Index

BMRR described, 1-3, 1-5
BMRR dose calculations, 8-15
BMRR emissions monitoring, $4-1-2$
BNL and ISO 14001, 2-2
BNL facilities (map), 1-6
BNL outfalls (map), 5-10
boiler emissions, 3-8
boiler statistics, $4-9-10$
bottles recycling (table), 2-15
bremsstrahlung radiation, 8-14
Breuer, Marcel, 6-29
Brookhaven Graphite Research Reactor, 1-3, 1-5,
8-10
Brookhaven Linac Isotope Producer, 1-3, 4-3 – 4,
8-14
Brookhaven Medical Research Reactor, 1-3, 1-5,
4-1 – 2, 8-15
Brookhaven Science Associates, 1-1, 2-25 – 26
bromodichloromethane discharged (table), 3-15
BSA, 1-1, 2-25 – 26
CAA, 3-6 – 10
CAC, 7-2
Canada goose sampling, 6-17
cans (drink) recycling (table), 2-15
CAP88-PC dose modeling software, 8-8 – 9
carbon tetrachloride, 7-11
cardboard recycling (table), 2-15
CBS facilities, 3-29
CEGPA, 7-2
Center for Imaging and Neuroscience, 1-3
Central Chilled Water Plant, 1-2
Central Steam Facility, 1-2, 4-8 – 9
CERCLA process, 2-17
chain of custody of samples, 9-3
Chemical Bulk Storage facility, 3-29
chemical spills summary (table), 3-24 – 27
chloroform discharged (table), 3-15
chronic toxicity testing, 3-12, 6-25 – 26
Clean Air Act, 3-6, 3-8 – 10
Clean Water Act, 3-10 – 16
climate described, 1-8 – 10
COC of samples, 9-3
1 ,
communication mechanisms, 7-2 Community Advisory Council, 7-2
Community College of Rhode Island, 6-27 – 28



INDEX

community involvement, 2-20 – 22, 7-2	emissions permits, 3-2
compliance monitoring, 2-20	Endangered Species Act, 3-31 – 32
compliance status, Chapter 3	energy management, 2-10, 2-16
consent orders (none issued), 3-34	energy performance (chart), 2-16
	enforcement actions, 3-34; table, 3-33
conservation, 2-10	
construction debris recycling (table), 2-15	environmental awards, 2-1
contract lab qualifications, 9-5 – 6	Environmental Management System, Chapter 2
converting units (Appendix C), C-1	Environmental Restoration Program, 2-17, 7-10 – 11
copper discharged, 3-12 (chart), 3-15 (table)	Environmental Surveillance Program, 7-8 – 11
Cosmotron, 1-6	EPA Environmental Quality Award, 2-1
CRMP, 6-29 – 30	EPA Performance Track Program, 2-17
cross-connection control, 3-17	EPCRA, 3-22 – 23
Cs-137, B-5	ESA, 3-31 – 32
Cs-137 in STP effluent, 5-6 – 7	ESSH Policy, 1-1, 2-2 – 5
CSF fuel use and emissions (table), 4-9	Evaporator Facility, 4-4
CSF nonitored for nonradiological emissions, 4-8 – 9	Executive Summary, v
CSF, 1-2	external audits, 2-2, 2-25, 3-32 – 33
cultural resource activities, 6-29 – 30	facilities described, 1-2, 1-5
cumulative dose calculation, 8-16	facilities map, 1-6
CWA, 3-10 – 16	facility area monitoring, 4-5, 8-4 – 7
Cyclotron, 1-5	field samples, 9-2, 9-4
data tracking and management, 9-5	Fire Station described, 1-2
DCE discharged (table), 3-16	Fish & Wildlife Service, 6-7 – 9
DDT in fish, 6-21; table, 6-24	fish at BNL, 1-11, 6-5
deer meat ingestion (dose from), 8-9 – 10, 8-15	fish sampling, 6-17 – 21
deer, 6-6 – 7, 6-28	fluorescent bulbs recycling (table), 2-15
defoliation, 6-8 – 9	fuel use statistics, 2-10, 4-9
diffuse sources, 8-10	fugitive sources, 8-10
direct radiation monitoring, 8-1 – 7	FWS, 6-7 – 9
Discover Award, 1-2	gamma emissions (none), 5-6 – 7
DOE awards, 2-1	geology of BNL site, 1-8
dose from	glossary, Appendix A
diffuse sources, 8-10	gross activity limits for drinking water, 5-3 – 5
fugitive sources, 8-10	gross alpha and beta (airborne), 4-7
ingestion, 8-15	groundwater flow map, 1-9
nonpoint sources, 8-10	groundwater monitoring wells (map), 7-5
area sources, 8-10 dose modeling, 8-7 – 9	groundwater monitoring, 7-3 – 8
G,	groundwater protection measures, Chapter 7
dose summary (Table 8-5), 8-16	groundwater remediation systems (map), 7-12
dose to aquatic and terrestrial biota, 8-15 – 16	Groundwater Status Report, Volume II (on CD)
eastern hognose snake, 6-4	groundwater status summary, Chapter 7
eastern tiger salamander, 6-3 – 4	groundwater treatment systems, 7-11 – 14
EDE defined, 8-9	gypsy moth, 6-8
effective dose equivalent defined, 8-9	habitat protection, 6-3 – 6
emergency planning, 3-22 – 23	half-life periods (Appendix C), C-1
emissions monitoring	halon, 3-9
nonpoint sources, 4-5	hazardous air pollutants, 3-9 – 10
nonradiological, 4-8 – 10	hazardous waste amounts (graphs), 2-8 – 9
NO_{x} , 4-9 – 10	Hazardous Waste Mgmt. Facility (former), 8-12
radiological, 4-1 – 8	hazardous waste self-assessment, 3-34
emissions (radioactive), 3-10	HDA discharged (table), 3-16

Heavy Ion Transfer Line, 1-5	recycling (table), 2-15
HFBR decommissioned, 1-3	mission (BNL's), 1-1
HFBR described, 1-5	mixed paper recycling (table), 2-15
HFBR emissions monitoring, 4-3	mixed waste amounts (graphs), 2-8 – 9
High Flux Beam Reactor, 1-3, 1-5, 4-3	MPF, 1-3, 3-23 – 24, 3-28
historical research, 6-29 – 30	National Environmental Policy Act, 3-3, 3-6
history of BNL, $1-1-7$	National Historic Preservation Act, 3-6, 6-29 – 30
HITL described, 1-5	National Priorities List, 7-2
hognose snake, 6-9, 6-28	National Register, 6-30
HTO, 4-7 – 8	natural gas use, 4-9
HWMF (former) soil removal, 8-12	natural resources described, 1-10, Chapter 6
hydraulic oil substitution (table), 2-12	NEPA, 3-3, 3-6, 6-7
hydrology of BNL site, 1-7 – 8	NESHAPs compliance, 3-9 – 10, 8-7, 8-12 – 14
improvements (environmental), 2-25 – 26	neuroscience, 1-3
independent assessments, 2-25	NHPA, 3-6, 6-29 – 30
Interagency Agreement, 7-2	nickel discharged from STP (chart), 3-14
ionizing radiation, B-2 – 3	No. 2, No. 6 fuel oil use, 4-9
iron discharged from STP (chart), 3-13	Nobel Prizes, 1-2
iron excursions, 5-8	nonpoint radiological sources, 4-5, 8-10
ISO 14001 Standard, 2-1 – 6	nonradiological emissions, 4-8 – 10
Keyspan output, 4-9	North Carolina State University, 6-28
kilowatt statistics, 2-10	NOVs, 3-32; table, 3-33
Lab Science Teacher Prof. Dev., 6-28	No _x emissions, $4-9-10$
laws pertaining to BNL (table), 3-3 – 4; Appendix D	NPL (National Priorities List), 7-2
lead discharged (table), 3-15	NRMP, Chapter 6
lead discharged from STP (chart), 3-13	NSLS, 1-5, 8-14
lead recycling (table), 2-15	oak moth, 6-8
Liblit award, 2-1	ODS, 2-19, 3-9
Linac described, 1-5	oil and grease discharged (table), 3-15
liquid effluent self-assessment, 3-33 – 34	oil spills summary (table), 3-24 – 27
local population, economy, 1-7	opacity levels, 4-9 – 10
Longwood High School, 6-8	oral history, 6-30
Los Angeles Mission College, 6-28	orange-striped oak moth, 6-8
LSTPD, 6-28	organic solvents reuse, substitution (table), 2-11
MACT, 3-9	OU III, 7-11 – 13
Major Petroleum Facility inspection, 3-23 – 24, 3-28	OU IV, 7-13 – 14
Major Petroleum Facility, 1-3	OUs (history), 2-17; table, 2-18
matrix spike and duplicates, 9-5	ozone-depleting substances, 2-19, 3-9
Max. Available Control Technology, 3-9	P2 Program, 2-7 – 10; table, 2-11 – 14
maximally exposed individual defined, 8-9	particulates, 4-5 – 10
medical research, 1-3, 1-5	PCBs, 3-30
MEI defined, 8-9	PCBs in fish, 6-21
mercury discharged from STP (chart), 3-13	Peconic River surveillance, 5-16 – 25
mercury in fish, 6-19 – 23	performance evaluations (contract labs), 9-7 – 9
mercury substitution (table), 2-11	Performance Track Program, 2-17
metals	permits (environmental), 3-2; table, 3-7 – 8
discharged from STP (charts), 3-12 – 14	pesticides, 3-30
in aquatic biota, 6-21, 6-25; table, 6-2	in aquatic samples, 6-25; table, 6-27
in fish, 6-21; table, 6-22 – 23	in fish, 6-21; table, 6-24
in STP effluent, 5-9	petroleum products detected, 7-9
in surface waters, 5-22 – 4	Pine Barrens Research Forum, 6-28



INDEX

plant species at BNL, 1-10	Safe Drinking Water Act, 3-16 – 22
plumes (maps), 7-6, 7-7	sample analysis, 9-5
plutonium-239, 8-10	sample collection and handling, 9-2
pollution prevention and minimization, $2-7-10$	sample preservation and shipment, $9-3-4$
pollution prevention projects, 2-11 – 14	sampling program (table), 2-23
potable supply wells quality data (table), 7-9	sanitary system effluents, 5-2 – 8
potable water use (schematic), 5-11	SARA, 3-22 – 23
potable water wells, monitoring, 7-4 – 8	savings due to conservation, 2-10
potable water, 3-16; (tables) 3-17 – 21	scientific notation, B-1
potable wells' radiological results (table), 7-8	SDL (former), 8-13 – 14
potassium permanganate, 7-11	SDWA, 3-16 – 22
precipitation - 56 years (graphs), 1-11	self-assessment, 2-24 – 25, 3-33 – 34
precipitation monitoring, 6-26	Sewage Treatment Plant, 1-3
prescribed fire, 6-29	Sewage Treatment Plant inspection, 3-32
printer/toner cartridges recycling (table), 2-15	Sewage Treatment Plant schematic, 5-2
process-specific wastewater, 5-8 – 10	silt zone source area, 7-11
proficiency evaluations (contract labs), 9-7 – 9	silver discharged from STP (chart), 3-14
public affairs group, 7-2	small mammal sampling, 6-17
QA (Quality Assurance) program, Chapter 9	smoke detectors recycling (table), 2-15
QC (Quality Control) measures, Chapter 9	snake magnets, 8-11
R-11/R-12/R-22, 3-9	soil sampling, 6-25
radiation concepts, B-1	Source Development Lab (former), 8-13 – 14
Radiation Therapy Facility, 1-5	source reduction (table), 2-11, 2-12
radio telemetry, 6-28	species at BNL, 1-10 – 12, 6-4 – 5
radioactive emissions, 3-10	spill prevention, 3-22
	spotted turtle, 6-28
radioactive source reduction (table), 2-11, 2-12	
radioactive waste amounts (graphs), 2-8 – 9	squirrel sampling, 6-17
radioactivity (concepts of), Appendix B	Sr-90 in deer bone, 6-17
radiological analyses (Appendix B), B-3	Sr-90 remediation, 8-11 – 12
radiological data methodologies, Appendix C	Sr-90 source areas, 7-11
radiological dose assessment, Chapter 8	Sr-90, B-5
radiological emissions, 4-1 – 5	STEM described, 1-5
radionuclide plumes (map), 7-7	storage regulations, 3-29
rainfall monitoring, 6-26	stormwater 3-12, 5-16
RCRA, 3-29 – 30	STP, 1-3
real-time monitoring (sanitary waste), 5-3	STP effluent statistics, 5-3 – 8
recharge basins, 3-12, 5-10 – 16	STP inspection, 3-32
recycling details (table), 2-15 regulations pertaining to BNL (table), 3-3 – 6,	STP schematic, 5-2
	Suffolk Co. Article 12, 3-29 Superfund AmendmentsAct, 3-22 – 23
Appendix D	,
Relativistic Heavy Ion Collider, 1-5	Superfund cleanup at BNL, 2-17 – 19
reporting spills (etc.), 3-22 – 30	surface water monitoring, 5-1
reptiles on site, 1-11	surveillance monitoring, 2-24
residual tritium, 7-9 Resource Conservation and Resource: Act. 2.20, 20	Tandem Van de Graaff described, 1-5, 1-7
Resource Conservation and Recovery Act, 3-29 – 30	tanks database, 3-29
RESRAD-BIOTA software, 8-14 – 15	Target Processing Lab, 4-4
restoration monitoring, 2-22 – 24	TCE discharged (table), 3-16
RHIC described, 1-5	temperature trend – 56 years (graphs), 1-12
river permits, 3-31	terminology (glossary), Appendix A
road base recycling (table), 2-15	threatened species on site, 1-10 – 11
RTF described, 1-5	tires recycling (table), 2-15

TLDs off site (map), 8-3	vegetation sampling, 6-25
TLDs on site (map), 8-2	VOC plumes (map), 7-6
tolytriazole discharged (table), 3-16	VOCs removal, 7-14; figure, 7-12
tritiated water, 4-7 – 8	VUV injection line, 8-14
tritium (airborne), 4-7 – 8	W.J. Weeks house, $6-29-30$
tritium, B-5	waste characterization activities, 8-12
tritium	Waste Concentration Facility, 1-3, 4-4
airborne, 4-8	waste generation (graphs), 2-8 – 9
at the AGS, 8-11	Waste Management Facility, 1-3, 2-7, 8-12 – 13
Exit signs recycling (table), 2-15	waste management summary, 2-6 – 7
in water at STP, $5-4-6$	wastewater discharges (tables), 3-11, 3-15 – 16
monitoring, $4-7-8$	wastewater sampling, 5-3
released from HFBR, 5-5	water conservation, 2-10; table, $2-11-13$
released to Peconic River, 5-6	water consumption trend (chart), 2-15
slug migrating, $7-10-11$	water quality data, Chapter 5
totals from STP, 5-6	for surface water, $5-20-25$
turkey sampling, 6-17	water supply wells, monitoring, $7-4-8$
UIC, 3-3, 3-17 – 22	WCF remediation, 1-3, 4-4, 8-12, 8-13
underground injection control, 3-3, 3-17 – 22	Weeks Campbell site, 6-29 – 30
units of measure, C-1	wetlands permits, 3-31
University of Hull (UK), 6-28	White House award, 2-1
University of Massachusetts, 6-28	whitetailed deer, $6-6-7$, $6-28$
uranium-238, 8-10	wild turkey, 6-6
Urbahn Architects (Berkner Hall), 6-29	wildland fire suppression, 6-28 – 29
used motor oil recycling (table), 2-15	wildlife programs, 6-27 – 29
USTs, 3-29	winds at BNL (wind rose figure), 1-10
vadose zone, 7-9	WMF, 1-3
validating, verifying analytical results, $9-5-6$	WW I earthworks, 6-29
vanadium discharged (table), 3-15	WW II barracks, 6-29
vegetation (map), $6-1-2$	zinc discharged from STP (chart), 3-14

