

Guidebook For Guests Conducting Research

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managed by Brookhaven Science Associates for the U.S. Department of Energy

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FOREWORD

Welcome to Brookhaven National Laboratory. This guide has been compiled to help you carry out your work safely and productively, as well as to acquaint you with BNL's services and facilities. We encourage you to ask questions, seek assistance, and voice concerns as the need arises.

Brookhaven is committed to maintaining the highest ethical and professional standards, providing a safe and healthy workplace, and protecting the public and the environment. The Laboratory has developed management systems to help meet these goals, but they will not work unless everyone uses them to schedule and coordinate resources and provide feedback. We ask that you learn about the systems related to your work at the Laboratory and use them appropriately.

In the experimental areas, potential exists for serious, even fatal accidents. There are latent hazards posed by heavy mechanical equipment; electrical hazards; corrosive, toxic and flammable gases; explosion; fire and radiation. Complying with environmental, health and safety requirements is an essential part of performing work at BNL. Following these rules is a condition for maintaining Guest status at the Laboratory. We urge each of you to read this Guide and learn the requirements for your own safety, the safety and health of others, and the protection of Long Island's environment.

We hope your experience at Brookhaven is pleasant and productive. If you have suggestions about how we can make things better, please let us know.

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INTRODUCTION TO BROOKHAVEN

Welcome to Brookhaven National Laboratory

Congratulations. You have arrived at Brookhaven National Laboratory (BNL) to work on an approved experiment, or to collaborate, consult, or otherwise perform research here.

This guide has been compiled to help you become familiar with Brookhaven and its obligations and commitments to you and its other visitors, as well as to help you learn of the Lab's requirements and expectations of all BNL visitors. This guide is as complete as possible; but if, while you are here, you have any unanswered questions or concerns, please do not hesitate to ask for assistance.

Background

Funded by the U.S. Department of Energy (DOE), Brookhaven is a multi-program scientific center that develops and operates large-scale, state-of-the-art research facilities that are beyond the capability of any single university. In carrying out DOE's mission at the Laboratory, BNL's staff conducts its own basic and applied research at the frontiers of science through long-term programs in the following fields: physics, chemistry, biology, medicine, energy and environmental sciences, and nonproliferation and national security. In addition, Brookhaven's 3,000 scientists, engineers and support staff collaborate and/or meet the needs of the more than 4,000 visiting researchers who come to the Lab each year from across the country and around the world.

Located on a 5,300-acre campus on eastern Long Island, New York, Brookhaven was established as a national scientific resource in 1947. It is situated on what was the U.S. Army's Camp Upton, a World War I training camp and a World War II induction center and rehabilitation hospital.

Today, the Laboratory is home to four Nobel Prize-winning discoveries in physics. The first Nobel Prize for research developed at BNL was awarded in 1957, for a theory on parity conservation. The physics prizes in 1976, 1980 and 1988 were awarded for discoveries made using Brookhaven's Alternating Gradient Synchrotron (AGS). The AGS is one of the world's premiere particle accelerators and currently the only heavy-ion accelerator for radiation-biology research in the U.S. In addition, the AGS now also serves as a pre-accelerator for the Lab's Relativistic Heavy Ion Collider (RHIC), which is the world's newest and biggest particle accelerator for nuclear physics research.

Since 1998, BNL has been operated under contract with the U.S. Department of Energy by Brookhaven Science Associates (BSA), a nonprofit, limited-liability company established in 1997 by Battelle and the Research Foundation of the State University of New York (SUNY) for SUNY at Stony Brook. BSA's goal is to encourage internationally significant and nationally important science research to be done at Brookhaven, while ensuring the quality of the Long Island environment, the safety of the surrounding community, and the health of the Lab's staff and visitors.

Founded in 1977 as the 12th cabinet-level federal department, the U.S. Department of Energy oversees much of the scientific research in the U.S., through its support of BNL and the eight other national laboratories. Today, the U.S. Department of Energy not only provides the majority of Brookhaven's research dollars and direction, but also it is the government agency responsible for the Lab's operations and environmental stewardship.

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BNL's User Facilities

Large national user facilities include the RHIC, the National Synchrotron Light Source (NSLS), and the AGS. These have user committees and program advisory committees. For further details contact:

- RHIC & AGS Users' Center BNL, Building 400E, Upton, NY 11973, 631-344-3333 or via e-mail at userscenter@bnl.gov or www.bnl.gov/userscenter/.
- Photon Science Users' Office BNL, Building 743, Upton, NY 11973, 631-344-8737 or via e-mail at nslsuser@bnl.gov or http://www.bnl.gov/ps/.

Smaller national user facilities include the Accelerator Test Facility (ATF), the Booster Application Facility (BAF), which also has a user committee, the Tandem Van de Graaff (TVDG) Accelerator, and the Scanning Transmission Electron Microscope (STEM) facility. The programs at these facilities are set up with individual scientists, programs, or groups.

- ATF: Contact the RHIC & AGS Users' Center BNL Building 400E, Upton, NY 11973, 631-344-3333 or via e-mail at userscenter@bnl.gov or http://www.bnl.gov/atf/default.html.
- BAF: This program is under construction. For information, please contact the Collider-Accelerator Department at 631-344-4611.
- Tandem Van de Graaff: Contact http://www.bnl.gov/bnlweb/facilities/TVdG.asp
- STEM: Biosciences User Coordinator BNL, Building 463, Upton NY 11973 631-344-3415 or via e-mail at folkers@bnl.gov.
- NSRL: Contact http://www.bnl.gov/medical/NASA/LTSF.asp

In-house facilities that are operated by BNL scientists for in-house programs are available on a case-by-case basis to outside users, mostly for collaborative work with BNL scientists. These include the Deep Ultraviolet Free Electron Laser (DUV-FEL), the Electron Microscope, the Laser-Electron Accelerator Facility (LEAF), the Positron Emission Tomography (PET), Magnetic Resonance Imaging (MRI) facilities, and the Whole Body Composition Facility. For more information, see the following list of BNL Research Centers and Scientific Departments.

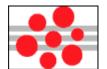
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Research Centers

BNL Advanced Accelerator Group

http://www.cap.bnl.gov/

The Advanced Accelerator Group investigates the application of new accelerator concepts to the design of future particle physics facilities. Our main emphasis is presently on the design of a high performance neutrino factory. Some major theoretical and simulation work includes the design of ionization cooling systems, including cooling rings, to improve the quality of low energy muon beams, and the study of FFAG accelerators, both in general and specifically for rapid acceleration of muon beams. Our major experimental efforts are devoted to the demonstration of target systems suitable for multi-MW proton beams.



Center for Functional Nanomaterials (CFN)

http://www.bnl.gov/cfn/

This Center will provide researchers with state-of-the-art capabilities to fabricate and study nanoscale materials. The Center's focus is to achieve a basic understanding of how these materials respond when in nanoscale form. Nanomaterials offer different chemical and physical

properties than bulk materials, and have the potential to form the basis of new technologies.

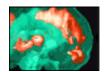


Accelerator Center for Energy Research (ACER)

http://www.chemistry.bnl.gov/sciandtech/PRC/crcrintr.html

This Center exploits pulse radiolysis techniques to study chemical reactions and other phenomena by subjecting samples to pulses of high-energy electrons. The reactions are followed by various methods of time-resolved spectroscopy and other detection techniques.

The Center includes the new picosecond Laser-Electron Accelerator Facility, a 2 MeV Van de Graaff accelerator, and a cobalt-60 source.



Radiochemistry and Biological Imaging

http://www.bnl.gov/CTN/

Volatile energy costs and the need to conserve a dwindling supply of fossil fuels have created an urgent need to develop alternative sources of renewable carbon-neutral energy. Plant biomass and its efficient conversion to biofuels will no doubt play an essential role in meeting

future global energy demands. The overall goal of this program is to develop methodologies that will help achieve our nation's goal of increased reliance on renewable energy. To accomplish this, BNL's program is structured into the following R&D areas.



Computational Science Center

http://www.bnl.gov/CSC/

The purpose of the CSC is to provide computational science capabilities through the use of powerful, state-of-the-art computers for researchers in biology, chemistry, physics, applied mathematics, medicine, and nanoscience Sponsored by the U.S. Department of Energy's Office of Science, the Center features Large Linux clusters and two QCDOC computers with 12,288 processors each.



National Nuclear Data Center

http://www.nndc.bnl.gov/

This Center provides information services in the fields of low and medium energy nuclear physics to users in the United States and Canada. In particular, the Center can provide information on neutron, charged-particle, and photonuclear reactions, nuclear structure, and decay data.



RIKEN BNL Research Center (RBRC)

http://www.bnl.gov/riken/

This Center, established by the Institute of Physical and Chemical Research, Japan (RIKEN) at Brookhaven National Laboratory, and the focus is on spin physics, Lattice Quantum Chromodynamics (QCD) computational physics and quark gluon plasma (QGP) physics. The goal is to establish a new field of physics for the 21st century by closely coordinating our theoretical and experimental research efforts.

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Research Facilities

http://www.bnl.gov/science/facilities.php



Relativistic Heavy Ion Collider (RHIC)

RHIC smashes particles together to recreate the conditions of the early universe so scientists can explore the most fundamental building blocks of matter as they existed just after the Big Bang. This research unlocks secrets of the force that holds together 99 percent of the visible universe—everything from stars to planets and people—and triggers advances in science and technology that have applications in fields from

medicine to national security. More than 1,000 scientists from around the globe—including hundreds of students training to be part of our nation's future high-tech workforce—conduct research at RHIC.



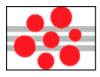
NASA Space Radiation Laboratory (NSRL)

Research supported by NASA on the radiobiological effects of high energy heavy ions had been carried out for several years at the Lawrence Berkeley National Laboratory BEVALAC in California. With the closing of the BEVALAC, the Brookhaven National Laboratory (BNL) <u>Alternating Gradient Synchrotron</u> (AGS) is the only accelerator in the United States capable of providing heavy ion beams at energies of interest for space radiobiology. Facilities in Europe, Russia and Japan are available, but their use is severely limited by a number of factors, including the lack of logistic support, the difficulty of shipping test biological samples over very long distances, and limited and/or very expensive beam time.



National Synchrotron Light Source-II (NSLS-II)

(NSLS-II) generates intense beams of x-ray, ultraviolet, and infrared light and offers an array of sophisticated imaging techniques to capture atomic-level "pictures" of a wide variety of materials, from biological molecules to semiconductor devices. NSLS-II has a nanometer-scale resolution—a key resource for researchers at Brookhaven's <u>Center For Functional Nanomaterials (CFN)</u>—and will enhance the development of next-generation sustainable energy technologies and improve imaging of complex protein structures.



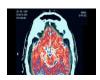
Center for Functional Nanomaterials (CFN)

The CFN explores the unique properties of materials and processes at the nanoscale. The CFN is a useroriented research center whose mission is to be an open facility for the nanoscience research community and advance the science of nanomaterials that address the nation's energy challenges.



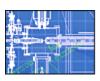
Radiotracer Chemistry, Instrumentation and Biological Imaging (RCIBI)

The lab hosts a suite of tools for Radiotracer Chemistry, Instrumentation and Biological Imaging (RCIBI), including small and clinical scale positron emission tomography (PET) and magnetic resonance imaging (MRI) scanners, as well as facilities that produce radioisotopes and incorporate them into molecules and nanomaterials. These radiotracers and tools are designed to image specific biochemical transformations and the movement of molecules, including environmental toxins. They have enabled advances in neuroimaging, drug development, and studies of plant metabolism that improve carbon sequestration and biofuel crop growth.



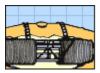
Brookhaven Linac Isotope Producer

The <u>Brookhaven Linac Isoptope Producer</u> (BLIP)—positioned at the forefront of research into radioisotopes used in cancer treatment and diagnosis—produces commercially unavailable radioisotopes for use by the medical community and related industries. BLIP consists of a an accelerator beam line and target area for generating radioisotopes already in high demand and for developing those required at the frontiers of nuclear medicine. In conjunction with this mission, scientists also perform irradiations for non-isotope applications and explore opportunities for emerging radioisotope applications.



Electron Beam Ion Source (EBIS)

EBIS is a new pre-injector system for the RHIC and NASA Space Radiation Laboratory science programs. The first of several planned improvements to the RHIC facility, EBIS will help transform RHIC into the Quantum Chromo Dynamics (QCD) Lab that will enable the study of QCD in more detail.



Tandem Van de Graaff

The Tandem Van de Graaff accelerators are used to bombard materials with ions for manufacturing and testing purposes. They are also used to supply RHIC with heavy ions.



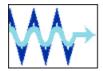
Accelerator Test Facility

The Accelerator Test Facility is used to explore new ideas on particle acceleration and the production of brighter x-ray beams for research applications.



Positron Emission Tomography (PET) Facility

The PET facility is used to image the brain for studies on the treatment of human addiction, the aging process and drug research and development.



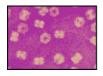
Laser Electron Accelerator Facility (LEAF)

A picosecond laser-electron accelerator facility at BNL's Center for Radiation Chemistry Research.



Transmission Electron Microscope

Operated by the Energy Sciences & Technology Department, this 300 kV field emission electron microscope is a unique probe for materials characterization.



Scanning Transmission Electron Microscope

Operated by the Biological Sciences Department, this is a custom-built electron microscope optimized for imaging unstained biological molecules with minimal radiation damage.

External Facilities to Which Brookhaven is a Contributing Partner



ATLAS

ATLAS (A Toroidal LHC ApparatuS), is one of four detectors to be located at a powerful new accelerator, the Large Hadron Collider (LHC), now under construction near Geneva, Switzerland. Read an overview of the BNL contribution.



Daya Bay Neutrino Experiment

An international collaboration tracks the safe subatomic send-offs from six nuclear reactors to study mysterious particles that may answer questions about the birth of our universe.



Spallation Neutron Source

The Spallation Neutron Source (SNS) is the world's foremost neutron scattering science facility for conducting chemistry and structural biology. Brookhaven is responsible for the design of the SNS accumulator ring.

Scientific Departments

Biological, Environmental & Climate Sciences Department

http://www.bnl.gov/ebnn/becs/

Explores our natural environment, and turns scientific ideas into practical applications. The image shown is of the <u>Free Air CO2 Enrichment ecology research center</u> in North Carolina, one of many built around the world by Brookhaven scientists to study the effect of excess atmospheric carbon dioxide on different ecosystems.

Biological Science research is focused on synthetic biology, radiobiology, computational biology and structural biology and the characterization of biological systems. The department is home to Radiotracer Chemistry, Instrumentation and Biological Imaging (RCIBI), a suite of tools available for researching plant metabolism, drug development and neuroimaging. Together with the Collider-Accelerator Department, Biosciences operates the NASA Space Radiation Laboratory (NSRL), used by radiobiologists and physicists to study space radiation effects.

Chemistry Department

http://www.bnl.gov/chemistrv/

The Chemistry Department focuses on PET studies of the human brain, heterogeneous and homogeneous catalysis, studies of gas phase dynamics of reactive species, solar photoconversion and other chemistries.

Collider-Accelerator Department

http://www.bnl.gov/CAD/

The Collider-Accelerator Department includes the staff who work to improve the <u>Relativistic Heavy Ion Collider</u>, the <u>Alternating Gradient Synchrotron</u>, and the <u>Tandem Van de Graaff</u> accelerators, and the physicists who use these tools in their research.

Condensed Matter Physics and Materials Science Department

http://www.bnl.gov/cmpmsd/

Major efforts of this department include the investigation of properties of superconducting oxides; methods of superconductor characterization and fabrication; the properties of advanced permanent-magnet

materials; the synthesis of materials for advanced battery and fuel-cell applications; the investigation of mechanisms of metal passivation and localized corrosion; development and investigation of the properties of cementitious and glassy materials; and advanced methods of electron microscopy to characterize the nanoscale structure of advanced materials.

Nonproliferation & National Security Department

http://www.bnl.gov/nns/

The mission of The Nonproliferation and National Security Department is to carry out research and development, provide technical support, and build prototype systems in order to further U.S. Government initiatives and policies in Nuclear materials safeguards and security, Arms control treaty verification, Nonproliferation of weapons of mass destruction, Material Protection Control and Accountability initiatives for nuclear materials in Russia and the NIS, and related national security areas.

Nuclear Science & Technology Department

http://www.bnl.gov/NST/

The Nuclear Science & Technology Department conducts basic and applied science, research and development, and technology implementation and deployment to support the DOE objectives of assuring adequate supplies of clean/affordable energy, reducing U.S. vulnerability to supply disruptions, advancing alternative and renewable energy technologies, and increasing energy choices, maintaining U.S. leadership in energy supply and use; and educating new generations of scientists.

Photon Sciences Department

http://www.bnl.gov/ps/

The NSLS provides one of the world's brightest continuous sources of x-ray and UV radiation for scientific research. This light is a beacon for more than 2,300 scientists from BNL, academia and industry annually, who use it to shed light on everything from the structure of molecules to microchips.

Physics Department

http://www.bnl.gov/physics/

BNL physicists pursue experimental and theoretical discoveries in high-energy, nuclear and solid-state physics, and help design and build many of the world's foremost physics facilities, both at Brookhaven and around the globe.

Scientific Divisions

<u>Information Technology Division</u> (ITD)

http://bnl.gov/itd/

ITD provides expertise in computing hardware and software support, as well as telecommunications services for the entire Laboratory. Current research ranges from three-dimensional visualization to aid scientific research, to advanced networking initiatives.

Instrumentation Division

http://www.inst.bnl.gov

The Division develops state-of-the-art instrumentation required for experimental research programs at BNL and maintains the expertise and facilities in specialized high technology areas essential for this work. Major areas of effort include semiconductor, gas, and cryogenic detectors, microelectronics, data acquisition hardware, micro and nano-fabrication, optical metrology, and laser and electro-optics. The Division also engages in collaborative research and technology transfer with selected industrial partners.

Superconducting Magnet Division

http://www.bnl.gov/magnets/

The BNL Superconducting Magnet Division constructs magnets for use in particle accelerators such as the Relativistic Heavy Ion Collider. Superconducting magnets which must be cooled to temperatures near absolute zero produce stronger magnetic fields and consume less energy than conventional copper wire electromagnets. Building on the magnet designs and construction methods developed for RHIC, this Division is building magnets for use in Europe's Large Hadron Collider and HERA accelerators.

Types of Research

Animal Research. The Brookhaven Laboratory Animal Facility (BLAF) located in the Medical Department is BNL's core accredited facility for research using laboratory animals. All animal research is conducted through the Institutional Animal Care and Use Committee (IACUC). The IACUC follows policies and procedures as outlined in the IACUC Policies and Procedures Manual and research is conducted according to the Animal Care and Use Program.

Basic Research. As a multi-program national laboratory, BNL's mission is to carry out basic and applied research in long-term programs at the frontier of science that supports DOE missions and the needs of the Laboratory's users' community. The majority of research conducted at Brookhaven falls into this category.

Classified Research can be performed at Brookhaven. Extensive discussions with the appropriate Department Chairman must take place in advance of such research.

Collaborative Research. In general, collaborative research is defined as a project that will produce a report having author(s) from BNL and an outside organization. Such joint projects require the approval of the cognizant Department Chair. Collaborative research may be conducted through collegial interactions or under a Cooperative Research and Development Agreement (CRADA) with a non-BNL organization, subject to the necessary BNL and DOE approvals.

Proprietary Research. Proprietary research can be conducted by a user institution at BNL's Designated User Facilities (RHIC, NSLS, CFN, AGS, Tandem, NSRL, and STEM). Institutions have to enter into a formal agreement with BNL prior to conducting such research. A full-cost recovery rate is charged for

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Use of BNL Services, Research Capabilities, Materials, and Facilities by Non-BNL Organizations

Note: This applies to organizational contracts. In most instances, individual researchers will be working at BNL facilities under an umbrella "user" agreement or with a BNL collaborator; they will not be entering into organizational agreements.

Generally, before non-BNL organizations may acquire BNL services, research capabilities, or materials, or utilize BNL facilities, appropriate agreements must be in place for such use. Thus, an organization that wishes to do research at BNL's Designated User Facilities should contact the individual user facility's Guest Administrator or Technology Commercialization & Partnerships, 631-344-4238, who will prepare and negotiate the agreement. Organizations wishing to utilize BNL research capabilities at non-user facilities or acquire non-research services from BNL may contact the Budget Office, 631-344-3428, or the Office of the General Counsel, 631-344-8629.

Scientific Proposal Review

Proposals for an experiment at ATF, NSRL, RHIC, Tandem, Booster and Linac accelerators should be submitted to the Collider-Accelerator Department's ALD, proposals for experiments at the NSLS should be submitted to the User Administration Office at the Photon Sciences Department, and proposals for experiments at the STEM Facility should be submitted to the Biological Sciences Department Administration Office. Proposals for experiments at scientific departments or divisions should be submitted to your host prior to subsequent scientific review, if appropriate, by a Department Chair or Division Head. Following scientific review you will be notified if the experiment was approved, deferred, or rejected.

Brookhaven's Commitment to Its Employees and Guests

Commitments to Brookhaven National Laboratory. BSA is the steward of the Laboratory's assets; they manage these resources in a manner that allows for reinvesting in the future and continuing BNL's mission.

Scientific, Professional, and Personal Conduct. BNL is committed to maintaining the highest ethical and professional standards in the conduct of our duties; all staff and guests shall conduct themselves in accordance with these standards in their relationships with each other, our customers, the public, and BNL. All staff members and guests must be free of any influence, interest, or relationship that actually or potentially conflicts, or appears to conflict with the interests of BNL or its customers. All staff and guests shall comply with applicable laws, regulations, and contractual obligations, as well as BNL policies and standards of performance. More information is available at https://sbms.bnl.gov/standperf.htm. Questions concerning conflicts of interest, applicable laws and regulations, and contractual provisions may be referred to the Office of General Counsel at 631-344-8629.

Environment, Safety, Security, and Health (ESS&H). BNL is committed to providing a safe and healthy working environment for all staff and guests; protecting the general public and the environment from unacceptable environmental, safety, and health hazards; operating in a manner that protects the environment by applying pollution prevention techniques to current activities; and remediation of environmental impacts of past operations.

Commitments to Our Customers. BNL is committed to provide services and products of the highest quality consistent with the needs, expectations, and resources of our customers. Brookhaven is committed to

continuously improving our processes, systems and capabilities so that they can improve operations and increase the value of our research products delivered to our customers.

Commitments to Our Staff and Guests. BNL is committed to recruiting, appointing, hiring, promoting, and compensating without regard to race, color, religion, gender, national origin, marital status, citizenship, age, disability, veteran status, sexual orientation, or any other characteristic, as may be protected by law or executive order. BNL values the contributions of all staff and guests and is committed to supporting their professional and personal development. BNL is committed to promoting open communications among all staff and guests; providing a work environment that facilitates health, fairness, honesty, integrity, and teamwork; and rewarding based on performance.

Commitments to the Public. Brookhaven will ensure that the ideas, interests and concerns of BNL stakeholders are considered in program planning and decision-making processes that affect the community or the general public. BNL will benefit the public by applying our professional skills and resources to scientific and technical problems. It will benefit the public by committing staff time and financial resources to schools, charitable organizations, and other recipients deemed appropriate by Laboratory leadership. Staff and guests are encouraged to participate in politics, and community and cultural activities but with the understanding they do so as individuals, not as representatives of BNL. Brookhaven will maintain a positive, proactive, and constructive relationship with our neighbors in the community, regulators, DOE, and our other stakeholders.

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BEFORE ARRIVAL AT BROOKHAVEN

Items to Address Before You Arrive

Access to BNL for Guests Engaged in Research. Based on contact with a sponsor or host from BNL, or based on interaction with scientific staff or advisors from your home institution, you have decided to participate in research at BNL and are joining an experiment already approved at BNL, or you have submitted a proposal that has passed BNL scientific and safety reviews.

In order for BNL to effectively carry out the administration of new arrivals, you are requested to complete the following requirements BEFORE you arrive. Further details on Guest and Visitor can be found at https://sbms.bnl.gov/sbmsearch/subjarea/50/50_SA.cfm?parentID=50.

Foreign Nationals have special requirements to be given access onto Brookhaven's site. Foreign nationals must have registered using BNL's Guest Information System (GIS), must have received approval from DOE's Foreign Visits and Assignments Office to visit Brookhaven, and must have notified Brookhaven of their arrival date before access on-site can be given. Brookhaven recommends that guest registration occur 30 days in advance of a visit.

Guest Information System (GIS). Brookhaven supports a web-based guest registration system. Individuals wishing to come to Brookhaven should log onto the <u>Guest Information System http://www.bnl.gov/guv/gis.asp</u>, complete the information requested, and submit it to Brookhaven 30 days in advance of a visit. Guests are asked to pay close attention to the e-mail instructions provided after registration and after arrival notification are completed.

Arrival Notification. All guests must notify Brookhaven of their actual arrival date to be given gate access to BNL. You can do this by going to <u>Guest Central http://www.bnl.gov/guv/guestcentral.asp.</u> If a guest fails to do this, access to Brookhaven site could be declined or the guest may be delayed at the front gate for an inconvenient period of time.

Make Transportation Arrangements to BNL. Commercial limousine services are available from local airports, John F. Kennedy, LaGuardia, and Islip MacArthur. It is advisable to request the rate when making the reservation. The Laboratory is 65 miles from the New York City area and taxis are not recommended. If you need assistance, please contact your host.

Transportation While at Brookhaven. No public transportation is available in the area surrounding Brookhaven. Guests should be aware that they might need to purchase, rent, or lease a vehicle when they arrive. BNL offers Classified Ads that advertise cars for sale.

Car Rentals. Enterprise Car Rental has an office at Brookhaven. It is located just outside the Guest, User, Visitor Center in Bldg. 400E. Enterprise offers full-day and partial-day rates for guests and families with business and personal needs, free pick-up service, discounted rates, and weekend packages. Call 631-344-4888 or 4889 for further details. The corporate account number is FX0019.

Brookhaven offers courtesy van service that provides on-site transportation. This service has a routine morning run that starts at 8:30 a.m. in the apartment area and makes 13 stops around the site. Between the hours of 8:45 a.m. and 4:15 p.m., Monday through Friday, excluding holidays, individuals can request transportation by calling extension 2714 and providing your name, telephone extension, location of pickup, location of drop-off and number of passengers. Requests are accepted on a first-come, first served basis. Be prepared to meet the van at the main entrance of your building. In order for us to be able to serve as many customers as possible, please be ready to board the van before making the call for pickup.

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Weekdays, except holidays, a Laboratory vehicle transports guests to Brookhaven to and from the Ronkonkoma Train Station. Due to limited seating, reservations are required for this service. Please telephone extension 631-344-2535, fax 631-344-6167, email transportation@bnl.gov or reserve in person at the Transportation Counter located in Building 400E no later than 10 minutes prior to departure time.

A courtesy shopping shuttle operates continually, except on some holidays, on Saturdays and Wednesdays between Brookhaven and the Southport Shopping Mall. Schedules can be found at Staff Services' web site for Shuttle Service http://www.bnl.gov/staffservices/shuttleservices.php.

Guest Intellectual Property Agreement (Patent Agreements)/User Facility Agreements. The Office of Intellectual Property and Sponsored Research (OIP) is responsible for the contractual arrangements that permit access to BNL's DOE Approved Major User Facilities by non-BNL organizations and for the provision of research and technical assistance to federal and non-federal organizations, including industry, universities, non-profit institutions, and state and local governments. These agreements are called Designated User Facility Agreements. Guests working within a Brookhaven Research Department must sign a Guest Intellectual Property Agreement. The User Agreement Acknowledgement Form and the Guest Intellectual Property Agreement are signed upon arrival to BNL. http://www.bnl.gov/guv/Agreements/default.asp

- The Work for Others system provides a process whereby Brookhaven obtains the necessary authorizations and funding to perform research and development services for non-DOE federal agencies and non-federal entities.
- Proprietary research can also be conducted at Brookhaven. This work is conducted under a Class Waiver for Proprietary Users of Energy Research Designated User Facilities. Such research may be conducted by private individuals, representatives from educational institutions, nonprofit organizations, or industry.
- Work for Other Agreements and Proprietary Research Agreements must be in place prior to arrival at BNL.

The appropriate agreement must be signed by the individual as a pre-requisite to issuance of a Laboratory ID card and authorization to conduct work at Brookhaven. All questions should be directed to the Technology Commercialization & Partnerships at 631-344-4238 or tech@bnl.gov.

Shipping Material to Brookhaven. All shipments should be addressed to Brookhaven National Laboratory, Central Receiving Section, Building 98, Upton, NY 11973-5000. To speak to a representative call 631-344-2300, unless you have made other arrangements with your host. Include your host's name or your name on the package. Individual departments can receive non-hazardous, non-radiological materials directly; contact your host for further details.

- <u>Insurance coverage</u> should be taken on non-BNL shipments that are delivered to the Laboratory. BNL will not be responsible for any reimbursement for damage to equipment or materials belonging to outside organizations.
- Shipment of all materials including hazardous materials and hazardous chemicals, etc., to BNL must be conducted in accordance with U.S. Department of Transportation requirements. Contact your ESH Coordinator and then Central Receiving Section at 631-344-2310 to make arrangements for these shipments.
- If your institution is shipping radioactive material or accountable nuclear material to BNL, you must contact the Isotopes and Special Materials (I&SM) Group at 631-344-5233 to obtain an authorization number and then Central Receiving Section at 631-344-2311 to make arrangements for these shipments.

- Radioactive materials are received at Central Receiving and are temporarily stored in the designated
 area for pick-up by I&SM. It is the Laboratory's policy to conduct the receipt, storage, inspection and
 delivery of Radioactive Hazardous Material in accordance with the regulations contained in the
 Department of Transportation's Code of Federal Regulations (CFR), Title 49, parts 100 through 179.
- <u>Shipping Materials On-site</u>. See On-site Transportation of Hazardous Materials in the *Upon Arrival at Brookhaven* Section of this Guide.
- Off-site Shipments. See Off-Site Shipments in the Leaving Brookhaven Section of this Guide.

Items to Bring With You

Identification. Guests and visitors working at Brookhaven need to have proper identification documentation with them when they arrive at BNL to be granted site access and to be allowed to work. Please make sure that you bring the appropriate documents with you to avoid any delays during check-in. The current identification requirements can be found on the Brookhaven web page at: http://www.bnl.gov/visitorinfo/visitor ID.asp. A Brookhaven photo ID card cannot be issued without the appropriate identification. If you have any questions, please contact the Guest, User, Visitor Center at 631-344-3333 or guvcenter@bnl.gov.

Medical Insurance. All guests are required, with the exception of casual visitors, to have medical insurance during the length of their stay on the BNL site. US citizens and foreign nationals affiliated with U.S. institutions must indicate they have insurance. For foreign nationals that are affiliated with foreign institutions (non-salaried) with appointments of more than 30 days, the guest's Department/Division is charged by the Fiscal Department each month for the full cost of such coverage. Medical coverage is also required for foreign nationals that are foreign affiliated visiting 30 days or less, as indicated above, and may be paid for at the discretion of the Department/Division. If the Department/Division does not pay for coverage, guests will be required to pay for the coverage* themselves. Medical coverage charged-back to the Department/Division at BNL is provided through the International Medical Group (IMG), and is available for a maximum of three years to identified classifications of foreign-affiliated collaborators.

*contact the GUV Center

Bring your insurance and prescription cards with you in case you need them.

Visit Documentation. In certain instances, you will be asked to verify authorization to be on-site when entering BNL. All first-time visitors should bring a copy of any documentation received from BNL such as an invitation letter or a housing agreement form.

Items NOT to Bring to Brookhaven

You may not bring radioactive materials to Brookhaven without making the proper arrangements. Contact BNL's Isotopes and Special Material Group (I&SM) at 631-344-5233.

The following articles are prohibited from the site, unless specifically approved by the Laboratory Protection (LP): any dangerous weapon, explosive, or other dangerous instrument or material likely to produce substantial injury or damage to persons or property.

Except for authorized members of law enforcement agencies, no person may bring or carry firearms on site without specific prior authorization from the LP. On-site residents and employees may store firearms with the

Police during their stay at BNL. No firearm of any type may be fired on the Laboratory site without authority granted by the Laboratory Police. For information contact the LP point-of-contact at 631-344-4691.

Biohazards, carcinogens, radioactive materials, explosives, laboratory animals, toxic materials including wastes, or laboratory equipment that is not commercially available requires review and approval by the receiving facility or Department prior to being shipped to BNL. These items must be shipped to the laboratory via carriers that comply with all requirements set by the U.S. Code of Federal Regulations. DO NOT bring these items onto the Laboratory site in your personal vehicle or in your luggage.

The following privately-owned articles are not permitted in areas posted *limited*, *exclusion*, *protected*, or *material access* without prior authorization: recording equipment, electronic equipment with a data exchange port, cellular telephones, radio frequency transmitting equipment, computers with associated media, and controlled substances.

Family Issues

Schools. Children living on the Laboratory site may attend a public elementary school (grades kindergarten through 6), a junior high school (grades 7 and 8), or a high school (grades 9 through 12), at no cost. A child who becomes five years old on or before December 1 of the year of entry is eligible for kindergarten. A child who becomes six years old on or before December 1 is eligible for grade 1. Students are transported to and from the Laboratory by school bus. Generally, the school term begins a day or two after Labor Day (first Monday in September), and ends late in June.

Students may register any time at the Longwood School District, Central Administration Offices, Yaphank Road, Middle Island, NY 11953; telephone 631-345-2162 or 631-345-2820. Your child should have the following documents in hand to register: passport, translated immunization records, and a copy of the housing rental agreement as proof of residence. The BNL point-of-contact can be reached at 631-344-3318.

Immunization Requirements. New York State Public Health Law requires proof of the following immunizations: at least 3 DPT (diphtheria, whooping cough, and tetanus) shots; 3 to 4 doses of oral trivalent polio vaccine; plus 1 single dose each of measles, mumps, and rubella (live) given after 12 months of age; if born on/after 1/1/85 all of preceding plus one more for measles and 3 hepatitis B for children born after 1/1/93. Immunizations should be given before you leave home and the immunization record translated into English. Without this document, your child will not be allowed to attend school.

Brookhaven's Child Development Center offers a day care program for children between the ages of six weeks to five years. The emphasis is on each individual child's process of learning. The Center is licensed by the New York State Department of Social Services and accredited by the National Association for the Education of Young Children (NAEYC). NAEYC accreditation identifies the center as accomplishing the highest standards possible for Early Childhood Education and establishes compliance, through professional review, to meet NAEYC's Highest Quality Early Childhood Criteria.

The Child Development Center is open to children of parents who are employees, guests or contractors as well as nieces, nephews and grandchildren of employees, guests or contractors. Beginning on September 4, 2012, we will be open between the hours of 7:30 a.m. and 6:00 p.m. weekdays throughout the year except for BNL holidays.

Additional information is available on the web at http://www.bnl.gov/HR/CDC/ChildDevCntr.asp or by phone at 631-344-7416.

Pets. Approval to harbor pets in apartments must be obtained from the Housing Office prior to arrival. Pets are prohibited in dormitories and in shared efficiencies. Contact the Housing Office at 631-344-2541.

Housing

http://www.bnl.gov/staffservices/onsitehousing.php

To support our guests, there are 333 on-site housing units. These units are comprised of 66 family-style apartments, 39 efficiency apartments, 213 dormitory rooms, 13 Guest House rooms, and 2 year round private houses.

Location:	Hours of Operation:
Research Support Building (400A), 20 Brookhaven Avenue	Monday - Friday: 8:00 am to Midnight
Reservations: (631) 344-2541 or 344-2551	Saturday: Closed*
Fax: (631) 344-2940	Sunday: 4:00 pm to Midnight
Email: housing@bnl.gov	Laboratory Holidays: Closed*
* After Hours : When the Housing Office is closed, key	s can be picked up or returned to Police Headquarters,

Building 50.

Miscellaneous Issues

Automobile Stickers. Your BNL ID Badge should be used as identification through the front gate. Identification badges are available for family members. Automobile passes are available for visitors who will reside on-site for long periods of time. Special requests by long-term guests to use automobile stickers will be considered on a case-by-case basis.

Equipment Identification and Tagging. DOE requires that ALL equipment at BNL have bar codes or tags to indicate ownership. Please tag all your equipment prior to arrival at BNL.

Visas. The U.S. Department of Energy (DOE) funds BNL; regulations must be followed in order for foreign individuals to receive travel-related expenses from the Laboratory. Similar regulations apply at other institutions and universities, which are funded by the DOE. All questions regarding Visas should be directed to Human Resources at 631-344-7663.

Monetary Issues

Accounts. Accounts to cover operating expenses by non-BNL institutions while at Brookhaven (e.g., charges for use of trades, shops, stockroom withdrawals, and telephone charges) are subject to BNL overhead and are established by the user's home institution via a purchase order. Contact the Budget Office at 631-344-3428 for further details.

Money & Banking. The best way to get cash is from an automatic teller machine (ATM) machine. There is an ATM machine in the lobby of the cafeteria in Berkner Hall, Building 488 and at Teacher's Federal Credit Union (TFCU) in Building 400. This ATM is connected to VISA, MasterCard, CIRRUS, PLUS, and NYCE networks. Most European and Japanese cards will work.

There are a number of banks located nearby. A branch of TFCU is located on-site in Building 400. You can cash paychecks at the TFCU with a BNL ID badge.

Travelers' checks, in US dollars only, can be cashed at the TFCU under a member's account. Travelers' checks in foreign currencies cannot be cashed on-site or anywhere nearby; if you need to do so, then please take the opportunity to do it at the airport when you first arrive.

Safety Procedures

Experiment Review. Your facility/department must be notified beforehand about all materials, chemicals or equipment that you bring into the facility. Each experiment or modification to the experiment must undergo a review for conventional Environmental, Safety, & Health (ES&H) issues by the Department's Experimental Safety Review Committee; see Appendices for name and phone number of the Committee Chairs. Sufficient drawings and certifications must be made available for review of equipment that is fabricated at a non-BNL facility. An experiment may also require review for access controls and radiation protection issues.

Certain types of equipment, such as pressure vessels, vacuum vessels, cryostats, and gas- handling systems must not be operated before undergoing a thorough ES&H review. Your facility/department must be informed before the introduction of a potential hazard into the experimental areas. Sufficient time must be allowed for a thorough review to be accomplished before operation of the equipment.

Safety and Work Planning Process. See Safety Section for information.

Training Requirements. The Laboratory has established training programs in accordance with regulatory requirements for work to be performed, hazards that may be encountered, areas that will be accessed, potential for risk, and general site requirements. Brookhaven's Training and Qualifications Program ensures that BNL employees and guests are trained and qualified to perform their assigned tasks and job functions. Training requirements that you will need for the work to be performed will be assessed through the guest orientation process. Completion of required training is tracked and reported through BNL's Job Training Assessment (JTA) process.

Training information and web courses are available at http://training.bnl.gov/. Your Training Coordinator can assist you with determining your training requirements and provide you information about the courses that can be completed prior to your arrival. Once your required training has been assessed, you may check the status of your requirements by accessing the Brookhaven Training Management System (BTMS). You will need login information in order to access the BTMS from off-site; this information is available from your Training Coordinator or your Guest Administrator. Training Coordinators are listed in the Appendices or can be found at http://www.bnl.gov/training/tc_list.htm. Guest Administrators are listed in the Appendices. Once logged into BTMS, record queries, status and expiration reports, and other training information will be accessible.

UPON ARRIVAL AT BROOKHAVEN

When You Arrive at BNL

Guests without a BNL ID badge will be stopped at the front gate and issued a temporary access pass to obtain access onto the Brookhaven site. Guests holding a valid BNL ID badge will have their ID badge scanned at the front gate to obtain access onto the Brookhaven site.

Check-In Procedures at Brookhaven

Guests will be instructed on check-in procedures when they complete the Arrival Notification by visiting Guest Central on-line at http://www.bnl.gov/guv/guestcentral.asp. If you are required to check-in, you will do so at one of the locations listed below, as applicable. Check-in hours are 8:30 a.m. to 5:00 p.m., Monday through Friday, excluding holidays. Guests should make every attempt to arrive during these hours. Guests arriving during non-working hours will be asked to read and acknowledge BNL's off-hours policy for untrained guests when they arrive.

- Guest, User, Visitor (GUV) Center, Bldg. 400, Research Support Building (RSB) All guests, except as noted below;
- Facilities & Operations Office (FM)/Donna Pfeiffer Contractors;
- Office of Educational Programs (OEP), Bldg. 438 OEP Student and Teacher Collaborators;
- Human Resources (HR), HR Records, Bldg. 400 (RSB) Consultants, Job Shoppers, and Foreign National Contractors.

Commitments and Expectations Statement. Guests coming to Brookhaven will be required to sign a Commitments and Expectations Statement before they receive a BNL ID card.

<u>Guest Intellectual Property Agreement (Patent Agreement)/User Facility Agreements</u>. See *Before Arrival at Brookhaven*.

<u>Identification</u>: Guests and visitors working at Brookhaven need to have proper identification documentation with them upon check-in at BNL. The current identification requirement can be found on the Brookhaven web page at: http://www.bnl.gov/visitorinfo/visitor_ID.asp. A Brookhaven photo ID card cannot be issued without the appropriate identification.

Guests less than 18 years of age (minors). Individuals who are minors and who have a guest appointment are required to have parent/guardian permission to work in Radiological Areas or Controlled Areas. It is BNL policy that minors are not to be exposed to hazardous situations while involved in BNL activities. Contact your Facility Support Representative to complete the appropriate request form; see Appendix for Facility Support Representatives. User facilities and departments may have additional requirements for minors that are covered in their facility-specific training.

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FACILITY ACCESS POLICY FOR UNTRAINED GUESTS ARRIVING DURING OFF-HOURS

If this is your first visit to BNL and travel arrangements bring you to Brookhaven during off-hours, the officer at the front gate will direct you to either Security or the Housing Office for housing keys. If you have made prior arrangements with your host, you may be directed to a User Facility and assigned an escort. Contact your host or Guest Administrator before you arrive at BNL to make plans for unescorted access to facilities and departments.

The off-hours untrained guest policy states that without training you are **ONLY** allowed unescorted access to BNL's common areas, these include the: Brookhaven Center, Post Office, Research Library, Housing Office, apartment and dormitory area, and the Cafeteria. It is important to recognize that you have not been trained and therefore, cannot work in scientific facilities or Departments without an escort. You **MAY NOT** begin work at BNL until you have received training.

BNL Photo ID Badges

If this is your first visit to BNL, you will be issued a photo ID badge when you check-in. ID badges will be issued for initial appointments and renewal appointments when proper identification has been provided, a Commitments and Expectations Statement has been signed, and a <u>Guest Intellectual Property Agreement</u> (Patent Agreement)/User Facility Agreement has been signed.

You must carry your BNL Photo ID badge with you at all times. It is an important form of identification. You will need it to access BNL's main gate and some of BNL's user facilities. Additional access cards are required for the RHIC, AGS, & NSRL facilities. Access is given when all appropriate training has been completed.

The BNL Photo ID badge issued to you is the property of the U.S. Department of Energy. If you should lose your ID card, report the loss immediately to BNL Police Headquarters 631-344-2238. Upon expiration of your appointment, the date indicated on your card, you must surrender your ID badge to BNL. If you plan to return and extend your Laboratory appointment, you must turn in your expired ID badge in order to receive a new one.

Training

All individuals are required to have BNL and/or site-specific training prior to unescorted access to BNL facilities and laboratories. Departments/facilities will identify authorized escorts if access to a facility is required prior to training. The Department or User Facility Training Coordinator should be contacted with any training questions, see Appendices for contacts.

Access to Brookhaven's Buildings

Common areas at Brookhaven such as the Cafeteria, the Brookhaven Center, Research Library, and the Housing Office are open to everyone. Untrained individuals are **NOT** free to wander through, or work in, any other Brookhaven buildings unescorted. If you are untrained and unescorted, you may enter a Brookhaven building only to proceed to your Guest Administrator's Office to check-in. Some buildings at Brookhaven have Controlled Access for radiation protection purposes. In order to enter these sites you must have appropriate training and access approval. Signs are posted on the doors to these areas. Unauthorized access is a serious infraction and may lead to loss of privileges at BNL.

Procurement at BNL

Procurement of Goods and Services. BNL uses a web-based procurement system. BNL's Procurement and Property Management Division (PPM) supports a web page to assist in how to use the system, click here to learn more https://sbms.bnl.gov/sbmsearch/subjarea/232/232 sa.cfm.

Miscellaneous Items

Auto Licenses. New York honors all valid foreign licenses. By law, New York will honor a valid driver license issued by any other nation to a resident of that nation. You should not apply for a New York State license unless you become a resident of New York.

Computing at BNL. Computer security is taken seriously at BNL. All guests will be required to take an on-line Cyber Security training course. This can be taken prior to coming to Brookhaven at the following site: http://training.bnl.gov/course/CyberSecurity.

English Lessons. English as a Second Language is a free course offered to individuals visiting Brookhaven. Contact ESOL Office at 631-344-4894 http://www.bnl.gov/esol/.

Health Concerns. Long Island is the home of two diseases which individuals visiting Brookhaven should take precautions against. Both of these diseases are spread by common insects, one by ticks and one by mosquitoes.

- <u>Lyme disease</u> is carried by deer ticks. An infected tick can transmit the spirochete to the humans and animals it bites. Be alert for symptoms, which may include a red rash (especially surrounding the tick bite), flu-like symptoms, or joint pains in the first month following any deer tick bite. If diagnosed and treated early with antibiotics, Lyme disease is almost always readily cured. Insect repellents with DEET can reduce the risk of tick bites.
- West Nile Virus is a rare mosquito-borne infection that can cause fever and headaches and in some cases neurological disorders. Mosquitoes are most active at dawn (just before sunrise) and at dusk (just before sunset). Limiting your time outside during those periods will limit your chances of being bitten by a mosquito. Insect repellents with DEET can reduce the risk of mosquito bites.

The Occupational Medicine Clinic is located in Building 490, 631-344-3670, and provides the following services for guests: emergency first aid care and emergency room or urgent physician referral, evaluations of medical concerns or conditions by a registered nurse, assistance in locating physicians and other health care providers for private care, and assistance in assessing medical qualifications for respirator users at BNL.

Property Damage. Individuals should take reasonable precautions, in accordance with the applicable ES&H Standards, to safeguard and protect BNL's equipment. In the event of any loss, destruction of, or damage to any property, the individual shall inform their host of the facts surrounding the occurrence. In the event the occurrence involves non-government-owned property, the owner of such property shall also be notified.

Recycling at BNL. Brookhaven supports a large recycling program that includes paper, Styrofoam, cardboard, lead, soda cans and bottles, laser printer cartridges, and scrap metals. Please note, some batteries are considered hazardous and must be disposed of a hazardous waste. Each Department and User Facility has designated collection areas for such items. Individuals are required to familiarize themselves with their locations and support these efforts. See *Safety Issues at Brookhaven Section* regarding disposal of hazardous wastes.

Traffic Safety. You are required to observe the traffic signs and speed limits posted on the Laboratory site. New York State law requires the use of seat belts at all times by passengers riding in the front seat of a car

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and for passengers under the age of sixteen (16) riding in the rear seat of a car. New York State law also requires hands-free cell phones while driving.

Everyone using bicycles as a mode of transportation around Brookhaven should ride with caution **and must wear a helmet** http://sbms.bnl.gov/sbmsearch/subjarea/128/128 Pro3.cfm.

Transporting Hazardous Materials On-Site

On-Site Transportation of Hazardous Materials must be via laboratory vehicles, **NOT** personal vehicles or rental vehicles. For assistance in on-site transfers, contact your ES&H Coordinator. Names and numbers are in the Appendices.

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SAFETY ISSUES AT BROOKHAVEN

Personnel Safety Requirements and Expectations

Brookhaven's Integrated Safety Management (ISM) system must be used by all BNL employees and guests to establish work planning and control requirements at BNL so that all work is planned and implemented properly, hazards and risks are identified and controlled, resources are scheduled and coordinated, and appropriate feedback mechanisms are in place. "Work" is defined as the activities that involve the design, operation, maintenance, modification, construction, demolition, or decontamination of facilities, systems, or experiments by BNL or non-BNL individuals. The Work Planning and Control for Experiments and Operations Subject Area establishes the requirements at BNL so that all work is properly managed by using a level of planning and control commensurate to the Environment, Safety, and Health (ES&H) hazards, job complexities, and work coordination needs. Contact your ES&H Coordinator or your Work Control Manager for further information; see Appendices.

Individuals who come to Brookhaven are responsible for their own safety as well as the safety of others. This includes acting in a prudent and responsible way when dealing with hazards, seeking help when unsure of proper procedures, reporting unsafe conditions and activities and utilizing BNL's stop-work procedures. Thus, individuals are responsible for the safe conduct of their experiments, and for providing the necessary knowledge and planning for dealing with hazards or potential accidents connected with their experiment. Bypassing any safety system or regulation at Brookhaven is prohibited, is considered a serious infraction or may result in monetary penalties to the facility/department, and may lead to loss of research privileges at Brookhaven.

Individuals should take reasonable precautions, in accordance with the applicable ES&H Standards above, to safeguard and protect BNL's equipment. In the event of any loss, destruction of, or damage to any property, the individual shall inform their host of the facts surrounding the occurrence. In the event the occurrence involves non-government-owned property, the owner of such property shall also be notified.

If you or your collaborators are injured, dial 911, or notify the Occupational Medicine Clinic at 631-344-3670 or 3671.

Hazardous Materials

Hazardous materials are reviewed as part of the experiment safety review. Depending on the type of material used, there may be special safety and emergency procedures required. Materials considered potentially hazardous are: flammable substances, toxic substances, radioactive materials, biological hazards, cryogenic liquids, carcinogenic and suspect carcinogenic materials, and corrosives. US law requires commercial suppliers of hazardous materials to provide Materials Safety Data Sheets (MSDS). MSDS forms should be consulted for potential hazards. BNL also maintains a computerized MSDS database for materials in its inventory.

Usage of Hazardous Materials. There are several support laboratories available around the BNL site for sample preparation or the conduct of other activities that need exhaust hoods and other controls. Further details can be obtained from your Building ES&H Coordinator.

Ship the smallest quantity of material necessary for the experiment to Brookhaven. Use of hazardous materials in small quantities helps to limit the potential of a "worst-case accident" and often simplifies required safety measures and limits the amount of hazardous waste produced. Hazardous gases are a particular concern. Only limited quantities of these gases can be brought into buildings. For some gases, even lecture bottles may be an unacceptable volume. For further guidance, contact your ES&H Coordinator, during the planning stages of shipping material to BNL.

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Storage of Hazardous Materials. Cabinets are available for short-term storage of flammable and corrosive liquids. Laboratory exhaust hoods are not appropriate places to store hazardous materials. <u>Individuals</u> are expected to ship their materials back to their home institution upon completion of their experiment.

BNL Chemical Management System (CMS). All chemicals shipped to BNL will be bar coded and will be maintained in a chemical management inventory. Further information can be found at Chemical Management System, which is an intranet site. Or you may contact the CMS Team Members Ext. 7325, 2862, CMS Manager Ext. 2028; Email: CmsTeam@bnl.gov.

Labeling. DOE requires that all chemical containers be properly labeled. Use of a standard labeling system is required throughout BNL. The labels display a colored diamond divided into four sections and have a space for the name of the material in the container.

Waste Management

Managing Chemical/Radioactive Wastes. Hazardous, industrial, and radioactive wastes must be managed/stored in areas specifically established for the particular type of waste. Contact your ES&H Coordinator and/or ECR to determine which area you should be using. All waste items must be identified, labeled, containerized, and stored according to BNL rules and requirements. Appropriate waste disposal forms must be completed to effect disposal.

Training is required for anyone generating/managing hazardous and/or radioactive wastes at BNL. These courses are available on the web at http://training.bnl.gov/. The courses take approximately 20 minutes to complete. Training is valid for one year. Contact your Training Coordinator for assistance. Training Coordinators are listed in the Appendices.

Medical Waste. All regulated medical waste (RMW) generated at BNL is picked up by a licensed contractor for disposal. BNL's Medical Department administers the contract and the RMW program. Arrangements for disposal of RMW, including RMW contaminated with short-lived isotopes, are made through the Medical Department's Medical Waste Supervisor. Arrangements for disposal of long-lived R-RMW are made through your department's/User Facility's Environmental Compliance Representative (ECR) and the Medical Department's ES&H Coordinator. Failure to comply with requirements in this subject area may be treated as a reportable event.

Hazardous Waste is defined as a by-product of certain processes and activities that can pose a substantial or potential hazard to human health or the environment when improperly managed. Wastes in any form are considered hazardous if they are ignitable, corrosive, reactive, toxic, or if they are included on the U.S. Environmental Protection Agency's list. The definition of hazardous wastes and the characterization of waste materials can be confusing. If you are not sure, ask your ES&H Coordinator and/or ECR.

Hazardous Waste Collection Area. Hazardous wastes that accumulate during an experiment should be stored in a Satellite Accumulation Area (SAA). Contact your ES&H Coordinator to learn the location of your SAA. Hazardous wastes are to be stored near their point of generation in a designated SAA until ready for transfer to a 90-day storage area. Only trained and qualified personnel may bring wastes to a collection area.

Waste Minimization. Implementing work practices that eliminate or reduce the generation of wastes, effluents, and emissions is a priority at Brookhaven. Recycle office waste in designated containers. While conducting experiments or projects, ensure that all hazardous materials are properly labeled and identified. Reuse, recycle, or dispose of all wastes appropriately in accordance with your project, experiment, or work plan. Please make every effort to minimize the quantity of chemicals you ship to BNL and the quantity of waste materials generated. Contact your departmental ECR or the Pollution Prevention (P2) Coordinator at extension 5660 if you need assistance.

Batteries. Alkaline batteries manufactured after 1995 can be disposed of in the normal BNL garbage. The following classes of batteries must be disposed of as hazardous waste: carbon-zinc, mercury, mercury oxide, silver-oxide, lithium, and nickel-cadmium.

Spills

Spills of oils, chemicals, chemical wastes, or releases of wastewater to the environment must be immediately addressed to prevent injury to personnel or releases to the environment. The release of non-permitted chemicals into a sink or floor drain is prohibited. A list of chemicals that may be disposed of via sinks or floor drains is available from your ES&H Coordinator and/or ECR. Report all spills to your ES&H Coordinator immediately to determine the appropriate response. All spills or releases to the outdoors, either by direct discharge, sinks or floor drains, or emitted to the atmosphere must be reported by calling the BNL emergency numbers 911 or extension 2222. For notifications by cellular phones you must call 631-344-2222.

Radiation Safety

When conducting work at BNL, it is important that radiological requirements be properly addressed. BNL regulations are subject to Federal enforcement under the Price Anderson Amendments Act (PAAA). The Laboratory is subject to fines and penalties, and individuals responsible for violations are subject to disciplinary actions. Contact your ES&H Coordinator for information or help.

Radiation Exposure. The approach to radiation protection is to manage and control exposures to the work force and to the general public, to levels as low as reasonably achievable (ALARA), taking into account technical, economic, practical, and public policy considerations. ALARA is a concept and a process that has the objective of attaining, and maintaining, if achieved, doses as far below the applicable limits of Federal Regulations (10CFR835) as reasonably achievable. Individuals shall always adhere to radiological postings and announcements.

Radioactive Material. Radioactive materials or sources used at BNL must be utilized in conformance with BNL's Radiological Control Manual. All such material must be labeled and controlled. Operating procedures and radiation work permits may also be required. Shipment of radioactive material to or from BNL must be done through the Isotope & Special Materials Group. Contact IS&M at 631-344-5233. Once on-site, contact your Department's ES&H Coordinator to ensure proper control.

Radiation Badges. During their Job Training Assessment individuals will be told whether or not they require a dosimetry badge. Details on how to obtain a badge will be provided at that time. Badges will not be issued to individuals who have not completed the necessary training. Some basic badge policies are:

- Wear ONLY the badge assigned to you.
- Wear badges on the outside of clothing between the neck and waist with the color bar facing out.
- Badges should be left on a badge board when leaving a building.
- Badges are exchanged monthly, usually within the first few days of each month.
- Lost or damaged badges must be reported to your ES&H Coordinator.
- Badges must be returned prior to returning to your home institution. If you accidentally take your badge back home with you, mail it back to your Guest Administrator immediately.

Safety Tagging

Red Tags for Lock-Out/Tag-Out. In some circumstances, a source of energy (such as electricity, high pressure, or radiation) must be turned off or disabled to avoid hazard to personnel. BNL has adopted a "Lock-Out/Tag-Out" procedure for these situations. The tags are red, have the words "Danger-Hold," written on them, the name of the person who attached the tag, the date, and the reason. Tagged equipment may not be operated and the tag may not be removed, except by the authorized person who attached it. Penalties for violation are severe and may include removal of your guest status at BNL. Further information about red tags can be obtained from your ES&H Coordinator.

Yellow or White Caution Tags for Equipment Conditions and Requirements. Yellow or white caution tags are not used at all facilities at BNL. They are commonly used to protect equipment and provide information about important conditions, such as vacuum requirements, and are placed where the information is needed. Further information about caution tags can be obtained from your ES&H Coordinator.

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LEAVING BROOKHAVEN

Electronic Transfer of Data

To transfer data into and out of the Laboratory via File Transfer Protocol (FTP), users must utilize the FTP proxy. Directions on how to use the proxy are on the BNL Cyber Security web page at http://www.bnl.gov/cybersecurity/proxy.asp.

To access most systems remotely at BNL, a remote user will need to use the Virtual Private Network (VPN) at BNL. In order to use the VPN, an individual must have a RSA SecurID token. Please click here for more information http://www.bnl.gov/cybersecurity/vpn/.

Experiment Closeout

At the conclusion of the experiment the experimental area shall be left in a condition that is satisfactory to the host Department/Division line management. This includes, but is not limited to, the proper disposition of chemicals and disposal of hazardous materials. It also includes the tear down of the experiment and assuring that all hazards are identified and appropriately controlled. See Off-site Shipments information below for details on shipping your equipment back to your home institution.

Leaving a BNL Department

Checking out of Brookhaven is very important. There is a formal checkout procedure for all individuals working in a department. Chemicals must be reconciled with the Chemical Management System as well as other materials and equipment prior to your departure. You should check out through the office that you check in. Contact your Guest Administrator with any questions you may have. See Appendices for names of Guest Administrators.

Leaving a BNL User Facility

Each User Facility has a formal checkout procedure. You should check out through the GUV Center or User Office that you check in. Prior to leaving Brookhaven, you are responsible for returning any items assigned to you such as: radiation badges, RHIC, NSLS and/or NSRL access cards, library books, keys, experimental equipment and supplies, etc.

Off-Site Shipments

Chemicals. All packages that contain chemicals are reviewed and repackaged at Building 98 for shipping to their final destination. Chemical packages must have a Material Safety Data Sheet (MSDS) attached to them. The MSDS must include a UN number. A UN number is a DOT chemical coding system used for international shipments. If the materials are mixtures, or you are not sure how to identify them, contact your ES&H Coordinator (see Appendices for Coordinator listings). Be sure that every container in the package is sealed and labeled. Place the materials into a box such that they do not break in transit to Building 98. Contents should not be loose, and equipment should be shipped separately from chemicals.

Hazardous & Radioactive Materials. Radioactive material and hazardous waste are packaged and labeled by the Isotopes and Special Materials Group (I&SM) and Hazardous Waste Management Group, respectively. Processing and shipment of radioactive hazardous material is done in accordance with the requirements contained in the Code of Federal Regulations (49CFR) and International Air Transport Association (IATA), Dangerous Goods Regulations (DGR). For shipping off-site radioactive materials that are not waste, a

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"Request to Ship Radioactive Materials Form" must be obtained from the Isotopes & Special Materials Group. Call 631-344-5241 to obtain this form.

Non-Hazardous Materials. Brookhaven's Shipping Section, Building 98, is responsible for the packaging, labeling, routing, and shipment of all material leaving the Laboratory to ensure all transportation guidelines and laws have been followed. A Shipping Memo is required to ship items off-site. See below for details.

Shipping Memos. Contact your Guest Administrator for further details on completing a Shipping Memo. See Appendices for names of Guest Administrators.

Publications

All individuals are obligated to inform their sponsoring BNL office of their publications or Ph.D. theses based on research carried out, in whole or in part, at Brookhaven. These lists are compiled and made available in various publications and reports. The following acknowledgement is to be used when referencing work performed at BNL:

"Research carried out (in part) at (name the BNL facility), Brookhaven National Laboratory, which is supported by the U.S. Department of Energy (Division) under contract #, and any other financial supporters."

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GUEST CHECK LIST

Experiment/proposal approved OR invitation from BNL to collaborate, consult, or perform research work received
Pre-registered and approved via BNL's Guest Information System (GIS)
Notified BNL, host/sponsor and/or Guest Administrator of your expected arrival date
Have identification documents with you upon arrival to Brookhaven (Foreign nationals: passport & Visa. US Citizens: driver's license, government ID card)
Have medical insurance coverage
Bring medical insurance card (not required if coverage is provided through BNL)
Bring visit documents, if any (e.g., housing agreements or invitation letter)
Bring school records and immunization records if children are accompanying you
Complete on-line training, if appropriate
Ship equipment to BNL, if appropriate
Identify and tag equipment being brought to BNL, if appropriate
Open financial (project) account at BNL, if appropriate
Read and understand Guest Intellectual Property Agreement (Patent Agreement)/User Facility Agreement, Commitments and Expectations Statement, and Guest Guide

APPENDIX A: BIOLOGICAL SCIENCES DEPARTMENT

GUEST ADMINISTRATION											
Position	Name	Ext.	Pager	Fax	Bldg.	Room					
Guest Administrator-Department Guests	Kathryn Folkers	3415		6398	463	B204					
DEPARTMENT ADMINISTRATION											
Position	Name	Ext.	Pager	Fax	Bldg.	Room					
Department Chair	David j. Schlyer	3416	631/294-5108	6398	463	B203					
Administrative Assistant to Chair	Kathryn Folkers	3415		6398	463	B204					
ENVIRONMENT, SAFETY AND HEALTH STAFF											
Position	Name	Ext.	Pager	Fax	Bldg.	Room					
ESH Coordinator	Robert Colichio	8440	631/831-4647	8441	490	9-93					
Experimental Safety Review Coordinator	Ann Emrick	5756	631/848-4631	6398	463	B206					
Work Control Manager	Ann Emrick	5756	631/848-4631	6398	463	B206					
Work Control Coordinator/Research Space Manager (Bldg. 463)	Rich Sautkulis	3386	631/278-6972	6398	463	109					
Research Space Manager (Bldg. 490)	Sal Sclafani	5055	631/494-5470	5311	490	8-112A					
Research Space Manager (Bldg. 901, 906)	Davids Alexoff	4221	631/875-8557	5815	555	384					
Training Coordinator	Ann Emrick	5756	631/848-4631	6398	463	B206					
Facility Support Representative	Cheryl Burns	4617	631/236-3265	5311	490	9-426					
Environmental Compliance Representative	Joy Haskins	7898	631/578-4821	5311	490	9-911					
Safety and Health Representative	Nancy Felock	2319	631/295-7665	5311	490	8-112B					

APPENDIX B: <u>CENTER FOR FUNCTIONAL NANOMATERIALS</u>

	GUEST ADMIN	ISTRATION						
Position	Name	Ext.	Pager	Fax	Bldg.	Room		
Guest Administrator-Department Guests	Susan Lattuca	3160		3093	735	2010		
Guest Administrator-User Facility Guests	Grace Webster	3227/6226		7072	735	2L01		
DEPARTMENT ADMINISTRATION								
Position	Name	Ext.	Pager	Fax	Bldg.	Room		
Director	Emilio Mendez	3322		3093	735	2004		
Assistant Director	James H. Dickerson	8812		3093	735	2003		
Administrative Assistant	Donna Storan	2716		3093	735	2005		

ENVI	RONMENT, SAFETY AN	ND HEALTH	STAFF			
Position	Name	Ext.	Pager	Fax	Bldg.	Room
ESH Coordinator	Bob Sabatini	3509	631/294-0778	3093	735	2001
Experimental Safety Review Committee	Bob Sabatini Lorraine Davis Aaron Stein Joy Haskins Frank Zafonte Sean Hannifin and SME's, as needed	3509 4156 3527 7898 5565 4585	631/294-0778 631/275-6201 631/578-4821	3093 3093 4071	735 735 735 490 745 555	2001
Work Control Manager	Bob Sabatini	3509	631/294-0778	3093	735	2001
Building Manager	Arthur Piper	5937		3093	735	1006
Environmental Compliance Representative	Joy Haskins	7898	631/578-4821		490	
Safety and Health Representative	Sean Hannifin	4585			555	
	USER SUPPORT S	ERVICES				
Position	Name	Ext.	Pager	Fax	Bldg.	Room
Facility Support Representative	Frank Zafonte	5565	631/457-3793		745	
Training Coordinator-Staff/Guests	Susan Lattuca	3160		3093	735	2010
Training Coordinator-Users	Grace Webster	3227/6266		7072	735	2L01

APPENDIX C: CHEMISTRY DEPARTMENT

	GUEST ADMII	NISTRATIO	N							
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
Guest Administrator-Department Guests	Linda Sallustio	4303		5815	555A	200				
DEPARTMENT ADMINISTRATION										
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
Department Chair	Alexander L. Harris	4301		5815	555A	200C				
Administrative Assistant to Chair	Linda Sallustio	4303		5815	555A	200				
ENVIRONMENT, SAFETY AND HEALTH STAFF										
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
ESH Coordinators	Diane Cabelli	4361	7608	5815	555A	170				
Experimental Safety Review Committee	Diane Cabelli	4361	7608	5815	555A	170				
ALARA Committee	J. Wishart	4327		5815	555A 901	160				
Work Control Manager	Diane Cabelli	4361	7608	5815	555A	170				
	USER SUPPORT	SERVICES								
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
Facility Support Representative	John Aloi	5212		7091	490					
Training Coordinator	Linda Sallustio	4303		5815	555	200				

APPENDIX D: COLLIDER-ACCELERATOR DEPARTMENT

	GUEST ADMIN	STRATIO	N			
Position	Name	Ext.	Pager	Fax	Bldg.	Room
Guest Administrator-Department Guests	Christine Meyer Lynanne Di Filippo	4619		5954	911B	A-236
Guest Administrator-Russian Ministry	Pamela Manning	4072		5954	911B	A-225
Guest Administrator-User Facilities Guests	Kelly Guiffreda	5654		8686	400E	
	DEPARTMENT ADMIN	ISTRATIO	N	-	·	-
Position	Name	Ext.	Pager	Fax	Bldg.	Room
Department Chair	Thomas Roser	7084		5954	911B	A-235
Administrative Assistant to Chair	Lynanne Di Filippo	4619		5954	911B	A-236
Department Administrator	Stephanie Lamontagne	7141		3674	911A	A-133
<u>EN</u> V	/IRONMENT, SAFETY AN	D HEALT	H STAFF			
Position	Name	Ext.	Pager	Fax	Bldg.	Room
Accelerator Safety Review Committee	Deepak Raparia, Chair	4849		5011	930	215
ALARA Committee	Paul Bergh, Chair	5992	631/453-4536		911A	109
Associate Chair for ESSHQ	Ed Lessard	4250	631/441-6682	5954	911B	A-224
Environmental Compliance Representative	Francis Craner	2905	631/774-6021	5676	911A	A-130
Environmental Coordinator	Bill Needrith	4713		5676	911A	A-129
ESH Coordinators	Asher Etkin	7200	5605	5676	911A	A-120B
ESSHQ Division Head	Ray Karol	5272		5676	911A	136
Experimental Safety Review Committee	Yousef Makdisi, Chair	4932		5954	911B	A-239

Radiation Safety Committee	Dana Beavis, Chair	7124	7249		510D				
TLD & Access Badges	Ann Marie Luhrs	7007		5676	911A	111			
	Angela Melocoton	5322		8686	400E				
Work Control Manager	Peter Cirnigliaro	5636	7250	5676	911A	138			
USER SUPPORT SERVICES									
Position	Name	Ext.	Pager	Fax	Bldg.	Room			
Facility Support Representative	Paul Bergh	5992	631/453-4536		911A	109			
Health Physics Office	On-duty RCT	4660			911A	109			
Main Control Room	Operations Coordinator	4662			911B				
Training Coordinator	John Maraviglia	7343	4210	5676	911A	A-131			
Training Office	Ann Marie Luhrs	7007		5676	911A	A-128			

Training Requirements

If you do not meet the training requirement, then you must be escorted. Individuals less than the age of 18 require permission to enter Radiological Areas. Contact the ESHQ Division Head for further instructions.

All Users of the Collider-Accelerator Department's User facilities must attend a classroom version of C-A Users' Training or requalify each year by taking a challenge exam. Challenge exams can be administered at the RHIC & AGS Users' Center, Building 400E or at the AGS Training Office, Building 911A.

APPENDIX E: COMPUTATIONAL SCIENCE CENTER

	GUEST ADMINI	STRATIO	N							
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
Guest Administrator-Department Guests	Lauri Peragine	7090		5751	463B	255B				
CENTER ADMINISTRATION										
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
Deputy Director	Michael McGuigan	2695		5751	463B	255E				
Interim Director	Robert Harrison	8676		5751	463B	255A				
Administrative Assistant to Interim Director	Lauri Peragine	7090		5751	463B	255B				
ENVIRONMENT, SAFETY AND HEALTH STAFF										
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
ESH Coordinator	Robert Colichio	8440	631/831-4647	8441	490	9-93				
Work Control Manager	Ann Emrick	5756	631/848-4631	6398	463	B-206				
Work Control Coordinator/Research Space Manager	Rich Sautkulis	3386	631-2786972	6398	463	109				
	USER SUPPORT SE	RVICES								
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
Facility Support Representative	Cheryl Burns	4617	631/236-3265	5311	490	9-426				
Training Coordinator	Ann Emrick	5756	631/848-4631	6398	463	B-206				
Environmental Compliance Representative	Joy Haskins	7898	631/578-4821	5311	490	9-911				
Safety and Health Representative	Nancy Felock	2319	631/295-7665	5311	490	8-112B				

APPENDIX F: CONDENSED MATTER PHYSICS & MATERIAL SCIENCE DEPARTMENT

	GUEST ADMINIS	TRATION								
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
Guest Administrator-Department Guests Guest Administrator-Department Guests Delegate	Ali Lopez Arlene Rementer	2590 3827		2739 2739	734 734	178 174				
DEPARTMENT ADMINISTRATION										
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
Department Chair	Peter Johnson	3705		2739	734	177				
Administrative Assistant to Chair	Ali Lopez	2590		2739	510B	2-10				
ENVIRONMENT, SAFETY AND HEALTH STAFF										
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
ES&H Coordinator	Keith Klaus	8466		2739	734	191				
Experimental Safety Review Committee	Keith Klaus	8466		2739	734	191				
Environmental Compliance Representatives	Frank Craner	2905		5815	911					
Work Control Manager	Keith Klaus	8466		2739	734	191				
	USER SUPPORT SER	RVICES		•	•					
Position	Name	Ext.	Pager	Fax	Bldg.	Room				
Facility Support Representative	Nicholas Contos	3205		7065	179B					
Training Coordinator	Kim Mohanty	4402		2918	734	245				
Research Space Manager	Harold Wiesman	7685		4071	480	109				

APPENDIX G: NUCLEAR SCIENCE AND TECHNOLOGY DEPARTMENT
(the Sponsor is the primary contact - additional Department/Directorate contacts are listed below)

· · · · · · · · · · · · · · · · · · ·	E GUEST ADMINIST									
Position	Name	Ext.		Fax	Bldg.	Room				
Guest Administrator-Department Guests	Patricia Lee	7040		3957	817	37				
DEPARTMENT ADMINISTRATION										
Position	Name	Ext.		Fax	Bldg.	Room				
Department Chair	William C. Horak	2627		3957	817	33				
Administrative Assistant to Chair	Patricia Lee	7040		3957	817	37				
ENVIRONMENT, SA	FETY AND HEALTH	STAFF								
Position	Name	Ext.	Cell	Fax	Bldg.	Room				
Environment, Safety, & Health (ESH) SH Coordinator	Patricia Carr	7192	516/319-0534	7065	830	4				
Environment, Safety, & Health (ESH) SH Coordinator	Linda Bowerman	4265	631/484-9387	7065	830	13				
Training Coordinator	Patricia Carr	7192	516/319-0534	7065	830	4				
Alternate Training Coordinator	Jeanne Madaia	7125		7065	830	5				
Environmental Management System (EMS) Representatives	Patricia Carr Linda Bowerman	7192 4265	516/319-0534 631/484-9387	7065 7065	830 830	4 13				
Occupational Safety and Health Assessment Series (OHSAS) Representative	Patricia Carr Linda Bowerman	7192 4265	516/319-0534	7065	830	4				
Experimental Safety Review Coordinator	Linda Bowerman	4265	631/484-9387	7065	830	13				
Alternate Experimental Safety Review Coordinator	Patricia Carr	7192	516/319-0534	7065	830	4				
Work Control Manager	Joseph Carbonaro	5139	631/921-7356	7065	830	2				
Alternate Work Control Manager	Patricia Carr	7192	516/319-0534	7065	830	32				
Facility Support Representative	Cheryl Burns	4617	631/236-3265		490					
Environmental Compliance Representative (ECR)	Joy Haskins	7898	631/578-4821		490	8-12				
Onsite Transportation Safety Coordinator	Linda Bowerman	4265	631/484-9387	7065	830	36				
GARS Occupational Safety & Health Committee Chair	Linda Bowerman Patricia Carr	4265 7192	631/484-9387 516/319-0534	7065 7065	830 830	36 32				

For assistance contacting the above Environment, Safety, & Health Staff or alternates call Ext. 7125.

APPENDIX H: ENVIRONMENT, SAFETY AND HEALTH DIRECTORATE*

DIRECTORATE GUEST ADMINISTRATION									
Position	Name	Ext.		Fax	Bldg.	Room			
Guest Administrator - Department Guests/Contractors	Arlean Vanslyke	4267		5845	120	1-33			
Guest Administrator - Facility Support Contractors	Beth M. Lettieri	8035		7091	120	2-10			
Guest Administrator - Environmental Protection Contractors	Susan C. Young	2828		7776	051	46			
DEPARTMI	ENT ADMINISTRATIO	N							
Position	Name	Ext.		Fax	Bldg.	Room			
Assistant Laboratory Director (ALD)	Gail G. Mattson	2482	865/719-9127	7618	120	1-25			
Administrative Assistant to ALD	Sarah Mahler	4207		7618	120	1-23			
ENVIRONMENT, S	SAFETY AND HEALT	H STAI	FF.						
Position	Name	Ext.		Fax	Bldg.	Room			
Environment, Safety & Health (ESH) Coordinator	Mary M. Chuc	2711	631/258-1379	7065	179B	34			
Environmental Compliance Representative (ECR)	Kathy L. Schwager	8471	631/599-8349	7334	860	130			
Environmental Management System (EMS) Rep	Kathy L. Schwager	8471	631/599-8349	7334	860	130			
Facility Support Representative	John P. Young	8427	516/852-1052	5812	860	145			
Occupational Safety & Health Assess. Series (OHSAS) Rep	Kathy L. Schwager	8471	631/599-8349	7334	860	130			
QA Representative	Roy H. Lebel	6392	631/433-0833	7981	902C	M15			
Safety & Health Representative	Mary M. Chuc	2711	631/258-1379	7065	120	1-58			
Training Coordinator	Sarah Mahler	4207		7618	120	1-23			
Work Control Manager	Michael F. Clancy Jr.	7651	516/924-4302	3223	860	104			

*Divisions:

Environmental Protection Safety & Health Services Radiological Control

APPENDIX I: BIOLOGICAL, ENVIRONMENTAL & CLIMATE SCIENCES DEPARTMENT (the Sponsor is the primary contact - additional Department/Directorate contacts are listed below)

GUEST ADMINISTRATION										
Position	Name	Ext.		Fax	Bldg.	Room				
Guest Administrator-Department Guests	Nancy Barci Sharon Zuhoski	7548 3359		2887	815E	M-3 1-33				
DEPARTMEN	DEPARTMENT ADMINISTRATION									
Position	Name	Ext.		Fax	Bldg.	Room				
Department Chair	Martin Schoonen	7511		2887	815E	M-2				
Administrative Assistant to Chair	Nancy Barci	7548		2887	815E	M-3				
ENVIRONMENT, SA	FETY AND HEAL	TH STA	.FF							
Position	Name	Ext.	Cell	Fax	Bldg.	Room				
Environment, Safety, & Health (ESH) Coordinator	Robert Colichio	8440	631/831-4647	8441	490	9-93				
· · · · · · · · · · · · · · · · · · ·	Ann Emrick	5756	631/848-4631	6398	463	B206				
Training Coordinator	Ann Emrick	5756	631/848-4631	6398	463	B206				
Environmental Management System (EMS) Representative	Ann Emrick	5756	631/848-4631	6398	463	B206				
Occupational Safety and Health Assessment Series (OHSAS) Representative	Ann Emrick	5756	631/848-4631	6398	463	B206				
Experimental Safety Review Coordinator	Ann Emrick	5756	631/848-4631	6398	463	B206				
Alternate Experimental Safety Review Coordinator	Robert Colichio	8440	631/831-4647	8441	490	9-93				
Work Control Manager	Ann Emrick	5756	631/848-4631	6398	463	B206				
Alternate Work Control Manager	Robert Colichio	8440	631/831-4647	8441	490	9-93				
Facility Support Representative	Cheryl Burns	4617	631/236-3265	5311	490	9-426				
Environmental Compliance Representative (ECR)	Joy Haskins	7898	631/578-4821		490	9-911				
Safety & Health Representative	Nancy Felock	2319	631/295-7665	5311	490	8-112B				
Onsite Transportation Safety Coordinator	Robert Colichio	8440	631/831-4647	8441	490	9-93				

APPENDIX J: <u>INSTRUMENTATION DIVISION</u>

	GUEST ADMINIS	TRATION							
Position	Name	Ext.	Pager	Fax	Bldg.	Room			
Guest Administrator-Department Guests	Barbara Gaer	4231		5773	535B	A131			
Guest Administrator-User Facilities Guests	Barbara Gaer	4231		5773	535B	A131			
DIVISION ADMINISTRATION									
Position	Name	Ext.	Pager	Fax	Bldg.	Room			
Division Head	Graham Smith	4253		7586	535B	A133			
Administrative Assistant to Division Head	Barbara Gaer	4231		5773	535B	A131			
ENVIRONMENT, SAFETY AND HEALTH STAFF									
Position	Name	Ext.	Pager	Fax	Bldg.	Room			
ESH Coordinator/Safety & Health Rep.	Robert DiNardo	4204		5773	535B	B138			
ESH Coordinator Alternate	TBD								
Experimental Safety Review Coordinator	Robert DiNardo	4204		5773	535B	B138			
Work Control Manager	Robert DiNardo	4204		5773	535B	B138			
Work Control Coordinator/Research Space Mgr.	John McGowan	5025		6340	535B	M24			
Facility Support Representative	Frank Zafonte	5565			745				
		4004		5773	535B	B138			
Training Coordinator	Robert DiNardo	4204		5//3	333D	D130			

APPENDIX K: PHOTON SCIENCES DIRECTORATE

GUEST ADMINISTRATION								
Position	Name	Ext.	Pager	Fax	Bldg.	Room		
Guest Administrator-Department Guests	Betsy Hanson [I-R]	4746		4296	817	25		
Guest Administrator-Department Guests	Barbara Moebes (A-H)	7159		4296	817	51		
Guest Administrator-Department Guests	Tammy Stein (S-Z)	5753		4296	817	42		
Guest Administrator-Department Guests	Laura Miller [Back Up]	2297		4296	817	37		
Guest Administrator-NSLS Facility	Betsy Hanson	4746		4296	817	25		
Guest Administrator-User Facilities	Gretchen Cisco	4703		4745	743	2-100		
DEPARTMENT ADMINISTRATION								
Position	Name	Ext.	Pager	Fax	Bldg.	Room		
Associate Laboratory Director	Steven Dierker	4966		5059	745	129		
Deputy for Construction	Erik Johnson	4603		5059	745	125		
Deputy for Programs	Erik Johnson	4603		5059	745	125		
Deputy for Science	Que Shen	3465		5059	745	123		
Photon Division Director	Paul Zschack	8703			743	132		
Administrative Assistant to ALD Project Director	Laura Miller	2297		4296	817	37		
Business Division Director/ Chief Operating Officer	Diane Hatton	5073		4296	817	41		
Business Division Deputy Director	Sue Perino	2483		5059	745	121		

ENVIRONMENT, SAFETY AND HEALTH STAFF							
Position	Name	Ext.	Pager/Cell	Fax	Bldg.	Room	
Environment, Safety, & Health (ESH) Manager	Bob Lee	7936	631/872-8790	7334	745	135	
ESH Operations Manager	Andrew Ackerman	5431	8244	5059	745	137	
ESH Coordinator	Lori Stiegler	5366	631/466/2016		745		
Safety Officer	Bob Chmiel	8141	8243	5059	745	151	
Environmental Compliance Representative	Debbie Bauer	5664	631/278-7189	5059	745	163A	
Industrial Hygiene	Chris Weilandics	2593	631/484-9394	5059	745	163B	
Facility Support Representative	Frank Zafonte Steve Townsend	5565 5142	631/457-3793	4745	745	1-178	
Radiological Control Technicians	Floyd Flanigan	8207	631/831-8038	4745	725A	1-174	
Experimental Safety Review Coordinators	Lori Stiegler Brian Heneveld	5366 6399	631/466-2016 631/466-1076	3238 4745	745 745		
Safety Engineers	Tom McDonald Gabrielle Stuve	4483 7328	631/828-9003		745 745		
Health Physics	Scott Walker	5747			745		
Radiation Physics	P.K. Job	4416		5059	745		
Construction Safety	Sirkantha Chilakala	3632	407/587-6567		120		

USER SUPPORT STAFF							
Position	Name	Ext.	Pager	Fax	Bldg.	Room	
Training Coordinator	Bruce Lein	2188	631/655-7756	7630	120		
Research Space Manager	Tony Mendez	7637	631/295-7182		743	137	
Work Control Manager	Al Boerner	5990	631/457-2992		741		
Research Space Manager	Bob Kiss	3476	631/457-3078	4745	725A	1-179	
Main Control Room - NSLS	Operations Coordinator	2550	631/344-5824	8409	725A	1-181	
Main Control Room – SDL	SDL Staff	5350	646 Bldg. Pgr		729		
User Machine Shop	Dennis Carlson	4926	631/344-0718	3238	725D	1-124	

All Users coming to do research at the NSLS or SDL through the Photon Sciences Users' Office (x8737) must complete facility specific and radiological training, and be issued an encoded BNL ID badge prior to unescorted access to the experimental floors. (TLD for SDL is required; TLD for NSLS depends on length of stay and nature of research). All Users must complete required training prior to accessing the experimental floor. Beam Line Operations and Safety Awareness training is administered separately by each beamline group. Additional training requirements apply if the user plans to spend in excess of 60 days per year at the facility.

Personnel arriving at night or weekends may contact the NSLS Control Room for training (x2550). All users who are visiting the NSLS for the first time or whose appointments have expired: must check in at the Guest, User, Visitor Center in building 400E during normal work hours or contact the Photon Sciences Users' Office (X8737).

All non-BNL personnel having staff appointments to the NSLS or SDL as collaborators, etc. must contact the Photon Science's Guest Administrator (x2145) upon arrival. They must schedule and fulfill all departmental orientation and training requirements.

For personnel lacking training, visits for tours or consultation to the NSLS and SDL Controlled Areas are permitted, providing the visitor will not be in a controlled area for more than three days in a year and no more than a total of eight hours on each day, but absolutely no experimental work will be allowed. These individuals must be escorted by a properly trained and qualified escort. Reading and signing the Visitor/Escort form is a prerequisite to entry. Prior to entry, persons under 18 must, in addition, make arrangements with Corinne Messana (x7398)

APPENDIX L: NONPROLIFERATION & NATIONAL SECURITY DEPARTMENT (the Sponsor is the primary contact - additional Department/Directorate contacts are listed below)

DIRECTORATE GUEST ADMINISTRATION								
Position	Name	Ext.		Fax	Bldg.	Room		
Guest Administrator-Department Guests	Donna Muscarella	2826		8272	197C	1-2		
DEPARTMENT ADMINISTRATION								
Position	Name	Ext.		Fax	Bldg.	Room		
Department Chair	Carol Kessler	8964		8272	197C	1-1		
Administrative Assistant to Chair	Donna Muscarella	2826		8272	197C	1-2		
ENVIRONM	ENT, SAFETY AND	HEALTH	STAFF	_	<u>-</u>			
Position	Name	Ext.	Cell	Fax	Bldg.	Room		
Environment, Safety, & Health (ESH) Coordinator	Patricia Carr	7192	516/319-0534	7065	830	4		
Training Coordinator	Patricia Carr	7192	516/319-0534	7065	830	4		
Alternate Training Coordinator	Jeanne Madaia	7125		7065	830	5		
Environmental Management System (EMS) Representatives	Patricia Carr Linda Bowerman	7192 4265	516/319-0534 631/484-9387	7065 7065	830	4 13		
Occupational Safety and Health Assessment Series (OHSAS) Representative	Patricia Carr Linda Bowerman	7192 4265	516/319-0534 631/484-9387	7065 7065	830 830	4 13		
Experimental Safety Review Coordinator	Linda Bowerman	4265	631/484-9387	7065	830	13		
Alternate Experimental Safety Review Coordinator	Patricia Carr	7192	516/319-0534	7065	830	4		
Work Control Manager	Joseph Carbonaro	6139	631-921-7356	7065	830	2		
Alternate Work Control Manager	Patricia Carr	7192	516/319-0534	7065	830	4		
Facility Support Representative	Cheryl Burns	4617	631/236-3265	3407	490	9-426		
Environmental Compliance Representative (ECR)	Joy Haskins	7898	631/578-4821		490	8-12		
Onsite Transportation Safety Coordinator	Linda Bowerman	4265	631/484-9387	7065	830	13		
GARS Occupational Safety & Health Committee Chair	Linda Bowerman Patricia Carr	4265 7192	631/484-9387 516/319-0534	7065 7065	830 830	13 4		

For assistance contacting the above Environment, Safety, & Health Staff or alternates call Ext. 7125.

APPENDIX M: PHYSICS DEPARTMENT

GUEST ADMINISTRATION								
Position	Name	Ext.	Pager	Fax	Bldg.	Room		
Guest Administrator-Department Guests	Fran Capasso (Scientific & Non-Scientific	4901		7142	510A	1-42		
	Guests) Dorothy Davis (Back-up)	2585		7190	510A	1-60		
Guest Administrator-User Facilities Guests	Kelly Guiffreda	5654		5156	400E			
DEPARTMENT ADMINISTRATION								
Position	Name	Ext.	Pager	Fax	Bldg.	Room		
Department Chair	Laurence Littenberg	3811		7142	510A	1-44		
Administrative Assistant to Chair	Leesa Allen	2700		7142	510A	1-44		
ENVIRONMENT, SAFETY AND HEALTH STAFF								
Position	Name	Ext.	Pager	Fax	Bldg.	Room		
ES&H Coordinators	Mike Zarcone Ron Gill	5890 3987	8502 5607	7190 1334	510A 510D	1-200 1-201		
Experimental Safety Review Committee	Ron Gill	3987	5607	1334	510D	1-201		
ES&H Committee	Brant Johnson	4552		2918	510A	2-186		
Work Control Manager	Susan Duffin	3492		7190	510A	1-113		
USER SUPPORT SERVICES								
Position	Name	Ext.	Pager	Fax	Bldg.	Room		
Facility Support Representative	Joe Vignola	3846	6160	7190	510B	1-134		
Training Coordinators	Michael Zarcone Melanie Echmalian	5890 2585	8502	7190 7190	510A 510A	1-200 1-199		