

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BROOKLYN-QUEENS AQUIFER FEASIBILITY STUDY
PUBLIC INFORMATION MEETING – October 22, 2003

SUMMARY REPORT

The New York City Department of Environmental Protection (DEP) held its second Public Information Meeting regarding the Brooklyn-Queens Aquifer (BQA) Feasibility Study on Wednesday, October 22, 2003 at York College, Jamaica, New York. In preparation for the meeting, letters of invitation, along with a newsletter that included a “Save the Date” announcement, were mailed to nearly 400 individuals, organizations, community facilities, agencies and media outlets. In addition, flyers (in English, Spanish, and French Creole) were sent to Community Boards #12 and #13, as well as to area churches and libraries for distribution. Display advertisements were placed in six newspapers. (See Attachment A for copy of advertisement and flyer.)

The meeting was scheduled to bring members of the public up-to-date on recent project activities, including test results for the Station 6 Pilot Plant; remediation of the West Side Corporation (WSC) site; and the work of the Citizens Advisory Committee (CAC), along with a look ahead at the project’s next steps. An Open House held at the beginning of the meeting encouraged attendees to view informational displays and speak with project staff. The meeting also included a screening of “Partners: The Brooklyn-Queens Aquifer Study,” a video that provides an overview of the project and a summary of the community outreach and education program. (See Attachment B for copy of agenda.)

Handouts, including the Fall 2003 project newsletter; Executive Summary of the Pilot Plant Treatment Memoranda; and comment sheet, were distributed to meeting attendees. Approximately 75 persons, including public officials, residents, and representatives of community groups and elected officials, attended the meeting. (See Attachment C for attendance list.)

REMARKS AND INTRODUCTIONS

Yvonne Reddick, CAC member and District Manager, Community Board #12, opened the meeting by welcoming the audience and asking those CAC members present to stand and introduce themselves. These included: Canute Bernard, Manuel Caughman, Councilman Leroy Comrie, Jeff Diggs, Kenneth Gill, Linda Caleb Hazel, Irving Hicks, Debora Hunte, Peter Richards, Earl Roberts, and Assemblyman William Scarborough. Calling him a “gentleman” and a “friend to southeast Queens” who is never too busy to return a telephone call, Ms. Reddick then introduced DEP Deputy Commissioner Douglas A. Greeley.

After welcoming the audience, Deputy Commissioner Greeley introduced DEP Commissioner Christopher O. Ward. He observed that Commissioner Ward, who previously worked at the Port Authority of New York & New Jersey, brings to this job a strong sense that business should be conducted in partnership with communities and their elected representatives. Citing examples, Deputy Commissioner Greeley mentioned Commissioner Ward’s meetings with Queens elected

officials to facilitate the remediation of the WSC site and his successful negotiations regarding a city water filtration plant.

Expressing his pleasure at being present, Commissioner Ward remarked that he had just come from Schoharie County, where he spent the day discussing water quality in connection with a stream restoration project. Noting that water links communities, he emphasized that water will be the environmental issue for the next decade or more. Referring to groundwater contamination stemming from the WSC site, Commissioner Ward stated that the City's \$12 million contribution toward clean-up of the property will allow the project to move forward. He added that DEP is working with Congressman Gregory Meeks and Assemblyman Scarborough on this issue. He further commented on the importance of identifying and addressing sites such as the WSC property so that their full economic potential can be realized. Commissioner Ward concluded by acknowledging the hard work of the community and by noting that the BQA Study is an example of what government and the community can accomplish when they "stay the course and work together."

Before introducing the project team, Deputy Commissioner Greeley commended Ms. Reddick for her work on behalf of the community, stating "there is no finer person working for you than Yvonne." He then introduced project team members Bill Yulinsky, Project Director, DEP; Donald Cohen, project manager, Malcolm Pirnie, Inc.; Nicole Brown, project engineer, Malcolm Pirnie, Inc.; and Helen Neuhaus, community outreach consultant, Helen Neuhaus & Associates. Other DEP staff present included Lillie Farrell, Director of Community Outreach; Mark Lanaghan, Assistant Deputy Commissioner, Bureau of Public and Intergovernmental Affairs; and Andy Rousseau, Supervisor of electricians at the groundwater headquarters. Deputy Commissioner Greeley also acknowledged Ms. Hazel, noting the vital role she played in the formation of the CAC. He added that the team is privileged to work with "outstanding community leaders."

He then provided an overview of the issues and activities connected with the project, including integrating the assets of the now defunct Jamaica Water Supply (JWS) Company into New York City's drinking water system; water storage; pilot plant testing; reducing groundwater flooding; sewer repair; watershed protection; remediation of the WSC site; and public education, particularly with schoolchildren. Before introducing the video, Deputy Commissioner Greeley referred to the BQA Study as the "grand slam of public works projects."

Following presentation of the video, which was met with applause, Deputy Commissioner Greeley re-introduced Ms. Hazel. She discussed the formation of the Scientific Review Panel (SRP), which was established to provide the CAC with independent guidance on technical issues. Ms. Hazel explained that over 30 universities, medical centers and professional associations were researched and more than 80 individuals contacted to determine their interest in participating. Before reviewing resumes, the CAC developed selection criteria and a list of relevant disciplines (chemistry, hydrogeology, risk assessment, chemical and civil engineering, epidemiology and public health). In the fall of 2002, the CAC selected seven top-level scientists and engineers to serve on the SRP. Ms. Hazel asked the following SRP members to introduce themselves: Dr. Jack Caravanos-Professor, Environmental and Occupational Health Sciences Program, School of Health Sciences, Hunter College; Dr. Gilbert Hanson-Professor, Department of Geosciences, State University of New York at Stony Brook; Dr. James "Chip" Kilduff-Professor, Department of Civil and Environmental Engineering, Rensselaer Polytechnic Institute;

Dr. Leonard Lion-Professor, School of Civil and Environmental Engineering, Cornell University; Dr. Alan Rabideau-Professor, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo; and Dr. Dhanonjoy Saha-Director, Research Information and Development, New York Medical College. Due to a previous commitment, the seventh SRP member-- Dr. Paul Liroy, Professor, Department of Environmental and Community Medicine, University of Medicine and Dentistry at the New Jersey/Robert Wood Johnson Medical School--was unable to attend the meeting.

PRESENTATION

Ms. Brown began the PowerPoint presentation by providing an overview of the project and the Station 6 Pilot Plant. She explained that the two main goals of the overall project were to reduce groundwater flooding and to produce a consistent supply of high quality drinking water. The pilot plant, located at 108th Avenue and 165th Place in Jamaica and in operation from February 2002 through February 2003, was specifically designed to test alternative techniques to determine the most effective way to remove iron and manganese and to “soften” the water. Displaying a bottle of raw water, Ms. Brown noted that iron and manganese are naturally occurring minerals that create an orange tint in the water. She explained that the first step in iron and manganese removal is oxidation. While this could be accomplished through addition of either potassium permanganate (a chemical) or ozone (a form of oxygen), it was determined that ozone is the more effective method. The second step in removing these minerals is filtration, during which water is passed through a membrane. Systems from three vendors were tested and evaluated; each had pluses and minuses.

Ms. Brown further explained that water hardness is a measure of the minerals in water. Hard water is high in minerals such as calcium carbonate. The pilot plant tested two different filtration methods to reduce hardness: nanofiltration and reverse osmosis. It was determined that reverse osmosis is more effective for hardness removal and has the added benefit of removing sodium from the water.

Ms. Brown then discussed the removal of Volatile Organic Compounds (VOC), which are man-made chemicals. They include perchloroethylene (PCE or PERC), a substance used in the dry cleaning process and methyl tertiary butyl ether (MTBE), a gasoline additive. Both have leaked into the aquifer, contaminating groundwater. VOCs can be effectively removed through a two-step process: air stripping followed by off-gas treatment. Because both processes are proven, well-understood technologies, they were not tested at the pilot plant.

Ms. Brown concluded with a description of the proposed Station 6 Demonstration Plant, which will be a full-scale treatment facility located at Brinkerhoff Avenue and 164th Place. (The existing DEP facility on this site will be demolished.) The preliminary architectural concept for the new building calls for a plant that serves both a functional and a community purpose. She noted that several steps must be taken before the Demonstration Plant is constructed, including a lengthy permitting process and design of the building.

Mr. Cohen continued the presentation by explaining that the Station 6 Pilot Plant, Station 24 and remediation of the WSC are interconnected pieces of the BQA project. Because contamination from the WSC site could affect groundwater supplies at Station 6, which is only ½ mile away, it is necessary to clean up the WSC site and remove the threat. At the same time, recovery wells at

Station 24 (which is ideally located adjacent to the WSC property) will prevent the contaminated groundwater plume from moving in the direction of Station 6.

Mr. Cohen stated that the WSC site was formerly a bulk storage and distribution center that supplied PCE to local dry cleaners. The New York State Department of Environmental Conservation (DEC) performed a Remedial Investigation and Feasibility Study of the site that looked at the extent of the contamination and the most effective methods of remediation. This provided the basis for the current clean-up plan. Mr. Cohen noted that there is close coordination between DEP and DEC on this project, which took a significant step forward when Commissioner Ward and Deputy Commissioner Greeley committed funding for the soil clean-up. At this point, the required legal documents between the two agencies have been finalized and the design contract for the clean-up of the most contaminated portion of the site is ready to go out to bid.

Referring to progress at Station 24, Mr. Cohen indicated that the first of two new recovery wells has been installed. This will allow most of the contaminated plume to be contained. The pumped water will be treated using Granular Activated Carbon (GAC), before being discharged to the sewer system. Mr. Cohen also explained that several monitoring wells have been installed at Station 24 and in the surrounding neighborhood and that the facility plan for water treatment has been completed.

Expanding on Ms. Brown's comments, Mr. Cohen noted that the Station 6 facility, WSC remediation and Station 24 pumping will be subject to the New York City Environmental Quality Review and Uniform Land Use Review processes. In addition, the project will require permits from DEC (for wastewater discharge), the Board of Standards and Appeals (for Station 6 demolition and reconstruction), the New York City Art Commission (for architectural design) and the New York City Buildings Department (for construction).

Reviewing the project schedule, Mr. Cohen indicated that a three-year construction period is anticipated for Station 6, with pumping expected to start in 2008-2009. Construction at the WSC property is expected to start early next year, with the clean-up starting in the fall. Pumping at Station 24 is anticipated for late 2005. He emphasized that community outreach will continue throughout the project.

QUESTIONS AND DISCUSSION

The following questions and comments were raised following the presentation:

- Councilman Comrie reiterated that the elected officials from southeast Queens are committed to continued interaction with the community. In particular, he called for the education of schoolchildren, observing that engineers like Ms. Brown are needed and should come from the community. Councilman Comrie commended Commissioner Ward for being proactive on the WSC site remediation. Noting the importance of the CAC, he stated that the committee needs new people to serve as the project moves ahead. He added that any decisions regarding groundwater will require the consent of the entire community. Lastly, Councilman Comrie drew laughter when he suggested "Hopefully, we'll have water so pure we can bottle it, call it 'water from the hood' and make some money!"

- Calling the BQA Study an “extremely important endeavor,” Assemblyman Scarborough noted that the project initially generated a great deal of skepticism. He stated that although he didn’t know how it would end, he is convinced that DEP and the project team are competent and sincere about improving water quality. Assemblyman Scarborough also observed that more sewers have been repaired under Deputy Commissioner Greeley’s leadership than at any other time during the past 30 years. He concluded by calling DEP a “good partner.”
- Stephanie Sadler, resident, expressed her concern about the discharge of water into Jamaica Bay. In response, Deputy Commissioner Greeley described DEP’s Combined Sewer Overflow (CSO) program, which includes placing hoods over catch basins to prevent debris from entering the bay. In addition to the possible construction of new CSO facilities, DEP is upgrading sewers in the Community Board #12 area and separating sanitary sewers from storm sewers. This will channel effluent from the sanitary sewers to a treatment plant and limit other discharges to the bay.

In response to Ms. Sadler’s question regarding the selection of contractors, Deputy Commissioner Greeley indicated that the bidding process will be extensive, with particular attention paid to local, minority and woman-owned businesses. He added that DEP will take quality and cost into account.

Lastly, in response to Ms. Sadler’s question regarding the commitment of funds in light of the City’s fiscal crisis, Deputy Commissioner Greeley explained that DEP is independently funded by water and sewer fees. He emphasized that the money is available now and will be in the future.

- Raj Pursaud, York College, asked if the encroachment of salt water into the aquifer is being studied as part of the BQA Project. Mr. Cohen explained that the project team is working with the United States Geological Survey (USGS) to collect basic groundwater data. Computer modeling is being used to evaluate different pumping scenarios for the groundwater system, which will help avoid further saltwater intrusion.
- In response to a question about testing for heavy metals and carcinogens, Mr. Cohen replied that analysis was conducted for more than 200 parameters, including heavy metals. He pointed out that the technical memoranda describing the tests are available in the lobby. In addition, DEP’s 2002 Water Quality Report provides information regarding testing for these contaminants. Noting that the City is required to meet or exceed state and federal drinking water standards, Mr. Cohen stated that heavy metals are either not present in the raw water, or would be removed during treatment.
- Noting that the BQA Study is a long-term project, Dr. Bernard, Community Board #12 and CAC, asked for assurances that the program will continue after the current team is gone. Ms. Neuhaus pointed out the level of commitment represented in the room, indicating that many on the team intend to remain involved. She added that CAC members, as residents of the community, will follow through on the project. Deputy Commissioner Greeley stated that DEP, which is responsible for the long-term quality and quantity of the drinking water supply, is always thinking about the future.

- In response to a question about the use of reverse osmosis, Ms. Brown confirmed that it would be used as the last step in the treatment process.
- Gertrude Gonesh, resident, thanked the project team, particularly Deputy Commissioner Greeley, for its community outreach effort. She observed “you have the decency to involve us.” Commending Ms. Brown for her explanation of the treatment process, Ms. Gonesh further noted that although she is not an engineer, she fully understood the presentation. She urged the team to meet with Mayor Michael Bloomberg so that he might direct other agencies to follow the BQA Study model for community involvement.
- In response to questions about the aquifers underlying New York City, Mr. Cohen explained that three aquifers, known collectively as the Brooklyn-Queens aquifer system, run the length of Long Island, Brooklyn and Queens. These are the Upper Glacial, which is the most shallow; the Magothy, which is the middle layer; and the Lloyd, which is the deepest. Formed approximately 60 million years ago, the three aquifers are separated by layers of clay.

Mr. Cohen further explained that the project team is currently using the existing infrastructure. He added that DEP is working with the USGS to develop an overall groundwater management plan, which will expand and improve the water supply system. Reiterating that some of the City’s worst groundwater flooding occurs in southeast Queens, Mr. Cohen noted that the pumping at Station 6 is expected to alleviate flooding at Intermediate School 8, Carter Houses and Jamaica Houses, among other locations. He added that, at this time, the BQA Study does not involve installation of any wells in Brooklyn.

- A question was raised regarding efforts to prevent ground and surface water contamination from the airports. Mr. Cohen replied that DEC is coordinating clean-up projects at John F. Kennedy airport; however, he is not aware of any efforts at LaGuardia Airport. He added that both facilities are far enough away so that they do not affect the BQA Project.
- Russell Hope, Cambria Heights homeowner, asked about efforts to address current and future contamination from gas stations and how such contamination is monitored. Deputy Commissioner Greeley answered that DEP, DEC and the USGS operate a number of monitoring wells throughout the City, which collect extensive, continuous data regarding water quality over time. In addition, the State requires implementation of a Wellhead Protection Plan (known in New York City as the Groundwater Protection Plan). Deputy Commissioner Greeley stated that Malcolm Pirnie, Inc. has developed an “excellent” database of gas stations, which will help identify possible sources of groundwater contamination. He noted that DEC is responsible for monitoring gas station compliance with state regulations.

Observing that homeowners are responsible for damage to pipes that results from contractors’ work in the vicinity of their homes, Mr. Hope asked which portion of the pipeline is considered part of the resident’s property. Deputy Commissioner Greeley replied that under the JWS system, the homeowner owned the portion from the house to the curb. Although JWS would fix pipes at no charge, the quality of the repairs was not

always good. When the City purchased JWS, the homeowner's responsibility was extended to cover the area from the valve to the sink. He added that under the City's ownership, water bills in southeast Queens were reduced by 43%, bringing them in line with water bills citywide.

A brief discussion ensued regarding damage to pipes and the responsibility of homeowners. Councilman Comrie noted that because southeast Queens has a high water table and because repairs made by JWS were of poor quality, residents in this area have a unique situation. He explained that he has submitted legislation that would provide low-cost plumbing services for senior citizens and low-interest loans for repairs. The bill also requires contractors to repair pipes damaged in connection with their roadway construction projects. Deputy Commissioner Greeley indicated that insurance companies will now insure a homeowner's pipes. He added that the homeowner should speak with the contractor and engineer on the job to determine if repairs could be done before the street is closed. In response to a comment from Mr. Caughman, Deputy Commissioner Greeley concurred that contractors for major jobs must post their name and contact information and should also meet with the local Community Board.

A related question was raised regarding cracks in the pipes as a result of truck vibrations. Acknowledging that this is a multi-pronged problem, Deputy Commissioner Greeley noted that DEP has a citywide leak detection program. He encouraged homeowners to document any cracked or broken pipes. Ms. Neuhaus added that photographs are an important part of documentation.

- In response to a question from a York College student, Mr. Cohen reiterated that, following extensive testing, water treated at the new Station 6 facility will be sent to the distribution system.

As there were no further questions, Ms. Neuhaus closed the meeting by urging everyone to remain active in the process. She stated that the project team is available to meet with community organizations and invited members of the public to attend CAC meetings. Dr. Caravanos extended an offer from the SRP to discuss the project with any interested individuals or organizations. In a final comment, Commissioner Ward emphasized that this meeting is not the end of the process and thanked everyone for attending.

BROOKLYN-QUEENS AQUIFER FEASIBILITY STUDY
PUBLIC INFORMATION MEETING

The New York City Department of Environmental Protection (DEP) has scheduled a Public Information Meeting to update the community on the status of work on the Brooklyn-Queens Aquifer Feasibility Study. This project is investigating the use of groundwater to supplement the City's drinking water supply and reduce flooding in Southeast Queens.

The purpose of the meeting is to provide the community with updated project information and to receive comments on recent progress on the study. The meeting will include a presentation on the results of groundwater testing at the Station 6 pilot testing facility in Jamaica; a status report on work to clean up contaminated soils and groundwater at the West Side Corporation site, which is located in the vicinity of 180th Street and 107th Avenue; and a summary of the extensive activities of the project's Citizens Advisory Committee and its Scientific Review Panel. A question and answer session will follow the presentation.

The Public Information Meeting will be held:

DATE: Wednesday, October 22, 2003
TIME: 6:30 P.M. Review of Exhibits
7:00 P.M. Presentation/Question and Answer Session
PLACE: York College Performing Arts Center—Small Theatre
94-45 Guy R. Brewer Boulevard, Jamaica, NY
(between Liberty and Archer Avenues,
next to east parking lot)

DEP encourages your participation at this meeting and welcomes your input. For further information concerning the meeting or the overall project, please contact Mark Lanaghan at (718) 595-3519, or visit our website at www.ci.nyc.ny.us/html/dep/html/news/bqa.html.

Ad appeared in:

Southeast Queens Courier	(10/08/03)
New York Daily News	(10/09/03)
Jamaica Times	(10/09/03)
Queens Chronicle	(10/09/03)
Ledger-Observer	(10/09/03)
Southeast Queens Press	(10/09/03)

PUBLIC INFORMATION MEETING

Brooklyn-Queens Aquifer **Feasibility Study**

The New York City Department of Environmental Protection (DEP) invites you to participate in a Public Information Meeting on the “Brooklyn-Queens Aquifer (BQA) Feasibility Study.” The project is investigating the use of groundwater to supplement the City’s drinking water supply and reduce flooding in Southeast Queens.

The Meeting will be held:

- DATE:** Wednesday, October 22nd
- TIME:** 6:30 P.M. Review of Exhibits
7:00 P.M. Presentation followed by
Question & Answer Session
- LOCATION:** York College Performing Arts Center—Small Theater
94-45 Guy R. Brewer Boulevard, Jamaica
(between Liberty and Archer Avenues, next to east parking lot)

The presentation will provide information on the status of the overall study, including the results of the Station 6 Pilot Testing program; an update on remediation work at the Station 24/West Side Corporation site; and a summary of the work of the Citizens Advisory Committee and its Scientific Review Panel.

We hope to see you on October 22nd. For additional information, please contact Mark Lanaghan, DEP, at (718) 595-3519 or visit our website at www.ci.nyc.ny.us/html/dep/html/news/bqa.html.

BROOKLYN-QUEENS AQUIFER (BQA) FEASIBILITY STUDY

PUBLIC INFORMATION MEETING

**Wednesday, October 22, 2003
7:00 P.M.**

**York College—Performing Arts Center
94-45 Guy R. Brewer Boulevard
Jamaica, NY**

AGENDA

Welcome	Yvonne Reddick District Manager, Community Board #12 Member, BQA Citizens Advisory Committee (CAC)
	Douglas Greeley, P.E. Deputy Commissioner Bureau of Water and Sewer Operations New York City Department of Environmental Protection
Introductory Remarks	Christopher O. Ward Commissioner New York City Department of Environmental Protection
Project Overview Screening of Project Video Introduction of CAC Members	Douglas Greeley
Introduction of Scientific Review Panel Members	Linda Caleb Hazel A Better Day Inc./St. Benedict the Moor/ St. Bonaventure Member, BQA CAC
Project Update -Pilot Testing Results -Station 24/West Side Corporation Clean-up -Future Activities	Nicole E. Brown Engineer Malcolm Pirnie, Inc. Donald Cohen Project Manager Malcolm Pirnie, Inc.
Questions and Discussion	Helen Neuhaus Helen Neuhaus & Associates Inc.

**Brooklyn Queens Aquifer Feasibility Study
Public Information Meeting – October 22, 2003**

Attendees

Aliesha Aire Resident	Helen Cooper Gregory Resident	Arnold Parks Resident
Sandra Atwell Resident	James Gulston Resident	Vincent E. Payne Resident
Richard Belgrave Resident	Daniel Hendrick Queens Chronicle	Raj Persaud York College
Nicole Blake Resident	Russell Hope Resident	James Pettiford Resident
Jacqueline Boyce District Leader	Doris V. James Resident	Jacqueline Pinkney Office of Congressman Gregory W. Meeks
Agnes Brunston Resident	Walter Jones York College	Irlynolia Pulliam Resident
Ruth Bryah Resident	Al Jordan Resident	Carolyn Roberts Resident
Thokus Chaturgan Resident	Juliet Kaye New Voice Of New York	Betty Robles Resident
Adeline Clinton Resident	Nazrul Khawdaker York College	Glenda Royal Resident
Donna Clopton 103 rd Precinct Community Council	Selwyn Le Bourne Resident	Stephanie Saddler Resident
Courtney Dentch Jamaica Times	Bernard Manhertz Resident	Cardinal Sandiford Resident
Ruth W. DuBerry Community Board #12	Gladys Marshall Resident	Stanley Schleifer York College
J. Leslie Eimers U.S. Geological Survey	Paul Misut U.S. Geological Survey	Frances Shaw Resident
Shirley El Idussi Resident	Phyllis O'Meally Resident	Florence & Fred Simmons 103 rd Precinct Community Council
Carole Eldridge Resident	R. O'Meally Resident	Gurpal Singh Resident
Gertrude S. Gonesh Resident	Andreas Papanocleous York College	Sherry Tarek Queens Tribune
	John Parks Resident	

Patrick Ulysse
Resident

Juan D. Valcural
Resident
Chrisla Weber
The Queens Courier

Citizens Advisory Committee

Dr. Canute Bernard
Community Board #12

Manuel Caughman
Brinkerhoff Action
Association

New York City Councilman
Leroy Comrie

Jeff Diggs
Office of New York City
Councilman Leroy Comrie

Kenneth Gill
Addisleigh Park Civic
Association

Linda Caleb Hazel
A Better Day/St. Benedict the
Moor/St. Bonaventure

Richard Hellenbrecht
Community Board # 13

Irving & Sarah Hicks
Brinkerhoff Action
Association

Debora L. Hunte
Brinkerhoff Action
Association

Yvonne Reddick
Community Board #12

Peter Richards
Community Board #13

Earl Roberts
113th Precinct Community
Council

New York State Assemblyman
William Scarborough

New York State Senator
Malcolm Smith

Scientific Review Panel

Jack Caravanos, Ph.D.
Hunter College

Gilbert Hanson, Ph.D.
SUNY - Stony Brook

James Kilduff, Ph.D.
Rensselaer Polytechnic
Institute

Len Lion, Ph.D.
Cornell University

Alan Rabideau, Ph.D.
SUNY - Buffalo

Dr. D.C. Saha
New York Medical College

Project Team

Nicole Brown
Malcolm Pirnie Inc.

Donald Cohen
Malcolm Pirnie Inc.

Lillie Zeigler Farrell
New York City Department of
Environmental Protection

Doug Greeley
New York City Department of
Environmental Protection

Natasha Harper
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Environmental Protection

Tom Lane
Malcolm Pirnie Inc.

Rick Meier
R. Meier & Associates

Nabeel Mishalani
Malcolm Pirnie Inc.

Karim Naraghani
Malcolm Pirnie Inc.

Helen Neuhaus
Helen Neuhaus & Associates

Andy Rousseau
New York City Department of
Environmental Protection

Commissioner Christopher Ward
New York City Department of
Environmental Protection

Denise Woodin
Helen Neuhaus & Associates

Anita Wright
Helen Neuhaus & Associates

Bill Yulinsky
New York City Department of
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