



**STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SCIENCE ADVISORY BOARD**



**BACKGROUND INFORMATION AND
CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE
*For General Scientific and Technical Studies and Assistance***

NAME: Dr. Robert J. Lippencott

TELEPHONE: 973-647-4945

ADDRESS: c/o TRC Environmental Corp., 57 East Willow Street, Millburn, NJ 07041

E-MAIL ADDRESS: rlippencott@trcsolutions.com

CURRENT EMPLOYER: TRC Environmental Corp.

SAB: _____

Standing Committee: _____

There are two parts to this form, Part I Background Information, and Part II Confidential Conflict of Interest Disclosure. Complete both parts, **sign** and **date** this form on the last page, and e-mail the form to njsab@dep.state.nj.us. **Retain a copy for your records.**

PART I - BACKGROUND INFORMATION

Please provide the information requested below regarding **relevant** organizational affiliations, government service, public statements and positions, research support, and additional information (if any). Information is "relevant" if it is related to — and might reasonably be of interest to others concerning — your knowledge, experience, and personal perspectives regarding the subject matter and issues to be addressed by the committee activity for which this form is being prepared. If some or all of the requested information is contained in your curriculum vitae, you may if you prefer simply attach your CV to this form, supplemented by additional responses or comments below as necessary.

I. ORGANIZATIONAL AFFILIATIONS.

Report your relevant business relationships (as an employee, owner, officer, director, consultant, etc.) and your relevant remunerated or volunteer non-business relationships (e.g., professional organizations, trade associations, public interest or civic groups, etc.).

Please see attached CV.

II. GOVERNMENT SERVICE.

Report your relevant service (full-time or part-time) with federal, state, or local government in the United States (including elected or appointed positions, employment, advisory board memberships, military service, etc.).

Please see attached CV.

II. RESEARCH SUPPORT.

Report relevant information regarding both public and private sources of research support (other than your present employer), including sources of funding, equipment, facilities, etc.

My Doctoral research in phytoremediation was conducted through Rutgers University and New Jersey Institute of Technology, and supported by Chevron Corporation (covered costs for some analytical tests, some supplies and some labor for preparation of a technical summary report of findings).

IV. PUBLIC STATEMENTS AND POSITIONS. List your relevant articles, testimony, speeches, etc., by date, title, and publication (if any) in which they appeared, or provide relevant representative examples if numerous. Provide a brief description of relevant positions of any organizations or groups with which you are closely identified or associated.

Please see attached CV.

V. ADDITIONAL INFORMATION.

If there are relevant aspects of your background or present circumstances not addressed above that might reasonably be construed by others as affecting your judgment in matters within the assigned task of the committee or panel on which you have been invited to serve, and therefore might constitute an actual or potential source of bias, please describe them briefly.

NA

PART II CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE

INSTRUCTIONS

It is essential that the work of committees of the SAB used in the development of reports not be compromised by any significant conflict of interest. For this purpose, **the term "conflict of interest" means any financial or other interest which conflicts with the service of the individual because it (1) could significantly impair the individual's objectivity or (2) could create an unfair competitive advantage for any person or organization.** Except for those situations in which the Department determines that a conflict of interest is unavoidable and promptly and publicly discloses the conflict of interest, no individual can be appointed to serve (or continue to serve) on a committee of the department used in the development of reports if the individual has a conflict of interest that is relevant to the functions to be performed.

The term "conflict of interest" means something more than individual bias. There must be an *interest*, ordinarily financial, that could be directly affected by the work of the committee.

Conflict of interest requirements are *objective* and *prophylactic*. They are not an assessment of one's actual behavior or character, one's ability to act objectively despite the conflicting interest, or one's relative insensitivity to particular dollar amounts of specific assets because of one's personal wealth. Conflict of interest requirements are objective standards designed to eliminate certain specific, potentially compromising situations from arising, and thereby to protect the individual, the other members of the committee, the Department, and the public interest. The individual, the committee, and the department should not be placed in a situation where others could reasonably question, and perhaps discount or dismiss, the work of the committee simply because of the existence of conflicting interests.

The term "conflict of interest" applies only to *current interests*. It does not apply to past interests that have expired, no longer exist, and cannot reasonably affect current behavior. Nor does it apply to possible interests that may arise in the future but do not currently exist, because such future interests are inherently speculative and uncertain. For example, a pending formal or informal application for a particular job is a current interest, but the mere possibility that one might apply for such a job in the future is not a current interest.

The term "conflict of interest" applies not only to the personal interests of the individual but also to the *interests of others* with whom the individual has substantial common financial interests if these interests are relevant to the functions to be performed. Thus, in assessing an individual's potential conflicts of interest, consideration must be given not only to the interests of the individual but also to the interests of the individual's spouse and minor children, the individual's employer, the individual's business partners, and others with whom the individual has substantial common financial interests. Consideration must also be given to the interests of those for whom one is acting in a fiduciary or similar capacity (e.g., being an officer or director of a corporation, whether profit or nonprofit, or serving as a trustee).

Much of the work of this department involves scientific and technical issues across a broad range of activities. Such activities may include, for example: defining research needs, priorities, opportunities and agendas; addressing questions of human or ecological health; providing scientific and technical assistance; assessing the state of scientific or technical knowledge on particular subjects and in particular fields. Such activities frequently address scientific and technical issues that are sufficiently broad in scope that they do not implicate specific financial interests or conflict of interest concerns.

However, where such activities address more specific issues having significant financial implications — e.g., funding option A versus option B, government development or evaluation of a

specific proprietary technology, — careful consideration must be given to possible conflict of interest issues with respect to the appointment of members of committees that will be used by the department in the development of reports to be utilized by the department.

The overriding objective of the conflict of interest inquiry in each case is to identify whether there are interests – primarily financial in nature – that conflict with the committee service of the individual because they could impair the individual's objectivity or could create an unfair competitive advantage for any person or organization. The fundamental question in each case is does the individual, or others with whom the individual has substantial common financial interests, have identifiable interests that could be directly affected by the outcome of the project activities of the committee on which the individual has been invited to serve? For projects involving advice regarding awards of contracts, grants, etc., this department is also guided by the principle that an individual should not participate in any decision regarding the award of a contract or grant or any other substantial economic benefit to the individual or to others with whom the individual has substantial common financial interests or a substantial personal or professional relationship.

The application of these concepts to specific scientific and technical studies and assistance projects must necessarily be addressed in each case on the basis of the particular facts and circumstances involved. The questions set forth below are designed to elicit information from you concerning possible conflicts of interest that are relevant to the functions to be performed by the particular committee on which you may be invited to serve.

1. **FINANCIAL INTERESTS.** (a) Taking into account stocks, bonds, and other financial instruments and investments including partnerships (but excluding broadly diversified mutual funds and any investment or financial interests valued at less than \$10,000), do you or, to the best of your knowledge others with whom you have substantial common financial interests, have financial investments that could be affected, either directly or by a direct effect on the business enterprise or activities underlying the investments, by the outcome of the project activities of the committee on which you may be invited to serve?

(b) Taking into account real estate and other tangible property interests, as well as intellectual property (patents, copyrights, etc.) interests, do you or, to the best of your knowledge others with whom you have substantial common financial interests, have property interests that could be directly affected by the outcome of the project activities of the committee on which you may be invited to serve?

(c) Could your employment or self-employment (or the employment or self-employment of your spouse), or the financial interests of your employer or clients (or the financial interests of your spouse's employer or clients) be directly affected by the outcome of the project activities of the committee on which you may be invited to serve?

(d) Taking into account research funding and other research support (e.g., equipment, facilities, industry partnerships, research assistants and other research personnel, etc.), could your current research funding and support (or that of your close research colleagues and collaborators) be directly affected by the outcome of the project activities of the committee on which you may be invited to serve?

(e) Could your service on the committee on which you may be invited to serve create a specific financial or commercial competitive advantage for you or others with whom you have substantial common financial interests?

If the answer to all of the above questions under FINANCIAL INTERESTS is either "no" or "not applicable," check here (NO).

If the answer to any of the above questions under FINANCIAL INTERESTS is "yes," check here (YES), and briefly describe the circumstances on the last page of this form.

2. OTHER INTERESTS.

(a) Is the central purpose of the project for which this disclosure form is being prepared a critical review and evaluation of your own work or that of your employer?

(b) Do you have any existing professional obligations (e.g., as an officer of a scientific or engineering society) that effectively require you to publicly defend a previously established position on an issue that is relevant to the functions to be performed in this committee activity?

(c) To the best of your knowledge, will your participation in this committee activity enable you to obtain access to a competitor's or potential competitor's confidential proprietary information?

(d) If you are or have ever been a NJ State employee, to the best of your knowledge are there any state conflict of interest restrictions that may be applicable to your service in connection with this committee activity?

(e) If you are a NJ State employee, are you currently employed by a state agency that is sponsoring this project? If you are not a NJ State employee, are you an employee of any other sponsor (e.g., a private foundation) of this project?

(f) If the committee activity for which this form is being prepared involves reviews of specific proposals for contract, grant, etc. awards to be made by NJDEP, do you or others with whom you have substantial common financial interests, or a familial or substantial professional relationship, have an interest in receiving or being considered for awards that are currently the subject of the review being conducted by this committee?

(g) If the committee activity for which this form is being prepared involves developing requests for proposals, work statements, and/or specifications, etc., are you interested in seeking an award under the program for which the committee on which you have been invited to serve is developing the request for proposals, work statement, and/or specifications — or, are you employed in any capacity by, or do you have a financial interest in or other economic relationship with, any person or organization that to the best of your knowledge is interested in seeking an award under this program?

If the answer to all of the above questions under OTHER INTERESTS is either "no" or "not applicable," check here (NO).

If the answer to any of the above questions under OTHER INTERESTS is "yes," check here (YES), and briefly describe the circumstances on the last page of this form.

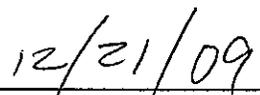
EXPLANATION OF "YES" RESPONSES:

NA

During your period of service in connection with the activity for which this form is being completed, any changes in the information reported, or any new information, which needs to be reported, should be reported promptly by written or electronic communication to the NJDEP Office of Science staff representative.



YOUR SIGNATURE



DATE

Reviewed by:
NJDEP

DATE

Curriculum Vitae

ROBERT J. LIPPENCOTT, Ph.D., CHMM

CONTACT INFORMATION

OFFICE

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HOME

Address	e-mail	phone
403 Tappan Avenue North Plainfield, NJ 07063	boblippencott@verizon.net	908-668-7382

EDUCATION

B.S., Biology (Fish and Wildlife Option), Montana State University, 1984
M.S., Environmental Science, New Jersey Institute of Technology (NJIT), 1993
Ph.D., Environmental Science, Rutgers University and NJIT, 2005

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Certified Hazardous Materials Manager (CHMM), Master Level, 1994 (# 7013)
Certified UST Subsurface Evaluator, New Jersey, 1996 (#0011998)
NJDEP Site Remediation Program Cleanup Star, 2003
Certified Wetland Delineator, U.S. Army Corps of Engineers, 2008

PROFESSIONAL AFFILIATIONS

Member - Academy of Certified Hazardous Materials Managers (National and Local Chapters)
Member - Institute of Certified Hazardous Materials Managers

TEACHING AND ADVISORY POSITIONS

New Jersey Institute of Technology, Adjunct Professor, Science, Technology and Environment,
Undergraduate Full Semester Course – Honors Section, Department of Chemistry and
Environmental Science, Spring 2006.

NJDEP Site Remediation Advisory Group (SRAG) Member

HONORS AND AWARDS

Alpha Lambda Epsilon, National Graduate Student Honor Society – NJIT Chapter, 1993

AREAS OF EXPERTISE

Dr. Robert J. Lippencott has management and technical experience in the following areas:

- Environmental Investigations of Contaminated Sites
- Site Remediation Design, Implementation and Project Management
- Hazardous Site Science
- Environmental Due Diligence
- Hazardous Waste Management
- Analytical Data QA/QC
- Environmental Toxicology and Chemistry
- Surface and Ground Water Investigation and Permitting
- Surface Water and Sediment Quality Evaluation
- Ecological Evaluation and Wetlands Permitting
- Soil, Sediment and Ground Water Geochemistry
- Statistical Evaluation of Geochemical Data

BIOGRAPHICAL SKETCH

Dr. Lippencott has over 24 years of combined experience and progressive responsibility in environmental science testing, investigations and project management at hundreds of hazardous waste sites and facilities in New Jersey. His experience represents a broad spectrum of applied sciences including chemistry, toxicology, geology, hydrogeology, microbiology, ecology and environmental statistics while providing remediation science and geology consulting for all aspects of site investigation and remediation project sites that represent a robust cross-section of New Jersey's past and current industrial sites and ecosystems. His experience covers technical and regulatory environmental compliance issues at a broad range of industrial and non-industrial facilities, including oil refineries, pharmaceutical facilities, printing concerns, chemical facilities, dry cleaners and brownfield sites, as well as undeveloped and natural areas.

As TRC Principal Environmental Scientist and Project Director, Dr. Lippencott currently manages environmental projects for compliance with New Jersey's ISRA, MOA, UST and Brownfields Programs, surface water discharge permitting and site remediation requirements, and USEPA's CERCLA, RCRA and TSCA regulatory requirements. Other responsibilities include directing technical staff in field activities involving soil/ground water/surface water sample collection, well installation, soil excavation, and management of technical staff preparing various plans, reports and permit applications. Dr. Lippencott also provides TRC's Project Managers in the New Jersey regional offices with advanced technical support and expertise for various projects including advanced data evaluation, statistically-based sampling plans, remediation standard development (including SESOIL and AT123D Modeling) and quality assurance planning. As TRC's Corporate Laboratory Certification Program Director, Dr. Lippencott provides oversight of staff, training, and maintenance of laboratory equipment and regulatory compliance.

REPRESENTATIVE EXPERIENCE

Site Remediation Project Management - Managed all aspects of remediation field and office work for numerous remediation sites mostly in New Jersey, including refineries, pharmaceutical facilities, printing concerns, chemical facilities, dry cleaners and brownfield sites. Conducted environmental assessments and field investigations at sites in New York, Pennsylvania, Ohio and Wisconsin. Contaminants of concern and media investigated and/or remediated include petroleum, organic solvents, PCBs, pesticides, radionuclides and heavy metals in soils, sediment, surface water and ground water from underground storage tanks, spill areas, manufacturing operations and historical sources. Examples:

- Oversight of 7-acre PCB landfill closure at a former pharmaceutical facility in Northern NJ, including evaluation of a large RI data set; development of compliance strategies under NJDEP and USEPA (TSCA) technical regulations, and wetlands remediation and mitigation.
- Directed decommissioning of an 80-year old chemical facility in Northern NJ, including all phases of field chemical classification of old drummed materials, and oversight of soil and ground water investigations, remedial activities and technical reporting.
- Designed and implemented on-site, ex-situ remediation of chlorinated solvents and petroleum hydrocarbons in 8,000 tons of high organic content soils using high vacuum vapor extraction and steam injection at a petro-chemical manufacturing plant in Northern NJ. Extracted vapors were captured with activated carbon, condensed to liquids and recovered for re-use in the on-site manufacturing process. Soils were approved by the NJDEP for on-site reuse in the original excavation.
- Completed forensic soil sampling and remediation program as expert witness and primary investigator for a litigation case involving a discharge of No. 2 heating oil during a delivery at a former greenhouse site in Central NJ. After removal of 1,500 tons of soil and a ground water investigation, the 16-acre site was closed under NJDEP's Cleanup Star Program, which required detailed review and evaluation of laboratory data quality assurance contingencies.

Soil Reuse and Hazardous Waste Management - Provided evaluation, advisement and oversight of all aspects of soil reuse and waste management issues for various projects, including waste identification/classification determination, consultation, strategies for compliance and waste reduction and response to violations. Examples:

- Directed investigation and data evaluation programs for on-site reuse of over 70,000 tons of contaminated soils from multiple sources at a petroleum refinery in Northern NJ.
- Evaluated applicability of USEPA's "Area of Contamination" Policy (including correspondence and discussions with USEPA and NJDEP) for waste management options analysis at a former pigment manufacturing site in Newark, NJ.
- Provided oversight of soil sampling and data evaluation for reuse of 6,000 tons of soil at an ISRA/redevelopment site in Newark, NJ. A soil reuse plan was developed using the NJDEP's new impact to ground water (IGW) soil remediation standards (SRS) guidance, including partition equation, SPLP and SESOIL Model calculations. A soil reuse plan with proposed site-specific IGWSRS is pending with the SRP case team. During this

evaluation, several technical errors in the NJDEP's spreadsheets were identified and discussed with the NJDEP senior technical staff who are currently considering implementing revisions.

Surface Water and Ground Water Discharge Permitting - Directed preparation of numerous permit applications and associated data collection, prepared draft and renewal permit comments submitted to state agencies, and advised on permit conditions and mitigating notices of violation. Examples:

- Directed technical staff in preparation of permit application and associated data collection, prepared draft and renewal permit comments for submission to state agencies, and advised client on negotiation of anticipated permit conditions.
- Completed an evaluation of ground water data and calculated weighted averages for estimating treatment system design and water quality conditions for an individual surface water discharge permit in support of a ground water remediation pump and treat system at a Northern NJ petro-chemical facility.
- Conducted an evaluation of over 10 years of quarterly ground water quality data collected under a NJPDES discharge to ground water permit at a rock quarry in Northern NJ to resolve notices of violation for multiple excursions above an iron permit limit. Monitoring wells were installed, sampling methods were revised and audited, and high quality hydrogeologic and water quality data were collected. Trend analysis was performed on the resultant data, which exposed a connection between iron excursions and suspended solids associated with poor sample collection methods. The permit was closed and NOVs were dismissed.

Ecological Evaluation - Performed over 50 baseline ecological evaluations (BEEs) for industrial clients in New Jersey, including a pharmaceutical site, petroleum refinery, cosmetic manufacturer, industrial dry cleaner and various redevelopment properties. Developed standard approach and reporting format for completing BEEs under the NJDEP's Technical Requirements for Site Remediation. Completed several, more advanced industrial impact evaluations of surface water and sediment for fresh water and tidal salt water environments. Examples:

- Directed and performed an in-depth BEE for a large petro-chemical R&D campus pursuant to NJDEP requirements, including an advanced impact evaluation of surface water and sediment for fresh water environments that was complicated by a large amount of legacy data of varying quality. Contaminants of concern included evaluation of potential ecological impacts from radionuclides and legacy pesticides associated with farmland.
- Provided advanced technical consultation for ecological evaluations at two of New Jersey's older electrical generating plants located on the Delaware River and the southern Atlantic coast. Project tasks included review of a large set of legacy and current site data, site inspections of operational and ecological areas and migration pathway analysis, development of ecological screening values, identification of data gaps, and preparation of work plans for completing evaluation of potential ecological impacts from site operations.

- Completed an ecological evaluation of a 117-acre municipal landfill closure/redevelopment site in Central NJ located on an impaired, tidal waterway. A multi-media approach was used to assess site soil, ground water, surface water and sediment data and link site contaminant with potential off-site impacts. The ecological evaluation findings were incorporated into the remedial/mitigation plan for the site to provide for mitigation of impacts to the on- and off-site ecosystem.

Statistical Evaluation – Provide advanced statistical data evaluation support to TRC project managers and engineers on a variety of projects and data sets, including biogeochemical data and ground water, wetland soil and sediment quality data. Examples:

- Directed staff in development of non-parametric statistical analysis of ground water data for compliance with a NJPDES ground water discharge permit at a pharmaceutical manufacturing site on the upper Delaware River;
- Developed a non-routine statistical method to sediment data assessment for a NJ redevelopment site that employed an academic evaluation approach for assessing a large volume of three dimensional spatio-chemical data (PAHs) in near-shore sediments of the Lower Hudson River - NY/NJ Harbor estuary;
- Performed a preliminary evaluation of physical and PCB chemical data at a former landfill remediation site and developed a statistical data evaluation program for site data collection and analysis to support remedial decisions.
- Completed trend and correlation/regression analysis for arsenic-contaminated soils and ground water for a redevelopment site in Northern NJ.

Geochemistry Data Evaluation - Completed evaluation of geochemical data at various sites in support of conceptual site model and remedial program development that included spatio-temporal analysis of ground water plume size and contaminant mass calculation, effects of subsurface redox and pH conditions on speciation and mobility/toxicity of metals, and evaluation of mass transfer reduction capacity/reversibility evaluation of metal ion reactions with naturally occurring minerals. Examples:

- Conducted a review of legacy data and directed collection of supplemental data for evaluation of arsenic in ground water at a former wood treating plant in central New Jersey. Determined the impact of biogeochemical factors effecting local redox conditions due to natural decay of site derived ammonia and nitrogen cycling. A predictive natural attenuation model was confirmed through ground water monitoring and the NJDEP approved a recommendation for no further action.
- Completed a quantitative evaluation of the potential for natural attenuation of hexavalent chromium in soils located in an inaccessible area under an existing metals facility in Central NJ. This assessment used USEPA guidance and site-specific mineralogical and hydrogeologic data to calculate the capacity for iron-rich native soils to convert chromium to an insoluble, non-toxic trivalent form.
- Performed an assessment of arsenic speciation and occurrence in the subsurface at a North Jersey redevelopment site on the Hudson River. Site biogeochemical data, ground water and soil arsenic data and hydrogeologic data were evaluated to assess arsenic mobility in the subsurface. Redox-pH speciation phase diagrams were constructed with

site data and correlation of soils and ground water data was completed. A very good positive correlation between arsenic soil and ground water concentrations was found, indicating arsenic concentrations under ambient ground water conditions were driven primarily by arsenic soil concentrations. The study results were incorporated into the overall site remedial program.

PROFESSIONAL EXPERIENCE

2003 to Present: Principal Environmental Scientist/Senior Project Manager/Project Director, TRC Environmental Corp. (Formerly Dan Raviv Associates and TRC Raviv), Millburn, NJ. Manages environmental projects for compliance with New Jersey's ISRA, MOA, UST and Brownfields Programs, surface water discharge permitting and site remediation requirements; areas of specialization include hazardous waste management, regulatory compliance, surface water and sediment evaluations, ecological risk assessment, data quality evaluations and statistical analysis. In addition, Mr. Lippencott provides litigation support and expert reports for pollution cases involving site remediation, ground water, PCB and waste disposal issues.

Responsibilities include directing technical staff in field activities including soil/ground water/surface water sample collection, well installation, soil excavation and monitoring. Organizes and schedules field work; performs waste classification and hazardous waste management evaluations; manages technical staff preparing Phase I/II environmental assessments, and preliminary assessments, soil and ground water sampling and remediation plans and reports, and ecological evaluations under NJDEP's Site Remediation Program. Directs preparation of environmental permit applications for ground water, surface water and stormwater discharges, wetlands projects, and air emissions from remediation system vents. Prepares new project proposals and cost estimates. Corresponds with contractors, clients, attorneys and government agencies to set project schedules, negotiate technical /regulatory compliance issues and obtain permits and approvals. Directs TRC's Corporate Laboratory Certification Program and provides oversight of staff in maintenance of laboratory equipment and regulatory compliance.

1997 to 2003: Senior Environmental Scientist/Project Manager II, Dan Raviv Associates, Inc., Millburn, NJ. Conducted environmental audits and industrial site evaluations. Directed field activities including soil/ground water sample collection, well installation, soil excavation and monitoring. Performed waste classification and hazardous waste management evaluations. Managed junior staff preparing Phase I/II environmental assessments, preliminary assessments, soil and ground water sampling and remediation plans and reports, and ecological evaluations. Directed preparation of environmental permit applications for ground water, surface water and stormwater discharges, wetlands and stream encroachment projects (NJDEP and ACE), and air emissions from remediation system vents. Prepared new project proposals and cost estimates. Corresponded with contractors, clients, attorneys and government agencies to set project schedules, negotiate technical /regulatory compliance issues and obtain permits and approvals. Directed corporate laboratory certification program and provided oversight of staff in maintenance of laboratory equipment and regulatory compliance.

1990 to 1997: Assistant Project Manager, Dan Raviv Associates, Inc., Millburn, New Jersey. Conducted environmental audits and industrial site evaluations. Directed field activities including soil/ground water sample collection, well installation, soil excavation, installation of remediation systems, and remediation system monitoring. Organized, scheduled and performed field work. Performed waste classification and disposal evaluations. Prepared Phase I/II, PA, soil and ground water sampling and remediation plans and reports. Reviewed analytical data and prepared assisted in preparations of report conclusions and recommendations. Prepared environmental permit applications for ground water, surface water and stormwater discharges, wetlands and stream encroachment projects, and air emissions from remediation system vents. Prepared new project proposals and cost estimates. Corresponded with contractors, clients and government agencies and programs, such as NJDEP, ISRA, BUST, NJPDES; Ohio EPA/BUSTR; Wisconsin EPA and USEPA. Directed corporate laboratory certification program and staff in maintenance of laboratory equipment and regulatory compliance.

1988 to 1990: Environmental Scientist, Dan Raviv Associates, Inc., Millburn, New Jersey. Assisted Project Managers with environmental audits and industrial site evaluations; performed field activities including soil/ground water sample collection, well installation, soil excavation, installation and operation of remediation systems. Conducted Phase I/II environmental assessments, soil and ground water sampling, and prepared reports. Organized and review laboratory analytical data into table. Assisted with preparation of project proposals and cost estimates.

1987 to 1988: Biologist, Laboratory Supervisor, U.S. Testing Company, Inc., Hoboken, New Jersey. Performed EPA Ocean Disposal Program bioassays. Conducted comprehensive bioassay studies evaluating EPA oil dispersant efficacy and toxicity. Performed both acute and chronic bioassay projects in freshwater and marine media for industrial/municipal facilities throughout New Jersey under the NJPDES Permit Program. Designed and constructed bioassay diluter systems, and cultured freshwater, marine and estuarine species used in laboratory testing and research for aquatic and ecological toxicology.

1985 to 1987: Environmental Chemist, U.S. Testing Company, Inc., Hoboken, New Jersey. Performed organic and inorganic chemical analyses for environmental parameters. Routinely conducted wet-chemistry procedures and used instrumentation (I.C.P., I.R., A.A., I.C) for analysis of soil, water and tissue (bio-accumulation) samples using EPA, ASTM and Standard Methods protocols. Analyzed soil and water samples for environmental parameters under the USEPA and NJDEP contract lab programs.

1985: Chemist/Intern, Hackensack Meadowlands Development Commission's Environment Center, East Rutherford, New Jersey. Conducted surface and ground water sampling as part of monitoring program designed to assess the impact of local landfills on the environmental quality of the Hackensack River estuary. Performed chemical and microbiological analyses of surface water, ground water, leachate, and sediments. Initiated and completed research on water and sediment conditions at the Hackensack Meadowlands Sports Complex.

1982 to 1983: Biologist/Consultant, McGuire Aquatic Services, Bozeman, Montana. Completed both field and laboratory work to determine aquatic invertebrate population structure in Missouri River benthos, including invertebrate identification, river sediment biological analysis and fish stomach content analysis.

1979 to 1982: Biologist/Laboratory Technician, Montana State University, Department of Agriculture and Department of Biology, Bozeman, Montana. Performed greenhouse maintenance duties, aquatic invertebrate identification and preparation of laboratory specimens.

PUBLICATIONS AND PRESENTATIONS

Nichols, H.F. III, Lazar B.J., Rabah, N.M., Lippencott, R.J., Hicks, P. and B. Carlson, 2009. Optimization of In-Situ Injection and Bioremediation Design at a Brownfield Site. *10th International In-Situ and On-site Bioremediation Symposium*, Battelle, Baltimore, MD. (Accepted for Symposium Proceedings, publication pending).

Lippencott, R. J., 2005. Evaluating Rhizodegradation of Petroleum Hydrocarbons and Polycyclic Aromatic Hydrocarbons in Wetlands Sediment Using *Spartina patens*. *Doctoral Dissertation*, New Jersey Institute of Technology and Rutgers University, Newark, New Jersey.

Lippencott, R. J., 2005. Evaluating Rhizodegradation of Petroleum Hydrocarbons and Polycyclic Aromatic Hydrocarbons in Wetlands Sediment Using *Spartina patens*. Invited Presentation to the Department of Biology Seminar, Rutgers University, Newark, New Jersey.

Lippencott, R. J., 2004. Evaluating Biodegradation of Petroleum Hydrocarbons and Polycyclic Aromatic Hydrocarbons in the Rhizosphere of *Spartina patens*. *Invited Presentation to the Department of Chemistry and Environmental Science Seminar*, New Jersey Institute of Technology, Newark, NJ.

Tepper, B. and R.J. Lippencott, 1988. Cadmium Toxicity to *Mysidopsis bahia* Using Different Diluents. *9th Annual Meeting - Reducing Uncertainty in Environmental Risk Assessment*. Society of Environmental Toxicology and Chemistry, Arlington, VA.

Tepper, B., D. Drosdowski and R.J. Lippencott, 1987. No Deposit, No Return Bioassay Diluters. *8th Annual Meeting - Environmental Risk: Recognition, Assessment, and Management*. Society of Environmental Toxicology and Chemistry, Pensacola, FL.

Konsevick, E. and R.J. Lippencott, 1985. A Report on the Water Quality and Sediment Conditions of the Sports Complex Lagoon System. *National Science Foundation Presentation*, Hackensack Meadowlands Development Commission - Environment Center, Lyndhurst, NJ.

LITIGATION SUPPORT AND EXPERT TESTIMONY

Testified as Expert Witness for property owner located adjacent to Laidlaw Bus Co., Re Site Plan Approval (Storm Water and Petroleum Storage) before Township of Clinton Planning Board, Hunterdon County, NJ.

Testified as Expert Witness for property owner Re Site Plan Approval (Wetlands Permit) before Mayor and Council, Borough of North Haldon, Passaic County, NJ.

Provided Litigation Support for PCB-contaminated site on behalf of Royce Associates Re NJ Spill Control Act cost recovery action (Site Remediation – Soil and Ground Water), City of Newark, Essex County, NJ.

Deposed as Fact Witness Re Site Remediation Activities for a petro-chemical facility in Bergen County, NJ.