous solids and approximately 200 drums and cylinders. Duties included development and implementation of a pre-excavation and post-excavation soil sampling plan as well as a drum characterization and sampling plan. Also coordinated the on-site treatment, delisting, and verification sampling of 5,000 tons of lead contaminated soil. Arranged for and coordinated the off-site disposal (landfill) of all site wastes at the appropriately permitted landfills.

- **Taylor Instruments Site, Rochester, NY**: Technical Affairs Manager for the excavation and off-site disposal of 43,000 tons of non hazardous, mercury and solvent contaminated soils and debris from the demolition and removal of a former mercury instrument manufacturing facility. Coordinated the sampling and off-site disposal of all site wastes to the appropriate (landfill, stabilization, chemical, treatment and mercury recycling) facility. Large quantities of free mercury and soils with mercury levels exceeding the High Mercury Land Ban Subcategory necessitated special handling and disposal requirements.

- **Commercial Oil Site, Oregon, OH**: Technical Affairs Manager for the characterization, consolidation and off-site disposal of the contents of 30 bulk oil storage at this former waste oil recovery facility. Coordinated the sampling and analysis of the various phases and contents of all tanks at the site. Waste materials were consolidated based on their characteristics

and compatibilities for off-site disposal (fuels blending/recovery, chemical treatment, and incineration).

- **Barker Chemical Site (NYS Superfund), Sodus, NY**: Technical Affairs Manager for the excavation and offsite disposal of pesticide-contaminated soils, sediments, and debris. Duties included developing and coordinating pre-excavation (to establish excavation limits) and post-excavation (to verify completion) sampling plans. Arranged for and coordinated the transportation and disposal (through incineration, chemical oxidation treatment, and macroencapsulation) of 4,000 tons of contaminated soil and building demolition debris.

- **Summit National Superfund Site (USEPA Region V), Deerfield, OH**: Technical Affairs Manager for the sampling, characterization, analysis, and disposal of approximately 500 drums of material and the contents of five underground storage tanks.

- **Metaltec/Aerosystems Site (USEPA Region II), Franklin, NJ**: Technical Affairs Manager for the onsite thermal treatment of approximately 11,000 tons of hazardous soils. Coordinated the post-treatment sampling of ash to verify that site-specific treatment criteria were met and that waste was correctly classified. Arranged for and coordinated the transportation and offsite disposal of all treated soils.

- **Marathon Battery Superfund Site (PRP Trust), Cold Spring, NY**: Technical Affairs Manager for the excavation/dredging of 150,000 cy of metals-contaminated soil and sediments from a former plant site, tidal marsh, and sections of the Hudson River, and onsite chemical fixation prior to rail transport for offsite disposal. Duties included onsite supervision of pre- and post-excavation and treatment sampling programs, QC of offsite analytical laboratories, interface with offsite disposal facilities, and liaison with the client regarding waste classification issues.

- **Madison Wire Site (NYS Superfund), West Seneca, NY**: Technical Affairs Manager for the excavation and offsite disposal of 17,000 tons of metals-contaminated soils. Duties included supervision of an extensive in-situ sampling program to characterize the waste based upon "as excavated" chemical characteristics. Also conducted post-excavation sampling program with "expedited turnaround" (48-hour) of analytical data to facilitate ongoing excavation operations.

- **Blosenski Landfill (PRP Trust), Chester County, PA**: Technical Affairs Manager for the excavation and offsite disposal of 1,200 tons of contaminated soils and 1,000 buried drums. Responsible for all onsite sampling and analysis programs, including development of a sample-compositing and characterization program via an onsite laboratory. Facilitated early completion of the project by employing several TSD outlets (incineration, chemical stabilization, and direct landfill) to allow removal of all wastes from the site within a 14-day time frame.

- **Lacey Road Airstrip Site, (PRP Trust), Forked River, NJ**: Technical Affairs Manager for the excavation and offsite disposal of 22,000 cy of DDT-contaminated soils, including development and implementation of a rigorous in-situ sampling and analysis program which allowed the segregation of wastes based upon halogenated organic compound (HOC) content. Coordinated the use of several offsite disposal outlets (incineration and landfill) to ensure proper disposition of the wastes prior to the implementation of the third-phase land ban regulations.

- **Borne Chemical (PRP Trust), Elizabeth, NJ**: Decontamination of an inactive waste oil processing/waste broker facility, including removal of wastes from 130 tanks, 10 miles of piping of various sizes, and 3,000 drums of unknown wastes. Duties included supervision of site sampling, analysis, and characterization programs, including determination of appropriate consolidation and offsite disposal methods and facilities. Established and supervised the operation of an onsite laboratory, as well as contracting for disposal of all wastes via aqueous treatment, landfilling, incineration, and fuels blending, as appropriate.

Name:	**JENNIFER A. SINGER**
Education:	BS, Biochemistry Russell Sage College, 1994
	MS, Environmental Pollution Control Penn State University, 1997
Title:	Technical Plan Coordinator
Professional Qualifications:	Completed USACE Construction Quality Management for Contractors (December 2000)
	Completed 40-hour Health & Safety at Hazardous Waste Operations (December 1997), with annual 8-hour refresher
	Member, American Chemical Society, Environmental Division

PROFESSIONAL EXPERIENCE

11/00- Present **Sevenson Environmental Services, Inc.**, Technical Plan Coordinator

Responsible for many aspects of U.S. Army Corps of Engineers projects including:

- Review of technical contract documents to determine requirements for completion of Sampling and Analysis Plans and associated contract-required chemical data reporting (e.g. Quality Control Summary Reports).
- Preparation of all contract-required reports including Sampling and Analysis Plans, Quality Control Summary Reports, and Monthly, Quarterly, and Final Reports.
- Preparation of reporting forms for Sevenson Site Project Management.
- Confirm site personnel are aware of project documentation/reporting requirements.
- Perform assessment of analytical laboratory data for completeness and adherence to contract-required QA/QC.

01/98 - 10/00 **Geovation Consultants, Inc.**, Environmental Chemist

Responsible for the oversight of research and development of bioremediation technologies and in-house analytical laboratory. Lead technical writer and researcher in the preparation of remedial investigations and feasibility studies. Client and regulatory agency contact. Day-to-day communications with analytical laboratories regarding cost estimates, sample shipment/receipt, and results reports. Organization of sample collection activities.

Name:	**PAUL J. HITCHO, PhD, CIH**
Education:	PhD, Biology, University of Notre Dame, 1971 BA, Biology, St. Vincent College, 1966
Certifications and Honors:	• Board-Certified Industrial Hygienist, American Board of Industrial Hygiene • National Science Foundation, Predoctoral Trainee, University of Notre Dame • National Institutes of Health Postdoctoral Fellow, University of Massachusetts • Certificate of Appreciation, US Department of Labor
Position:	**Vice President, Director of Health and Safety**

PROFESSIONAL EXPERIENCE

Dr. Hitcho brings a rich professional background to Sevenson Environmental Services, Inc. He has conducted extensive research as a postdoctoral Fellow at the National Institutes of Health and taught at the university level. He was a field industrial hygienist for the Occupational Safety and Health Administration for 3 years, and later served as supervisor of industrial hygiene for the Pittsburgh Area Office. While serving as the head of the Industrial Hygiene Department for the United Steelworkers of America, Dr. Hitcho acted as liaison between the union and the coal carbonization (coking) industry and related chemical industries. He is recognized as a world authority in this field by the International Agency for Research on Cancer (IARC). The IARC monographs developed while he was an active participant are cited by OSHA today in that agency's hazardous communications standard 29 CFR 1910.120. Dr. Hitcho also interfaced with pesticide and herbicide manufacturers to conduct occupational health studies and to develop hazard analyses for some of the processes in this industry. Since 1986, Dr. Hitcho has served as the Director of Occupational Health and Safety for Sevenson. On every project the firm has undertaken since then, he has developed, implemented, reviewed, and evaluated the project-specific worker health and safety plans, as well as overseeing the medical monitoring of all field employees. Dr. Hitcho supervises a staff of Site Health and Safety Officers. He has overseen the health and safety aspects of all Sevenson's projects.

Name:	**PAUL JUNG**
Education:	A.S. Degree - Radiation Protection Technology Central Florida Community College Ocala, Florida
Project Assignment:	**Site Health and Safety Officer** **Assistant Radiation Safety Officer**

PROFESSIONAL EXPERIENCE

Mr. Jung, is a site health and safety officer and an Assistant Radiation Safety Officer with Sevenson Environmental Services, Inc. He is responsible for the implementation and enforcement of site-specific health and safety plans developed in-house by the firm's C.I.H. and the Site Radiological Control Plan developed by the Corporate Radiation Safety Officer and/or the Certified Health Physicist consultant. Mr. Jung's duties include: assisting the C.I.H. in training all field personnel; conducting informational meetings; repair and maintenance of all related industrial hygiene and radiological field instruments; industrial hygiene and radiological air monitoring and sampling; evaluation of analytical data for industrial hygiene and radiological monitoring; conducting radiological contamination surveys; providing radiological job coverage; and conducting ALARA reviews. Mr. Jung has gained significant experience in health and safety and radiological protection protocols while working on a variety of remedial action projects involving: confined space entry, contaminated soil removal and material decontamination; soil stabilization, characterization and disposal, and air monitoring. He has worked on a number of "high visibility" projects and has gained invaluable experience in dealing with various regulatory agencies. Mr. Jung's unique blend of training, education, and experience makes him especially well suited to be a Health and Safety Officer and/or a Assistant Radiation Safety Officer on all types of projects and to resolve any health and safety problem which may arise. Key past projects include:

1995 - Present:

- **WR Grace Project D-III, Chattanooga, TN:** Solidification of radioactive sediment lagoons and soil excavation with an extensive air monitoring and site control program. Level B protection worn.

- **U.S. Radium Superfund Project, Orange, NJ**: Radioactive soil excavation with an extensive air monitoring and site control program. Level C protection worn.

- **Citgo Refinery, Lake Charles, LA**: Sampling of a volatile organic compound contaminated lagoon and soil stabilization pilot project. Level B protection worn.

- **Austin Avenue Superfund Site, Lansdowne, PA**: Radioactive soil excavation, demolition, and new construction. Level C protection worn.

- **Montclair Superfund Site, Montclair, NJ**: Radioactive soil excavation and building decontamination and rehabilitation. Level C protection.

- **Clevite, Cleveland, OH**: Building decontamination of radioactive material and rehabilitation. Level C protection worn.

- **Chevron Refinery, Perth Amboy, NJ**: Sediment sampling and treatability testing of organic contaminated sediment. Level B protection worn.

1993 - 1995:

Health Physics Technician at a number of Nuclear Power Stations. Implemented monitoring, permit, control, and worker training programs. Levels C and B protection utilized.

Name:	**MARK B. NICKLAS**
Education:	AAS, Niagara County Community College, Sanborn, New York AAS, Luzerne County Community College, Nanticoke, Pennsylvania BA, State University of New York, Empire State College, Buffalo, New York
Project Assignment:	Project Manager

EXPERIENCE

Mr. Nicklas has been an employee of Sevenson Environmental Services, Inc. for 12 years. During this time he has served in a wide variety of capacities including Health and Safety Officer, Quality Control Engineer, Project Engineer and Project manager. This has enabled him to gain significant experience in remediation operations including scheduling, material acquisition, labor relations, regulatory requirements, work sequence, and cost accounting. Mr. Nicklas' past project experience includes the following:

- **Frazier River Sediment Remediation, Burnaby, BC**: Project Manager for the installation of Sevenson's SEAL Wall system (permanent low permeability sheet pile wall); construction and operation of a temporary water treatment plant; dredge contaminated Frasier River sediments; and install sediment cap.

- **Lagoon Closure, Model City, NY**: Project Engineer for insitu solidification/stabilization of 50,000 cy of lagoon sludge using pozzalonic reagents. A multi-layer cap was installed over solidified material.

- **Lipari Landfill Superfund Site, Pitman, NJ**: Site Health and Safety Officer for remedial construction activities which included extensive site work; the excavation and consolidation of 100,000 cubic yards of soil and sediment from several satellite sites for treatment utilizing low temperature thermal desorbtion; solidification/stabilization of marsh sediments; capping construction; and restoration.

- **Frontier Chemical Superfund Site, Pendleton, NY**: Project Engineer for this remedial action. Work tasks included the dewatering of a 40 million gallon Quarry Lake; excavate and stabilize 35,000 cy of lake sediment and 20,000 cy lake perimeter soils; place stabilized sediment and soils under cap; construct 8 acre multi-layer cap; install 1,300 linear feet collection trench and construction of 150 gpm leachate treatment system.

- **Metaltec-Aerosytems, Franklin, NJ**: Project Engineer for the low temperature thermal desorption of 12,500 tons of contaminated soil; sheeting and dewatering of excavation area and onsite treatment of groundwater.

- **Maryland Environmental Services, Baltimore, MD**: Project Manager for the cleaning and inspection of 1,000 linear feet of city sewer. Responsible for work scheduling and supervision, material acquisition, client relations, and health and safety.

- **Gill Creek, Niagara Falls, NY**: Project Engineer for the Creek remediation involving the construction of a steel sheeting and earth fill cofferdam; installation of a by-pass pumping system; treating contaminated water on-site; excavation of creek sediments and loading for disposal off-site.

Name:	**REBECCA M. SCARBOROUGH**
Education:	A.A.S., Nuclear Technology Texas State Technical College, Waco, Texas 1992 B.S., Biology, Tarleton State University, Stephenville, Texas 1989
Special Qualifications:	40-hour and 8-hour OSHA Hazardous Waste Site Training per 29 CFR 1910.120 Radiological Control Technician Certification, 1995 Environmental Monitoring Course, 1995 First Aid - CPR - 1998
Project Assignment:	**Site Health & Safety/Radiation Safety Officer**

PROFESSIONAL EXPERIENCE

Ms. Scarborough is experienced in overseeing the implementation of SSHP and all aspects of Radiological Protection Plan for rad projects, including developing documentation, conducting safety meetings, overseeing monitoring activities. She provides site staff Health and Safety training, site radiological training and is experienced in rad health and safety documentation. Her experience has included:

- **WR Grace Project D-III, Chattanooga, TN:** Site Safety Officer and Radiation Safety Officer for the solidification of radioactive sediment lagoons and soil excavation with an extensive air monitoring and site control program. Level B protection worn.

- **Austin Avenue Radiation Superfund Site, Delaware County, PA**: Site safety officer responsible for data entry and QC of all documents, field work the on-site radiological laboratory, including the Multi-Channel Analyzer. Responsible for personnel and environmental monitoring, samples analysis and QC, and shipping of samples per guidelines. Also performed radiological training of on-site personnel. Supervised over 225,000 manhours of rad operation. In addition, supervised the off-site waste disposal activities, including preparation of shipping documentation, implementation and enforcement of the OSHA HAZWOPER (1910.120) standard. She was responsible for the calibration, use, and interpretation of field air monitoring equipment; site specific training requirements; hazard communication; medical surveillance; personal protective equipment selection and use; decontamination procedures (personnel and equipment); and spill containment protocols. Ms. Scarborough is certified in HAZWOPER (40-hour, 8-hour refresher, and 8-hour supervisor) and first aid / CPR.

Other Projects Include:

Thermo Nuclear Service, Oak Ridge, TN (1994-1996) - Radiological Control Technician, responsible for processing, data entry and quality control of all documentation field lab work, all counting equipment. Performed soil, water and air sample collection; sample preparation for Gamma Spectroscopy; shipped samples per DOT guidelines; and monitored contamination controls. Additional responsibilities included radiological and industrial hygiene occupational, non-occupational and environmental monitoring. Participated in site characterization and remediation of DOE FUSRAP sites.

Oak Ridge Institute, Oak Ridge, TN (1994) - Health Physics Technician responsible for surveying materials and equipment scheduled to leave the Y-12 Plant in compliance with plant policy. Items surveyed included: wooden pallets, computers, machine tools, unused chemicals, office equipment. Operated a variety of instrumentation designed for this survey.

Science Applications International Corporation, Las Vegas, NV (1992-1993) - Radiological Control Technician responsible for the operation of counting equipment, sample collections, pre-activity surveys, calibration of equipment, radon monitoring and site characterization tasks at the Yucca Mountain Project.