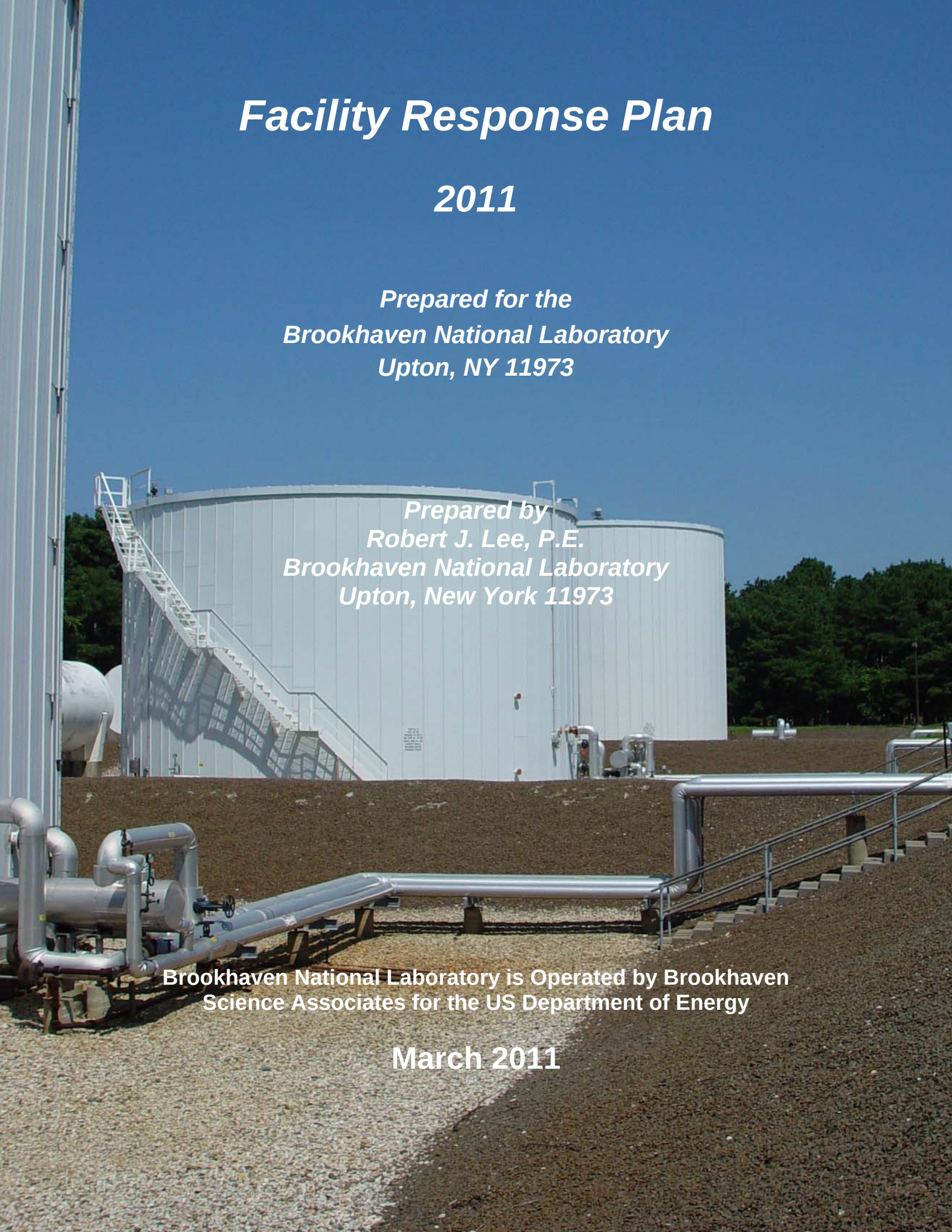

Facility Response Plan

2011

Prepared for the
Brookhaven National Laboratory
Upton, NY 11973

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Brookhaven National Laboratory is Operated by Brookhaven Science Associates for the US Department of Energy

March 2011

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Preface

The *Facility Response Plan (FRP) for Brookhaven National Laboratory* (BNL) was prepared in accordance with the requirements mandated by the Oil Pollution Act of 1990. It provides information necessary to respond to oil spills, especially worst case releases, and is designed to supplement the *Brookhaven National Laboratory Spill Prevention, Control, and Countermeasures (SPCC) Plan*. Much of the material contained in this plan was derived from existing BNL documents, with additional information and material obtained from federal, state, and local agencies.

The FRP is specifically designed for use when responding to significant releases of petroleum (i.e., > 100 gallons). Smaller spills are managed in accordance with the BNL subject area, Spill Response. This subject area may be viewed at: https://sbms.bnl.gov/sbmsearch/subjarea/26/26_SA.cfm?parentID=26. Spill reports are prepared for all releases in accordance with this subject area. All reportable releases (i.e., those that impact the environment or are greater than five gallons) are summarized in the *BNL Site Environmental Report.*

The plan is periodically reviewed and updated to ensure that the facility description, response capabilities, and release scenarios are representative of facility activities. The plan is also updated to reflect changes in regulations or upon notification by regulatory authorities that the plan is not consistent with regulatory requirements. At a minimum these reviews will be conducted yearly.

The 2011 Update includes a detailed 5-year review of the entire plan and addresses any new or different operating conditions or information contained in the plan.

1.0 Response Plan Cover Sheet and Applicability Determination

RESPONSE PLAN COVER SHEET		
Facility Name: **Brookhaven National Laboratory-Major Petroleum Facility**		
Location (Street Address): **Building 610 - 95 Temple Place**		
City: **Upton**	State: **NY**	Zip: **11973**
County: **Suffolk**		Phone Number: **(631) 344-4028**
Latitude: **N 40 Degrees**	**52 Minutes**	**03 Seconds**
Longitude: **W 72 Degrees**	**52 Minutes**	**17 Seconds**
Owner: **U.S. Department of Energy**		
Owner Address: (if different from Facility Address): **53 Bell Avenue, Upton, NY 11973**		
Operator (if not Owner): **Brookhaven Science Associates LLC.** **Building 460** **40 Brookhaven Avenue, Upton, NY 11973**		
Standard Industrial Classification (SIC) Code: **7391**		
Largest In-service Oil Storage Tank Capacity: **600,012**		
Maximum Oil Storage Capacity (Gallons): **2.3 million**		
Worst Case Oil Discharge Amount (Gallons): **600,012**		
Facility Distance to Navigable Water: **>1.25 mile**		
Number of Oil Storage Tanks: Building 610/611: **6 aboveground (2.3 million gallons)** Buildings 423 & 651: **3 underground, 3 aboveground (36,000 gallons)** Building 630: **4 underground (24,550 gallons)** Miscellaneous Heating Oil Tanks: **11 (14,020 gallons)** Miscellaneous Standby Emergency Power Tanks: **28 (16,535 gallons)** Electrical Transformers: **279 units (150,000 gallons)**		

APPLICABILITY OF SUBSTANTIAL HARM CRITERIA
Does the facility transfer oil over-water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons? **NO**
Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and within any storage area; does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation? **NO**
Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? **YES**
Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility would shut down a public drinking water intake? **NO**
Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years? **NO**

CERTIFICATION
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete.
Signature: ***[Signature on File]***
Name (Please type or print): Edward T. Murphy
Title: Manager – Energy & Utilities
Date: 3/31/11

1.2 Facility Information

The facility information form, Figure 1-1, is designed to provide a brief description of the site and of past activities, as well as general facility information.

BNL encompasses approximately 5,300 acres located near the geographic center of Suffolk County, Long Island, New York. The headwaters and tributaries of the Peconic River are located within the site boundaries, approximately 1.25 miles from the nearest major oil storage area. BNL is located above a sole-source aquifer.

BNL has several large aboveground storage tanks (ASTs) containing a variety of oil types. Tanks at BNL range from 100 to 600,000 gallons, and most of the larger tanks (i.e. >5,000 gallons) are located in two areas: at the Major Petroleum Facility and near the Site and Staff Services Garages. Specific information concerning the size, age, material stored, location, and prevention equipment associated with individual tanks can be found in Sections 3.9, 3.10, and 3.11 of the *Spill Prevention Control and Counter-measures Plan* (SPCC Plan; BNL 2011) and in Exhibit A.

The topography of BNL is such that the surface flow of a small to medium spill predictably would be limited to the actual site of the spill. Elevation at BNL varies from approximately 48 feet to 100 feet above sea level. The BNL local topography is shown on the site and storm drainage map (see Exhibit F, Figures 1 and 2). Section 3.8 of the SPCC Plan contains specific information on site geography.

There are three distinct water-bearing units underlying the BNL site; from shallow to deep these are the Upper Glacial aquifer, Magothy aquifer and the Lloyd aquifer. Regionally, these units are collectively known as the Nassau/Suffolk Aquifer System, and were designated by the US Environmental Protection Agency as a Sole Source Aquifer System pursuant to Section 1424(e) of the Safe Drinking Water Act. The Upper Glacial aquifer is nearest to the surface, and is the most vulnerable to contamination from oil spills. Contamination from large surficial oil spills is of considerable concern because the Upper Glacial aquifer is generally composed of highly permeable sands and gravel. The potential for migration of petroleum hydrocarbons through the unsaturated (vadose) zone near the BNL bulk storage facilities is described in Section 9.2 of the SPCC Plan (BNL 2011).

Pursuant to the Safe Drinking Water Act amendments of 1996, BNL prepared a Source Water Assessment for its drinking water supply wells (Bennett *et al* 2000a). BNL maintains its own drinking water supply system, and pumps water from six wells that are screened in the Upper Glacial aquifer. The wells are grouped into eastern and western supply well fields, each well field consisting of three supply wells that are closely located and generally operated concurrently. The BNL groundwater model was used to determine the geographic extent of the five-year capture zone (or zone of contribution) for each well field. The source water assessment compared the geographic extent of the five-year capture zones to known potential sources of contamination, such as petroleum bulk storage facilities. Results of this assessment indicate that the petroleum storage facilities at the Major Petroleum (Storage) Facility and underground storage tank areas at the two BNL vehicle maintenance facilities are located outside the areas of influence of the BNL water supply wells and, therefore, pose a very low risk to the BNL water supply.

1.3 Emergency Response Information

This section describes the resources needed to respond to an emergency involving the discharge of oil or mixture of oil and other hazardous substances.

1.3.1 Emergency Notification Phone List

The Emergency Notification Form, Figure 1-2, identifies the organizations and individuals notified in the event of an emergency release, in prioritized order. To facilitate notification during all hours, each Laboratory response organization has been assigned cell phones that are carried by at least one member of the organization, including the Qualified Individual, around the clock. The Fire/Rescue Group, upon initial assessment of the release, initiates the paging sequence. For notification of local water suppliers, BNL is the local water purveyor for the immediate site. Since all water supplies are groundwater derived, there are no immediate consequences from surface releases of oils. If groundwater were impacted by a release, all other potentially impacted local water purveyors would be notified.

The Spill Response Notification Form, Figure 1-3, provides a checklist of information that shall be provided to the National Response Center (i.e., EPA), and other responding organizations. The information contained in this form will be provided to the responding organizations at the time of notification or must be in the process of being collected.

Figure 1-1
FACILITY INFORMATION FORM

Facility Name: Brookhaven National Laboratory – Major Petroleum Facility, Building 610		
Location (street address): 95 Temple Place		
City: Upton	**State:** New York	**Zip:** 11973
County: Suffolk		**Phone:** 631-344-4028
Latitude: N 40 Degrees	52 Minutes	03 Seconds
Longitude: W 72 Degrees	52 Minutes	17 Seconds
Well head Protection Areas: The BNL site is located within a deep recharge sensitive zone and over a sole source aquifer; however, no wellhead protection areas have been designated for this area.		
Owner: United States Department of Energy		
Owner Address (If different from facility address): 53 Bell Avenue, Upton, NY 11973		
Operator (If not owner): Brookhaven Science Associates, Building 460, 40 Brookhaven Ave., Upton, NY 11973		
Qualified Individual: Edward T. Murphy		
Position: Manager – Energy & Utilities		
Address: Building 134C, 35 Brookhaven Ave. Upton, NY 11973		
Emergency Phone Number: 631-344-3466 (business) 631-872-8968 (cell)		
Date of Oil Storage Start-up: January 1948		
Current Operation: The Brookhaven National Laboratory is a multidisciplinary scientific research facility conducting research in biological, chemical, material and medical sciences; particle and high energy nuclear physics. The Central Steam Facility provides high-pressure steam for building heat, air conditioning and process heating. A maximum of 2.3 million gallons of fuel oil are stored at the Major Petroleum Facility to support CSF operations.		
Dates and Types of Expansion or Facility Modifications: 11/96: Clean and demolish Tanks 1 (210,000 gals.) and 2 (216,000 gals.) 12/96: Complete construction of fuel off-loading facility 11/97: Clean and demolish Tanks 7 (20K gals.), 8 (10K gals.), 13 (10K gals.), 14 (10K gals.), 15 (10K gals), 16 (10K gals.), and 17 (10K gals.) 5/05: Clean and demolish Tanks 11 (60K gals.), 12 (60K gals.), 18 (60K gals.), 19 (60K gals.), and 20 (60K gals.) 6/08: Constructed new geosynthetic clay liner (GCL) as the low permeability hydraulic barrier for Tanks 5 and 6 See Sections 3.9 – 3.12 of the SPCC Plan for a full description of facility modifications.		
Date of Plan: 2/16/95	Revision No. 3	**Date of Latest Revision:** 3/31/11

Figure 1-2
EMERGENCY NOTIFICATION PHONE LIST
BROOKHAVEN NATIONAL LABORATORY

Reporter's Name:	Date:
Facility Name: Brookhaven National Laboratory	Owner Name: U.S. Department of Energy
Facility Identification Number: New York State, Major Oil Storage Facility ID. No. 01-1700	

Organization	Phone Number	Person Contacted	Time of Notification	Comments
BNL Police Group	631-344-2222			
BNL Fire Rescue	631-344-2222			
BNL Safety and Health Services	631-344-8211			
BNL Environmental Protection Division	631-344-3148			
BNL Response Coordinator (Qualified Individual)	631-344-3466 or 631-872-8968 (cell)			
EPA National Response Center	1-800-424-8802			
New York State Department of Environmental Conservation (SERC)	518-457-7362 (24 hour)			
Suffolk County Department of Health Services	631-854-2537			
Local Emergency Planning Coordinator	631-852-4855 (Business Hours)			
BNL Directors Office	631-344-7774			
DOE/Brookhaven Site Office	631-344-3424			
BNL Clinic	631-344-3670 (Business Hours)			
Stony Brook Hospital	631-444-1911			
Fire Marshall: Suffolk County Fire, Rescue, and Emergency Services	631-852-4855 (Business Hours) 631-852-4815 (24-hr. Service)			
Miller Environmental Group (Response Contractor)	631-369-4900			
New York State Police (Riverhead Barracks)	631-728-3000			
TV/Radio: Notification by BNL Media & Communications	631-344-3174			
Local Water Supply System	631-514-1280			

* *BNL maintains fulltime, 24 hour, fire and security response capabilities. Emergency response is initiated by calling 344-2222 (x2222 via on-site phones), which simultaneously notifies both response organizations.*

Figure 1-3

SPILL NOTIFICATION INFORMATION FORM
Brookhaven National Laboratory

Page 1 of 2

Reporter's Last Name:	First:	Middle Initial:	Reporter's Company Position:

BNL Phone Number(s):

Facility Name:	Owners Name:	Organization Type:
Brookhaven National Laboratory	**U.S. Department of Energy**	**Department of Energy Research Facility**

Street Address: **40 Brookhaven Avenue**	City: **Upton**	State: **NY**	Zip: **11973**

Were Materials Released: (Y/N)	Confidential: (Y/N)
Meeting Federal Obligations to Report: (Y/N)	Date Called:
Calling for Responsible Party: (Y/N)	Time Called:

Incident Description

Source and/or Cause of Incident:

Date:	Time of Incident:

Incident Address/Location:

Container Type: Tank Capacity: Units:

Facility Capacity: Units:

Facility Latitude: **N 40 Degrees 52 Minutes 03 Seconds**

Facility Longitude: **W 72 Degrees 52 Minutes 17 Seconds**

Figure 1-3 (cont.)

SPILL NOTIFICATION INFORMATION FORM
Brookhaven National Laboratory

Page 2of 2

Material Released

Name or CHRIS Code	Released Quantity	Unit of Measure	Material Released to Water? (Yes or No)	Quantity	Unit of Measure

Response Action

Actions taken to correct, control, or mitigate the incident:

Impact

Number of Injuries:	Number of Deaths:
Were there Evacuations: (Y/N)	Number Evacuated:
Was there any Damage: (Y/N)	Damage in Dollars (approximate):

Medium Affected:

Description:

More Information about release medium:

Additional Information

Any information about the incident not recorded elsewhere in the report?

Caller Notifications

EPA/NRC: (Y/N)	NYSDEC: (Y/N)	SCDHS: (Y/N)
Name:	Name:	Name:
Date: Time:	Date: Time:	Date: Time:

CHRIS : Chemical Hazard Response Information System USCG: United States Coast Guard
EPA: United States Environmental Protection Agency

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1.3.2 Facility Response Equipment

Spill response equipment is maintained at several locations at BNL. Portable fuel transfer pumps, hand tools, and absorbent materials are available in a sea-land container located along Seventh Avenue just south of the fuel transfer facility. This equipment is collocated at the Major Petroleum Facility (MPF) for immediate response to spills. A spill response trailer used primarily for small, petroleum-related incidents is parked at the Site and Staff Services Garage (Building 326) and contains a small amount of absorbent materials for use during an oil spill incident. Heavy equipment and additional personnel for remedial work are available from BNL's Site Resources Division. Additional absorbents are available from responding fire and rescue vehicles.

The estimated total absorbent recovery capability is 500 gallons, excluding the use of sand or soil. The total portable transfer pump capability at the MPF is approximately 4,500 bbls per day. BNL's fire department is staffed 24-hours a day and is responsible for providing first response resources for fire, medical, and hazardous material or oil spill incidents. Table 1-1 contains a list of equipment. BNL's Fire/Rescue Group and Facility and Operations (F&O) Directorate, during inspection and testing, as described in Section 1.3.3, update the equipment lists, if necessary, or when any changes in equipment or supplies are made. A complete list of BNL's Fire/Rescue Group's equipment and supplies available for spill response is presented in Exhibit B. The equipment listed in Exhibit B is inspected/updated on a weekly basis. Contact the on duty Captain for the latest list of equipment available in the event of an emergency. Exhibit G includes the equipment capabilities of the Miller Environmental Group (MEG), BNL's Oil Spill Response Organization (OSRO).

An agreement was reached with the MEG to provide response resources (personnel and equipment) for spills up to and including Worst Case Discharge (WCD) amounts occurring at BNL. MEG will respond within 1 to 6 hours of notification depending on the severity of the incident.

In addition to the equipment listed in Table 1-1, there are numerous communication systems available, including pagers, cellular phones, two-way radios, emergency mass notification (email, text, cell, home, and office phones), and conventional telephone systems.

1.3.3 Response Equipment Deployment and Tests

All emergency response equipment is used for routine facility operations; consequently, it is always in-service and fully deployable. Heavy equipment is used for construction and routine earth-moving activities. Similarly, all pumps and other transfer equipment are routinely deployed during facility operations. In addition, all equipment is inspected and maintained at least annually by maintenance staff to ensure its reliability. Heavy equipment and emergency response vehicles (e.g., Fire Rescue) are routinely maintained by a staff of heavy equipment and automotive mechanics. Copies of preventative and routine maintenance records for emergency response vehicles, heavy equipment, and other equipment (e.g., pumps) are maintained by BNL's Facilities Operations Center and Staff Services Division. Semiannual equipment deployment exercises are performed on facility equipment not used on a regular basis (e.g., hard boom). Documentation of these drills is kept on file with the Environmental Protection Division.

The Laboratory's OSRO continuously maintains their emergency spill response equipment. Exhibit G includes documentation of MEG's equipment deployment exercises.

Table 1-1 Spill Response Equipment Brookhaven National Laboratory			
Operations and Maintenance: Heavy Equipment Inventory			
Number of Units	Make	Type/Model	Operational Status
1	Caterpillar (D7)	Dozer	Active
1	John Deere (JD 450-C)	Dozer	Active
3	Kawasaki, Clark, and Volvo	Payloaders	Active
2	John Deere	Payloaders	Active
2	Caterpillar	Payloaders	Active
3		Dumpsters	Active
2		Load Lugger Trucks	Active
7		Dump trucks	Active
2	Volvo	Backhoes	Active
1	New Holland	Backhoe	Active
2	Honda	Generators (5-50 kilowatt)	Active
3	New Holland	Skidsteers	Active
3	Bobcat	Skidsteers	Active
1	Vacmaster System 4000	Vacuum System	Active
Major Oil Storage Facility: Response Equipment Inventory			
Transfer Pumps			
Make	Model	Capacity	Operational Status
LeRoi	Air-driven double diaphragm (90 psig)	2,000 gph at 150-foot head	Active
LeRoi	Air-driven double diaphragm (90 psig)	2,000 gph at 150-foot head	Active
LeRoi	Air-driven double diaphragm (90 psig)	2,000 gph at 150-foot head	Active
LeRoi	Air-driven double diaphragm (90 psig)	2,000 gph at 150-foot head	Active

Table 1-1 (cont.)
Spill Response Equipment
Brookhaven National Laboratory

Transfer Hose

Number	Length	Type	Service
4	25 feet	3-inch wire reinforced	Oil
3	20 feet	3-inch wire reinforced	Oil
3	25 feet	2-inch wire reinforced	Oil
1	20 feet	2-inch wire reinforced	Oil

Absorbents

Number	Package	Type
3	30-gallon pails	Loose absorbent material
1	50-pound bag	Loose absorbent material
6	Bundle (200 sheets)	Absorbent pads

Hard Boom: 1000 feet of hard boom to be deployed as necessary

Fire Rescue: Emergency Response Equipment Inventory

Number	**Equipment**	**Summary of Supplies Available (See Note Below)**
2	Haz-Mat Trailers	HazMat Level 'A', 'B', & 'C' capability. Up to Large Size Spill capability. Hand tools, spark resistant shovels, wrenches, standard and over-pack drums, acid and base absorbents, plastic sheet goods, absorbents (pads, loose, socks – multiple quantities of all), personal protective equipment, etc, decon equipment, chlorine kits.
1	Rescue Unit	HazMat Level 'B'and 'C' capability. Up to Moderate size spill capability. Extrication and technical rescue equipment. Hand tools, spark resistant shovels, wrenches, acid and base absorbents, mercury kit, plastic sheet goods, absorbents (pads, loose, socks), personal protective equipment, mass casualty emergency medical supplies, metering and monitoring equipment, APR/PAPR's, SCBA's.
1	Ambulance	BLS Capability. Emergency medical supplies, resuscitation equipment, emergency life support.
1	Class 'A' Engine	1500-gallon per minute pump, foam mixer, ladders, portable extinguishers, fire hose with assorted nozzles, hand tools.
1	Command Vehicle	Communications and computer capabilities. Internet and Intranet capability.
1	Ladder/ Pumper	2000 GPM pump with 95' bucket/ladder. Foam capability, assorted fire equipment.
1	EMS Kubota	4x4 vehicle with BLS EMS equipment.
NOTE:	A complete list of all Fire Rescue equipment and supplies available at BNL for spill response is presented in Appendix B of the Facility Response Plan.	

Key: psig = Pounds per square inch gauge gph = Gallons per hour

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1.3.4 Facility Response Personnel

The primary BNL emergency response team is composed of BNL's Police and Fire/Rescue Groups. On-site personnel available on a 24-hour basis for immediate deployment include the following:

- Police Group: Multiple Officers, including Captain;
- Fire/Rescue: Six to eight personnel, including a fire captain;
- Site Shift Supervisor: One Facilities & Operations Directorate representative; and
- Senior Stationary Engineer: Two Major Petroleum Facility staff.

During off-hours, additional support will be requested to respond, if necessary through the Office of Emergency Management (OEM). The OEM maintains a list of additional contact names and phone numbers.

In the event of an oil spill, the BNL Police and Fire/Rescue Groups are simultaneously notified by dialing extension 2222 from any on-site phone. From a cellular phone, call 631-344-2222. The Fire Rescue Group is assigned lead responsibility when responding to hazardous material or oil releases. The Incident Commander, typically the on-duty Captain, assesses the spill and need for additional response personnel. If deemed necessary, the Incident Commander initiates the emergency response paging system. All Emergency Response personnel are available through BNL's Emergency Mass Notification System, including the Qualified Individual (on duty Crisis Manager), Operations and Maintenance supervisory staff, environmental compliance staff and others. Table 1-2 lists some key emergency response personnel that would typically respond to releases of oils and chemicals.

In addition to BNL personnel, the Miller Environmental Group, a registered Oil Spill Response Organization for the Port of New York, is contracted to provide additional mitigation in a Medium- or Worst-Case Discharge. Table 1-3 lists their resources. Exhibit G includes evidence of the most current contract/agreement BNL has with MEG.

Table 1-4 provides a high-level list of the BNL Emergency Response Organization (ERO) personnel by category. Exhibit D provides a more detailed list of ERO staff and their responsibility. Table 1-5 lists available response personnel along with each person's responsibility and training. This list identifies all BNL staff that routinely responds to releases of oils or chemicals.

1.3.5 Evacuation Plan

Based upon the previous Hazard Assessment conducted for Laboratory operations and discussed in section 1.4, there are no petroleum-based release scenarios that would require off-site evacuations or protective actions from a spill that emanates from the Major Petroleum Facility. In addition, due to the size of the BNL site, the engineering controls in place, and the isolation of the MPF, the need to evacuate the site due to a Worst Case Discharge is also very remote. Only in the event of an uncontrollable fire would full site evacuation be considered.

During response to spill events, the Fire Captain is the first emergency responder to arrive at the scene. The Fire Captain assesses the spill to determine additional response resource needs. In the event of a large release at BNL, the following key factors are considered:

- **Location of stored materials**
  The largest amount of stored material is located at BNL's Major Petroleum Facility. This location of large storage tanks, along with all other hazardous material storage tanks, is indicated on Figures 1-1 and 1-2 in Exhibit F.

- **Potential hazards imposed by the spilled material**
  The primary hazard from a spill of fuel oil is the potential for an ignition that starts a fire. While highly unlikely, the potential for this scenario does exist. This fire could be an uncontrolled fire (with exposures) or smaller in scale with a large amount of smoke.

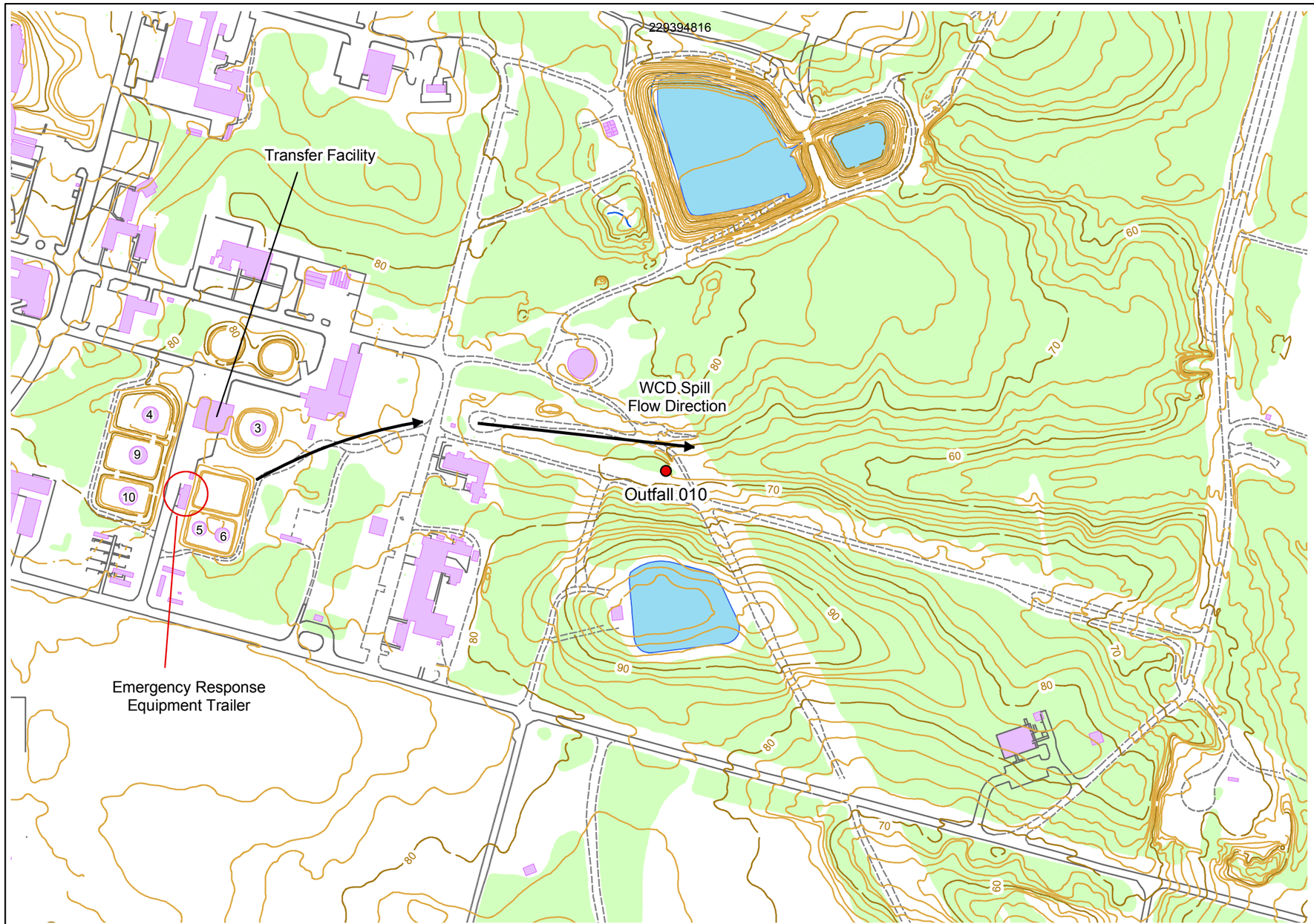
  Other hazards would include environmental insult based upon quantity and flow path of the material spilled. This has potential for entry into drywells and storm drains. There is little concern regarding the generation of a 'plume' of material that emanates from a fuel oil spill.

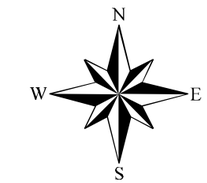
- **Spill flow direction**
  This will be determined at the time of the incident by the Fire Captain responding to the spill. A major spill at the MPF that is not contained within the secondary containment would flow in an easterly direction away from the central portion of the Laboratory (See Figure 1-5).

- **Prevailing wind direction and speed**
  The wind speed and direction will be determined at the time of the incident by the Fire Captain responding to the spill. BNL's Emergency Operations Center (EOC) has access to meteorological data that are representative of conditions on-site and that information can be obtained at any time. In general, the primary wind rose in the spring and summer months is from the southwest and the primary wind rose in the fall and winter months is from the northwest.

- **Arrival route of emergency response personnel and response equipment**
  Based on the spill flow direction and wind direction/speed, the responding Fire Captain will determine the best arrival route for all emergency response personnel and response equipment. This message would be included in the emergency response page that goes out to the Laboratory's Emergency Response Organization. Emergency response agencies have multiple access routes, from various directions, into the MPF.

- **Evacuation routes**
  BNL has the unique ability to be able to evacuate the site in any direction (See Figure 1-6: BNL Site Evacuation Plan Diagram). However, the primary evacuation routes are to the west, northwest, and southwest. The Laboratory has one major north-south road in the western part of the site, with five major east-west roads feeding into it. Most Laboratory facilities lie east of Upton Road and west of the MPF. The main exit is via Princeton Avenue going westward from Upton Road at the southwest sector of the site (Main Gate). At each end of Upton Road there are secondary exits, which are normally used only at rush hour (North and South Gates). There is one secondary gate available northeast of the MPF. For most emergencies, all of the primary Laboratory gates would





Legend

- 2' Topography
- 10' Topography
- Dirt Roads
- Paved Roads
- Buildings
- Onsite Surface Water
- Vegetation
- Recharge Basins

BROOKHAVEN NATIONAL LABORATORY

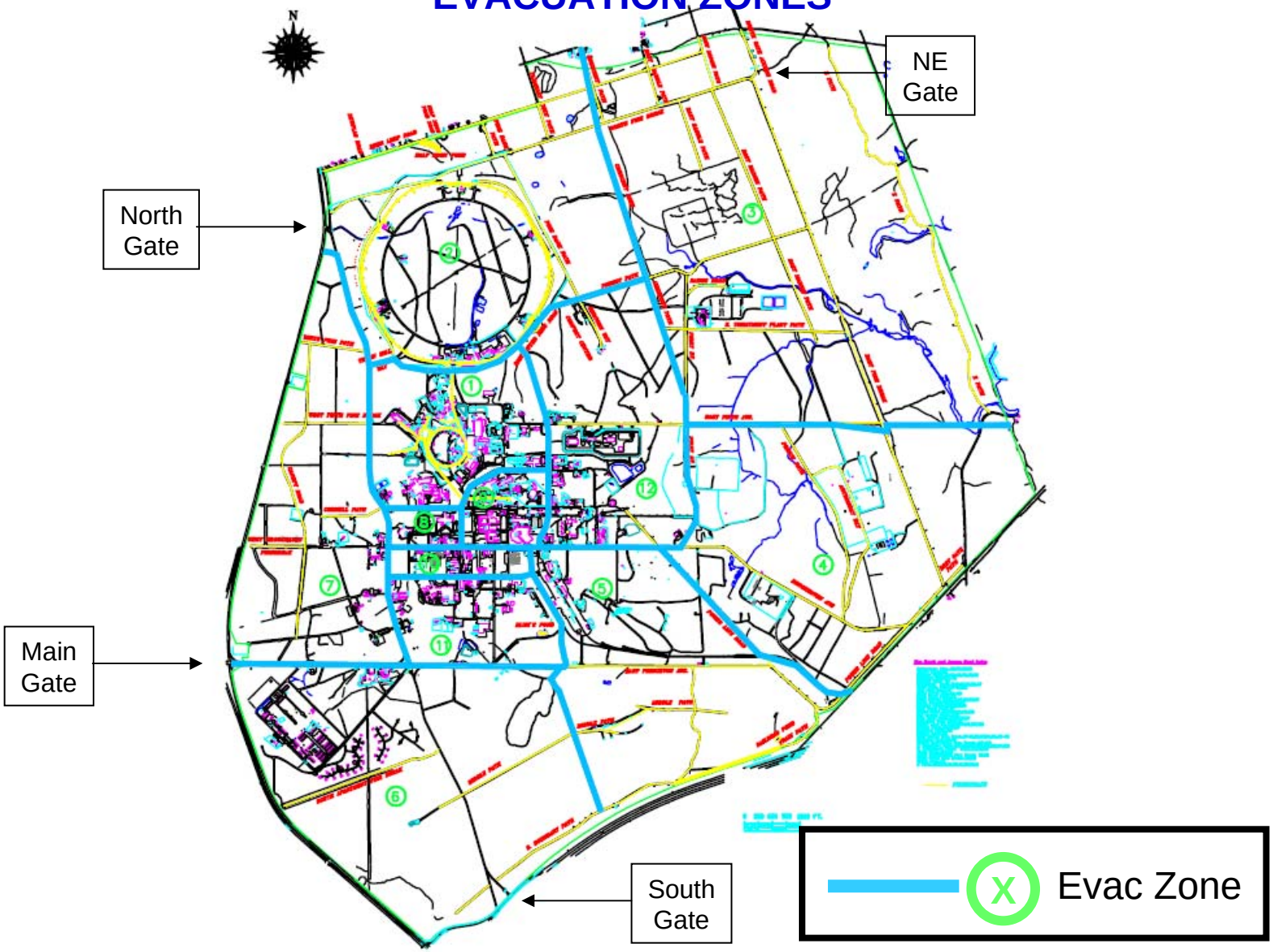
Environmental Protection Division

Central Steam Facility

Figure # 1 - 5

kls - 03/21/11
r:/arcmap_projects/esd/csf/topo_map_r1_5.mxd
r:/graphics/esd/csf/topo_map_r1_5.pdf

Figure 1-6
BROOKHAVEN NATIONAL LABORATORY EVACUATION ZONES



be open and available, unless specific meteorological or other conditions preclude the use of a route to a gate.

There are two types of evacuation that could occur - a selective evacuation and a general evacuation. A selective evacuation takes place when it is felt that the risk is greater in some areas than in others. In this case, evacuation shall be staggered and directed by zones in decreasing order of the predicted hazard. Some zones may stand by or shelter in place instead of evacuating. A general evacuation will be ordered when the emergency is of such magnitude that its effects could be site-wide or when the IC determines the presence of nonessential personnel on site might be an impediment to effective control of the emergency situation. This may be ordered late in a selective evacuation.

All personnel except those having specific emergency functions will be directed to leave the site. Personnel would leave the site by the most direct means possible. Ultimately, the location and size of the spill will determine the need for evacuation.

- **Transportation of injured personnel to nearest emergency medical facility** – BNL maintains a full-service ERO including emergency medical technicians, NYS certified ambulance, and fire response personnel. During normal business hours, there is also access to doctors and nurses at the site clinic, who are trained and are part of the ERO. They provide initial on-site assistance in the event of a mass casualty incident. BNL works closely with area hospitals in the event personnel are injured and require transportation to a medical facility. Injuries to three or more people would require use of mutual aid resources through the Suffolk County Mutual Aid Plan to assist in transportation.

- **The need for a centralized check-in area for evacuation validation (roll call)** The BNL response system is based upon the Incident Command System (NIMS compliant) and the Fire Captain assumes the role of Incident Commander until relieved by a superior officer or qualified replacement. An incident command post is established near the site of release in a safe area. For incidents requiring a central command and additional resources, the EOC, located in Building 939, is staffed. From this facility, communications with outside resources, the media, and regulatory agencies can be established. This would also act as the centralized check-in area for evacuation validation in the event a site-wide evacuation is necessary.

BNL maintains an Emergency Plan for addressing response to “operational emergencies” including fire, medical, weapons of mass destruction, nuclear, chemical/oil release, criminal and meteorological scenarios. In general, selective or general evacuations (as described above), are just two of the many protective actions that can be taken in response to emergencies. Protective Actions are described more fully in the BNL Emergency Plan.

Off-site protective actions resulting from other emergencies at BNL but impacting the local community are implemented by New York State and Suffolk County authorities. These actions would be based upon their knowledge of the emergency by interaction with BNL under the mutual aid agreement in place for the County of Suffolk.

1.3.6 Qualified Individual’s Duties

The Laboratory Crisis Manager (CM) has overall responsibility during a response to a Laboratory emergency. The Crisis Manager will assume the role of the Qualified Individual (QI)

during response to a release. Edward T. Murphy is one of three Crisis Managers for this facility and, when required, he shall assume overall strategic management of external emergency response and will be the primary interface with DOE/BHSO and other governmental agencies. The QI/CM is knowledgeable of emergency planning procedures and will implement response activities during an oil spill emergency. In the absence of the primary QI/CM, notification will be made to a designated alternate. The line of succession for these alternates is set forth in BNL's Office of Emergency Management Program operations and procedures. The responsibilities of the QI/CM or his/her designee are as follows:

- Remain present at the scene of an emergency or the Emergency Operations Center (EOC);
- Ensure that all response personnel are notified as needed;
- Activate the BNL alarm and/or communication systems to notify BNL personnel as appropriate;
- Identify the character, source, amount, and extent of the release, as well as the other items needed for internal and agency notification;
- Notify and provide necessary information to the appropriate federal, state, and county officials;
- Assess the interaction of spilled substance with water and/or other substances stored at the facility, and notify response personnel at the scene of that assessment;
- Assess the possible hazards to human health and the environment resulting from the release;
- Assess and implement prompt actions to contain and remove the oil released;
- Coordinate rescue and response actions as previously arranged with all response personnel;
- Use authority to immediately access company funding to initiate cleanup activities;
- Act as the Emergency Director for all BNL response personnel and activities; and
- Direct cleanup activities until properly relieved of this responsibility.

Table 1-2
EMERGENCY RESPONSE PERSONNEL
BROOKHAVEN NATIONAL LABORATORY

Title	Name	Telephone[1]	Response Time	Responsibility During Response Action
1. Assistant Laboratory Director	L. Bates	2222	30 minutes	Oversight of plant activities, including direction, coordination of containment, and remediation of spilled product.
2. Manager, Energy & Utilities (Qualified Individual)	E. Murphy	2222	30 minutes	
3. Manager, Utilities Group	W. Chaloupka	2222	30 minutes	
4. Manager, Site Resources Division	T. Lambertson	2222	30 minutes	
5. Supervisor - MPF	E. Simon	5327	15 minutes	Oversight of Major Petroleum Facility staff
6. Environmental Protection Division Regulatory Compliance Staff	J. Haskins D. Bauer F. Craner S. Ferrone B. Hooda R. Lee P. Pohlot J. Remien K. Schwager J. Williams (one of ten)	2222	30 minutes	Assess release, determine notification requirements, and notify response personnel.
7. F&O Directorate Site Shift Supervisor	On Duty (one of five)	4284	On site	F&O Support
8. Manager, Emergency Management	M. Pena	2222	60 minutes	Evacuation Coordination
9. Public Affairs Office	M. Lynch	2222	60 minutes	Public Relations

[1] Telephone number that is initially used when the person is not on site. The Incident Commander initiates the emergency response paging system to request appropriate personnel assistance, including those listed above. All are available through the emergency response paging system.

Table 1-3

EMERGENCY RESPONSE CONTRACTOR
BROOKHAVEN NATIONAL LABORATORY

Contractor	Telephone	Response Time	Contract Responsibility
MEG Environmental Services	(631) 369-4900	1 to 6 hours pending severity of spill	Provide all necessary equipment to complement BNL's capability for containment, remediation, and disposal of spilled petroleum products.

Table 1-4

EMERGENCY RESPONSE ORGANIZATION
BROOKHAVEN NATIONAL LABORATORY

Personnel (by Category)	Response Time (Minutes)	Telephone (Day/Evening)
Qualified Individual (Crisis Manager)	30	2222
Police Group	3	2222
BNL Fire/Rescue Group	3	2222
F&O Directorate Senior Stationary Engineer	1	2222
Environmental Protection Division Environmental Compliance Personnel	30	2222
Safety and Health Services Division Industrial Hygiene Personnel	30	2222

Table 1-5

OIL SPILL RESPONSE TRAINING AND RESPONSIBILITY
BROOKHAVEN NATIONAL LABORATORY

Functional Title	Staff Employees[1]	Responsibility	Training[2]
Qualified Individual	E.T. Murphy	• Allocate resources to mitigate and remediate spill • Act as a point of contact (POC) between government agencies and BNL	• Hazard communication (2 hours) (HP-IND-200) • BNL Emergency Planning and Response training (GE-EMERGPLAN) • Crisis Manager (EM-22) • Spill Prevention, Control and Countermeasure Training (TQ-SPCC) • OJT: Annual exercises and drills
MPF Line Supervisor	MPF Supervisor: E. Simon	• Notify BNL Emergency Response Organization (x2222) • Notify F&O management	• Hazard Communication (2 hours) (HP-IND-200) • HAZWOPER (40 hours) (#0361) plus Annual • Refresher (8 hours) • BNL Emergency Planning and Response training (GE-EMERGPLAN) • First Responder – Ops Level – Central Steam Facility (EP-CSF-020) • Spill Prevention, Control and Countermeasure Training (TQ-SPCC) • OJT: Annual exercises and drills
Site Shift Supervisor Oil Spill Responder (after hours)	Site Shift Supervisor: T. Carpluk J. Fortunato P. Ouvrard R. Bellando	• Notify BNL Emergency Response Organization (x2222) • Notify F&O management • Notify MPF Supervisor (after hours) • If necessary, capable of diverting flow of STP to holdup ponds (after hours)	• Hazard Communication (HP-IND-200) • BNL Emergency Planning and Response training (GE-EMERGPLAN) • HAZWOPER First Responder (8 hours) (#EP002) plus Annual Refresher • Spill Prevention, Control and Countermeasure Training (TQ-SPCC)
MPF Senior Stationary Engineer	MPF Senior Stationary Engineers: Group Leader: M. Kijowski	• Notify Site Shift Supervisor/MPF Line Supervisor • Close valve/divert oil to alternate tank • Containment of leak • Apply absorbent material • Containerize minor quantities* for disposal	• Hazard Communication (#IND200) • HAZWOPER First Responder (8 hours) (#EP002) plus Annual Refresher • BNL Emergency Planning and Response training (GE-EMERGPLAN) • First Responder – Ops Level – Central Steam Facility (EP-CSF-020) • Spill Prevention, Control and Countermeasure Training (TQ-SPCC) • OJT: Annual exercises and equipment deployment drills *minor quantity <55 gallons

Table 1-5

OIL SPILL RESPONSE TRAINING AND RESPONSIBILITY
BROOKHAVEN NATIONAL LABORATORY

Functional Title	Staff Employees[1]	Responsibility	Training[2]
Hazardous Waste Remediation Oil Spill Responders	Roads, Mason Supervisor: M. Bonanno Grounds Supervisor: M. Pankowski Heavy Equipment Supervisor: J. Gottlieb	• Contain leak or build berm • Pump oil into barrels (if applicable) • Apply absorbent materials • Containerize wastes	• Hazard Communication (#IND200) • BNL Emergency Planning and Response training (GE-EMERGPLAN) • HAZWOPER First Responder (#EP002) plus Annual Refresher or HAZWOPER (40 hours) (#0361) plus 8-hour refresher annually to include oil remediation (#0361R) • Spill Prevention, Control and Countermeasure Training (TQ-SPCC) • OJT: Annual exercises and equipment deployment drills
Emergency Response Organization: Incident Commander	Fire Chief: C. LaSalla Captains: R. Barone K. Licata M. Hickey M. Rosenfeld	• Incident Commander • Notification of authorities • Direct emergency response and mitigation measures as defined in 29 CFR 1910.120 Q • Cause notification to be made • Use specialized monitoring equipment	• NIMS Incident Command System Training • Emergency Command and Management, HAZMAT Incidents (36 hour) • BNL Emergency Planning and Response training (GE-EMERGPLAN) • Hazard Communication (#IND200) • Hazardous Materials Response Technician • Spill Prevention, Control and Countermeasure Training (TQ-SPCC) • OJT: Periodic Drills and Exercises
Fire Rescue Group	Firefighters: 24 hour / 7 day per week coverage 6 FF minimum per shift 8 FF maximum per shift	• First emergency responders to oil/chemical spill • Identify and evaluate spill • Provide emergency medical services • Control and suppress fire • Mitigate and stabilize release and divert to reduce environmental insults • Plug and patch • Use specialized monitoring equipment	• BNL Emergency Planning and Response training (GE-EMERGPLAN) • Hazard Communication (#IND200) • Hazardous Materials Response Technician • Spill Prevention, Control and Countermeasure Training (TQ-SPCC) • OJT: Periodic Drills and Exercises • HAZMAT decontamination drill

Table 1-5

OIL SPILL RESPONSE TRAINING AND RESPONSIBILITY
BROOKHAVEN NATIONAL LABORATORY

Functional Title	Staff Employees[1]	Responsibility	Training[2]
Police Group	Captains. Lieutenants, and Police Officers: Names withheld for security reasons 24 hour / 7 day per week coverage	• Receive spill report and disseminate information to spill response teams • Provide line of communication between scene and off-site personnel • Control traffic/crowd • Control of spill site	• Hazard Communication (#IND200) • NIMS Incident Command System Training • BNL Emergency Planning and Response training (GE-EMERGPLAN) • Spill Prevention, Control and Countermeasure Training (TQ-SPCC) • OJT: Periodic Drills and Exercises
Specialized Support: Environmental Compliance Spill Response	Environmental Compliance: J. Remien and D. Bauer, Group Leaders (interim)	• Second line of spill response • Assess environmental impact of spill • Notify regulatory agencies and BNL/DOE management • Act as technical support • Prepare reports	• Hazard Communication (#IND200) • BNL Emergency Planning and Response training (GE-EMERGPLAN) • NIMS Incident Command System Training • Spill Prevention, Control and Countermeasure Training (TQ-SPCC) • HAZWOPER (40 hours) (#0361) • OJT: Periodic Drills and Exercises • Spill Response Team (ES-12)
Specialized Support: Safety & Health Field Services Spill Response	Industrial Hygiene: R. Selvey (Group Manager)	• Second line of spill response • Assess safety and health risk of spill to spill response teams and the public • Specify personal protective equipment	• Hazard Communication (#IND200) • BNL Emergency Planning and Response training (GE-EMERGPLAN) • NIMS Incident Command System Training • Spill Prevention, Control and Countermeasure Training (TQ-SPCC) • HAZWOPER (40 hours) (#0361) • OJT: Periodic Drills and Exercises

Table 1-5 Footnotes

[1] Only the names of supervisors and group leaders are listed in this column. BNL's organizational charts have the most current list and names of personnel within each function. This information is available on BNL's website.

[2] A list of the most current and complete training qualifications for each function/employee is maintained by BNL's Training Office. This information is available on BNL's website.

1.4 Hazard Evaluation

BNL encompasses approximately 5,300 acres located near the geographic center of Suffolk County, Long Island, New York. The headwaters and tributaries of the Peconic River are located within the site boundaries approximately 1.25 miles from the nearest major oil storage area. Considering that all oil storage is secondarily contained and the distance to the nearest surface water, oil migration to the Peconic River is not likely to occur as a result of routine operations. This possibility is extremely remote during catastrophic failure of both the primary and the secondary containment systems and only if the release occurs during heavy rains.

1.4.1 Hazard Identification

Aboveground oil storage consists mostly of persistent oil of classes III and IV, with over 70% of the site's total capacity located at the Major Petroleum Facility (MPF). Additional bulk petroleum storage is also contained in aboveground storage tanks (20,000 gallons) and underground storage tanks (19,000 gallons) located at the Site and Staff Services Garage (Building Nos. 321 and 423). The on-site public service station (Building 630) also has 24,550 gallons of underground capacity.

Electrical equipment, such as transformers and capacitors, comprise less than 10% of the aboveground oil storage capacity site-wide. The majority of the transformers are small and contain less than 100 gallons of oil. In accordance with Factory Mutual guidelines, all transformers are equipped with curbing and rock ballast to contain releases. Many of the larger transformers (i.e., those containing greater than 660 gallons individually or 1320 gallons for combined installations) are also equipped with secondary containment and oil/water separators to mitigate releases in the event of a transformer failure. Review of past spills associated with transformers shows that all releases were contained to the immediate area and cleaned-up expeditiously with no environmental impact.

Additional smaller tanks and transformers are located throughout the site; however, due to their numbers, size, and locations, descriptive details for each tank and transformer are not included in this section. Small transformers and substations are equipped with permeable rock ballast and curbs to collect and contain releases. Specific information for tanks located at the MPF, including tank contents and maximum capacities, tank failure(s)/causes, and other design specifications, is contained on the storage tank information sheet (Figure 1-4). Sections 3.9 and 3.12 of the BNL SPCC Plan and Exhibit A contain additional specific tank identifiers, descriptions, locations, and containment information. Figures 3-1 and 3-2 of Exhibit F show transformer locations.

Routine operations posing a threat of spill or release involve the transfer of fuel oil to and from storage tanks, maintenance of equipment, and refilling of vehicles. All bulk transfers of fuel oil are performed within secondarily contained areas that mitigate the potential for environmental impact. These areas are designed to contain the 110% of the contents of a single transfer trailer. Mechanical equipment rooms are similarly contained, which would prevent the release of oil in the event of a gross pump failure. Transfer operations are continuously monitored.

Transfer of gasoline at the service stations is typical of any service station. Containment and leak detection is conducted at all fill ports, and all underground piping from the pump islands to the tanks is secondarily contained with leak detection. The most likely potential for a small spill is during refueling of vehicles. At the public service station, service station employees perform all refueling. At the Staff Services station BNL employees who are knowledgeable of spill reporting requirements perform all transfers.

Figure 1-4
Major Petroleum Facility (MPF)
Tank Summary

Tank Number	Working Capacity Barrels	Maximum Capacity Barrels	Product Stored	Service IN/OUT	Tank Failure/ Cause	Axis	Year Installed (Built)	Diameter (feet)	Height Length (feet)	Floor (ends)	Shell Thickness	Roof Thickness	Material	Tank Remote Level[1]	Tank Local Level[1]	Tank High Level[2]	Support Type[3]	Manufacturers Design Criteria & Notes*
3 (611C)	7143	7162	#6 Oil	IN	None	Vertical	1964	40.00	32.00	1/4" Pl	0-16'H=1/4" 16-32'H=3/16"	3/16" Pl	ASTM-A283 Grade C	1	3,4,5	1,2	1	Buffalo Tank API Std.650
4 (611D)	9524	10107	#6 Oil	IN	None	Vertical	1974	42.50	40.00	1/4" Pl	1/4" Pl	1/4" Pl	ASTM-A283 Grade C	1	3,4,5	1,2	1	Chicago Bridge API Std.650
5 (611E)	7143	7170	#2 OIL	IN	None	Vertical	1983	38.00	35.50	1/4" Pl	1/4" Pl	3/16" Pl	A-283-C	1	3,4,5	1,2	1	Buffalo Tank API Std. 650
6 (611F)	7143	7170	#2 OIL	IN	None	Vertical	1983	38.00	35.50	1/4" Pl	1/4" Pl	3/16" Pl	A-283-C	1	3,4,5	1,2	1	Buffalo Tank API Std. 650
9 (611G)	9330	9480	#6 Oil	IN	None	Vertical	1989	48.00	30.00	1/4" Pl	1/4" Pl		SA-283-C	1	3,4,5	2	1	Pittsburg-Desmoines API 650
10 (611H)	14115	14315	#6 Oil	IN	None	Vertical	1989	48.00	45.00	1/4" Pl	1/4" Pl-Ring 1 1/4" Pl-Ring 2-5		A-36 A-283-C	1	3,4,5	2	1	Pittsburg-Desmoines API 650

Working Capacity: 54,398 Barrels (2,284,716 Gallons)
Maximum Capacity: 55,404 Barrels (2,326,968 Gallons)

Group 3 Oil WCD	Tank No. 5 is the largest single aboveground tank within an adequate secondary containment area and therefore, the WCD planning volume for BNL for Group 3 oil.
Group 4 Oil WCD	Tank No. 10 is the largest single aboveground tank within an adequate secondary containment area and therefore, the WCD planning volume for BNL for Group 4 oil.

[1] TANK LEVEL
1 - Rosemount Model 5400 Radar Gauge
2 - Metritape resistive gauging system with remote read-out
3 - Automatic Tape Scale (Protectoseal model 12000 A or equal)
4 - Scale board with cable and float
5 - Manual sounding tape or stick

[3] TYPE SUPPORT
1 – Circular Ring

[2] HIGH LEVEL ALARMS
1 - TRANSDATA Model 6699-40 Annunciator System with Model 6693-L Operation checkers
2 - Alarm from Rosemount Model 5400 Radar Gauge through a Programmable Logic Controller.
3 - PNEUMERACATOR Model LC [3 or 4] SA CL level indication system.
4 - OMNITEC / Electrolevel Indication System
5 - WARWICK TA201T Level Alarm with manual checker

Other site activities that pose a threat of release are transportation-related. In the event of an accident, standard spill response procedures are followed which mitigate and minimize the impact of such incidents.

There are no significant impacts associated with daily throughput changes at BNL. Since BNL is not a commercial facility and oils are used for on-site consumption only, site operations are fairly uniform and do not vary drastically from day-to-day. There may be an increase in fuel delivery rates at times of low cost, but these are typically followed by lull periods. Similarly, during natural gas use, deliveries are very infrequent. The only potential impact is again from transportation-related incidents since engineering controls mitigate potentials for releases at the points of delivery.

1.4.2 Vulnerability Analysis

The vulnerability analysis of the study area shows human, cultural, economic, and environmental resources potentially at risk in the event of a WCD at BNL. The study area was determined according to topography, potential WCD spill scenarios, and vulnerable resources. The affected area is within the flood plain of the Peconic River. As stated earlier, the potential to impact the Peconic is very remote and requires two modes of failure (i.e., primary tank and secondary containment) occurring during a period of intense precipitation.

In accordance with Appendix C, Attachments II and III, since the MPF is located within a sensitive environment (Pine Barrens) and a WCD could impact a state endangered species habitat, the most probable planning distance “D4” has been calculated to be 0.24 miles. This is the distance from the nearest opportunity for discharge to Outfall 010, which is located east of the MPF (See Figure 1-5 for location of outfall). Since the BNL site is not a shoreline facility nor are there any direct discharges into navigable waters, all small and medium discharges would be highly localized.

This section discusses some of the resources of particular interest to a vulnerability analysis.

1.4.2.1 Demographics

Based on the 2000 U.S. Census and associated population estimates for 2007, approximately 13,460 persons live within 1.0 mile (1.6 kilometers) of the Laboratory’s boundary. The Laboratory’s on-site population includes approximately 3,000 employees and more than 4,300 guest researchers who visit periodically each year. An average of 180 people live in temporary on-site housing, and an average of 130 guest scientists and students who visit the Laboratory stay in the dormitories.

As mentioned in Section 1.4, the possibility of oil migration to the Peconic River is extremely remote. However, in the event oil does reach the river, impacts would be limited to those residential homes located along the Peconic River closer to the Laboratory boundary.

1.4.2.2 Economic Resources

Local business located along the Peconic and downtown Riverhead would most likely not be impacted by response efforts to an oil spill at BNL.

1.4.2.3 Cultural Resources

Although numerous facilities are potentially protected under the National Historic Preservation Act because of their age (i.e., > 50 years old) or historical significance, the following are confirmed cultural resources located at BNL and determined to be eligible for inclusion in the National Register of Historic Places.

- Brookhaven Graphite Research Reactor Complex - Building Nos. 701, 702, 703, 704, 705, 708, 709, 709A, and 801;
- High Flux Beam Reactor (Bldg. 750);
- World War I Era Trenches

The BNL Cultural Resources Management Plan identifies other areas of cultural/historic significance including (BNL 2005):

- Architecturally significant buildings (Berkner Hall – Bldg. 488, and Chemistry – Bldg. 555).
- Buildings having historic period significance – Building 120 and Building 30
- Archeologically sensitive areas
- Other structures or features identified during future cultural resources evaluations would be added to this document in subsequent revisions.

A review of potential runoff routes for a WCD indicates that there would be no risk to these known resources because of their locations relative to the MPF.

1.4.2.4 Endangered/Threatened Species

The Peconic River System is the largest vulnerable resource potentially impacted by a WCD from the MPF. The river system has been designated as a protected area under the Wild, Scenic, and Recreational Rivers System Act by the New York State Legislature (Title 27, Article 15, and New York State Environmental Conservation Law).

The Peconic River System contains wetlands, marshes, and ponds that provide habitat for several sensitive plants and animals. Numerous wetlands and sensitive environments surrounding the BNL property could potentially be affected by a large release of oil, especially if it entered the Peconic River System. Through implementation of BNL's Natural Resource Management Plan (BNL 2003), additional endangered, threatened, and species of special concern have been identified as having been resident at BNL during the past 30 years. The only New York State endangered species confirmed as now inhabiting Laboratory property is the eastern tiger salamander (*Ambystoma t. tigrinum*). Additionally, the New York State endangered Persius duskywing butterfly (*Erynnis p. persius*) and the crested fringed orchid (*Plantathera cristata*) have been identified on site in the past. Five New York State threatened species have been positively identified on site and two other species are considered likely to be present. The banded sunfish (*Enneacanthus obesus*), the swamp darter fish (*Etheostoma fusiforme*), and the stiff goldenrod plant (*Solidago rigida*) have been previously reported (BNL 2000b). The northern harrier (*Circus cyaneus*) was seen hunting over open fields in November 2003. In 2005, the Pine Barrens bluet (*Enallagma recurvatum*) damselfly was confirmed at one of the many coastal plain ponds located on site. The frosted elfin butterfly (*Callophrys irus*) has been identified as possibly being at BNL, based on historic documentation and the presence of its preferred habitat and host plant (wild lupine). In addition, stargrass (*Aletris farinosa*) was reconfirmed to exist at BNL. A number of other species that are listed as rare, of special concern, or exploitably vulnerable by New York State either currently inhabit the site, visit during migration, or have been identified historically.

A complete listing of New York State endangered species, threatened species, and species of special concern at BNL is included in Exhibit E.

1.4.2.5 Fish and Wildlife

Significant fish and wildlife habitats exist on the BNL site, within the forest and woodlands, throughout the Peconic River System, and along adjacent shorelines. The forest and woodland habitat adjacent to the MPF are home to several New York State species of special concern, including several birds, reptiles, and amphibians. Several plants have also been identified by New York State as being Rare, or Exploitably Vulnerable. Vernal water bodies located within close proximity to the MPF are potential habitat to the New York State endangered Tiger Salamander. The Peconic River drainage is also one known location supporting populations of the Banded Sunfish, a state-listed threatened species.

The sensitivity of the Peconic River and Central Pine Barrens vegetative communities is of concern. Sensitive plant systems include the Pine Barrens, dwarf Pine Barrens, cranberry bogs, and a variety of wetland plant species.

Although outside the potential impact area, Long Island protects eight units of the Long Island National Wildlife Refuge Complex. The Wertheim Refuge encompasses one of the largest undeveloped estuaries on the island and is located approximately 3 miles due south of BNL. Other designated and/or protected grounds include state and county parks, fish hatcheries, and Indian reservations. Significant coastal fish and wildlife habitats have been mapped under the Coastal Management Program to preserve the recreational, commercial, and ecological benefits of Long Island's coastal resources. A WCD occurring on the BNL grounds is not expected to impact these natural resources.

1.4.2.6 Groundwater

There are three distinct water-bearing units underlying the BNL site: the Upper Glacial aquifer, Magothy aquifer, and the Lloyd aquifer. These aquifers constitute the Nassau/Suffolk Aquifer System, which has been designated by the U.S. Environmental Protection Agency (EPA) as a Sole Source aquifer system, pursuant to Section 1424(e) of the Safe Drinking Water Act (SDWA). Groundwater in the sole source aquifers underlying the BNL site is classified as “Class GA Fresh Groundwater” by the State of New York (6 NYCRR Parts 700-705). The best usage of Class GA groundwater is as a source of potable water supply. As such, federal drinking water standards, NYS Drinking Water Standards (NYSDWS), and NYS Ambient Water Quality Standards (NYSAWQS) for Class GA groundwater are used as groundwater protection and remediation goals. All six of BNL’s active drinking water supply wells are completed (i.e., screened) in the Upper Glacial aquifer. In the vicinity of BNL, the Suffolk County Water Authority uses both the Upper Glacial and Magothy aquifers for public water supply.

Because the aquifer system is very susceptible to contamination from legacy and ongoing facility operations, water quality is being protected using a comprehensive program of engineered and operational controls of existing aquifer contamination and potential sources of new contamination. Groundwater quality at BNL has been impacted by chemical and radiological contamination. Six significant volatile organic compound plumes and eight radionuclide plumes have been identified and are being remediated as part of BNL’s Long Term Response Action program. BNL’s groundwater monitoring network is designed to verify the effectiveness of the engineered and operational controls, and to track cleanup progress. Details on BNL’s groundwater protection and restoration programs are provided in the annual Site Environmental Report.

1.4.3 Analysis of the Potential for an Oil Spill

Most petroleum product storage and handling occurs at the MPF. As such, this area poses the greatest risk for a spill incident. The risks associated with this area are similar to those found in other areas of BNL where petroleum products are handled. Exhibit H contains standard operating procedures for daily operations (e.g., fuel transfer, containment inspection, and drainage).

As indicated on Figure 1-4 the oldest storage tank at the MPF is 47 years old. All other tanks are less than 37 years old with the newest tank being 22 years old. In accordance with New York State Petroleum Bulk Storage Regulations (Part 613.6(3)(b)) Out-of-Service API 653 inspections are performed on the six (6) MPF tanks every 10-years. The last Out-of-Service tank inspections were conducted in 2004.

The inspections were performed in compliance with the API 653 Standard. Any deficiencies identified as part of the inspections were repaired in accordance with best engineering judgment and industry accepted practices. Copies of the inspection reports are included in Appendix 10 of the BNL SPCC Plan.

1.4.3.1 Spill Scenarios

Possible spills in the MPF area may be classified in four basic categories:

- Major spills occurring outside of containment areas;
- Minor spills occurring outside of containment areas;
- Major spills (> 1,000 gallons) occurring inside of containment areas;
- Minor spills (< 1,000 gallons) occurring inside of containment areas.

Major spills outside of the containment areas are not considered likely, since these spills would be limited to line losses or transfer mishaps, which should be recognized and mitigated immediately. Additionally, as part of the extensive MPF upgrades conducted in 1995 and 1996, all piping systems were replaced, and where necessary, double-lined and equipped with leak detection.

Most major spills would probably occur within the containment areas. As defined in Section 9.3 of the SPCC Plan, Areas 3 and 4 are Bentonite-lined, and the balance of the tank areas are lined with Enviromat--a combination geosynthetic and clay liner (BNL 2011). These containment systems would preclude petroleum products from entering the soils, except for the unlined underside of the tanks, which are supported by concrete-ring walls. Leakage through the containment system would primarily be limited to the liner-ring wall interface unless the tank was dislodged. Tank dislodgement could be affected by an earthquake, airplane crash, or an event of similar magnitude.

The most probable spill scenario would occur within the contained tank areas from leakage at the base of a tank. If sizable, such leaks would be evident through noticeably rapid changes in the tank's product level. Otherwise, minor leakage might continue unabated until detected in the downgradient groundwater monitoring wells. Since antecedent moisture in the vadose zone beneath the tanks is constrained to a large extent by the secondary containment systems, a

certain volume of these minor leaks will be stored in the unsaturated soils until field capacity is reached.

One possible WCD scenario assumes a catastrophic tank failure, a major spill, and rapid attainment of field capacity in the vadose zone beneath the ruptured tank. This would cause the most rapid migration of contaminants to the water table, as contaminants would travel as a free phase or through advective groundwater flow to the MPF monitoring array. Under such circumstances, minimal contaminant travel times to the groundwater monitoring array could be estimated using the hydrogeologic parameters defined in Section 9.1 of the SPCC plan and according to the distances specified in Table 2 (Section 9) of the SPCC plan (BNL 2011). These data could also be used to support groundwater-modeling studies of a spill situation, which would incorporate site-specific information relative to product characteristics and environmental conditions at the actual time of the incident. Most importantly, a release to soils would be attenuated in the vadose and saturated zones. There would be no immediate impacts to surface water, or water supply sources.

Routine MPF operations include the receipt, transfer for storage and transfer for consumption of fuel oil for central steam production used for on-site heating and process steam purposes. The MPF and site storage facility were equipped with state-of-the-art fuel offloading facilities in 1995. These facilities provide complete containment of the delivery vehicles and have mitigated all releases during offloading. In 1996 the MPF underwent significant upgrades, including the removal of 900,000 gallons of capacity and upgrade of piping systems to conform to current requirements and standards (including secondary containment), where required. In 2004, internal inspection and coating of all active storage tanks were completed. Since 1997, oil consumption has been drastically reduced due to the use of natural gas. Based upon the physical upgrades to the MPF, the potential for releases from the transfer and storage of fuel oil has been significantly reduced.

The largest potential for environmental release is transportation-related. The most probable scenario is an accident when delivering fuel to the facility. This potential is greatest during adverse weather conditions.

1.4.4 Facility Reportable Oil Spill History

During the period from January 1, 2006 to October 31, 2010, BNL experienced 44 spill incidents that were reported to regulatory agencies (None of the spills were greater than or equal to 10,000 gallons). New York State requires that any spill that impacts soil be reported within two hours of the time of discovery. Of the 44 spills only two (2) were related to the storage and transfer of petroleum. All other spills were related to failed mobile (e.g., motor oil, hydraulic oil, or antifreeze) or stationary equipment (e.g., working fluid releases such as cutting oils). The spills ranged in size from 1 cup to approximately 70 gallons.

All spills were to soil or were contained on impermeable surfaces. None of the releases were deemed “reportable” per 40 CFR Part 110, that is none of the releases resulted in impacts to surface water, nor did they cause a violation of a surface water quality standard. There were neither long-term impacts to the environment nor any threats to surface waters resulting from these releases. BNL provides a summary of the reported incidents in annual site environmental reports; excerpts are contained in Exhibit I.

1.4.5 Weather Risk Assessment

Incidents occurring as a result of weather conditions are inherently unpreventable and have the potential to cause Worst Case Discharges that would breach secondary containment structures.

1.4.5.1 Winter Storms

As indicated by records maintained by BNL's meteorology group for 40 years, severe winter storms pose a threat to BNL. The average annual snowfall is 31 inches. Average snowfall in this area from October through April starts at 0.1 inch, peaks to 9.3 inches in February, and diminishes to 0.4 inch. The combination of heavy snow, light snow, rain, and falling temperatures causes unpredictable, hazardous road conditions. An average of one to two icing conditions occurs each year exclusive of snow.

In the event of a weather-induced emergency, the safe evacuation of nonessential personnel and the early arrival of some vital personnel must be accomplished before BNL's roads and the surrounding area roads become dangerous or impassable. The safe and timely evacuation of personnel is of primary importance. Ongoing road clearing, sanding, and maintenance of arteries during the storm by BNL’s Site Resources Group ensure the continuance of vital services. Site Resource staff clear BNL's 29 miles of paved road, 12 miles of paved walkways, 83 acres of parking lots, and approximately 350 buildings, as conditions permit, to expedite recovery procedures and a return to normal operation.

Transportation incidents resulting from icing conditions could result in a small to medium discharge.

1.4.5.2 Thunderstorms and Lightning

Communications

Recently installed additional grounding, increases in spare parts inventory, a manual telephone panel for switch room outages, and a Plectron Warning System have improved BNL's communications systems and made them less vulnerable to lightning strikes and line surges.

Storage

Tanks installed after 1963 comply with API Standard 650, which is cross referenced to API Recommended Practice 2003: Protection Against Ignitions Arising Out of Static, Lightning and Stray Currents. Thus, minimal risk is posed to the tanks through ignition by lightning.

1.4.5.3 Hurricanes/Wind

Hurricanes are defined as storms with winds in excess of 74 miles per hour. The probability by percentage of a hurricane striking this area in any year is 0 to 1%. According to the Federal Emergency Management Agency (FEMA), the probability of a great hurricane with winds in excess of 125 miles per hour is zero for an area extending hundreds of miles up and down the Atlantic coast from this location.

Wind damage to modular buildings and trailers and wind driven debris are the primary concern to BNL. Wind felled trees and power lines may also interrupt services and roadways. High winds, erosion caused by flash floods, and intense storm water runoffs are of most concern with regard to a WCD.

1.4.5.4 Earthquakes

BNL is located in an Earthquake Risk Zone 1, so earthquakes are not considered a threat. On a scale of 1 to 3, 1 is the least intense with damage corresponding to intensities VII and VIII. (The Roman numerals refer to intensity on the Modified Mercali Intensity Scale).

1.5 Discharge Scenarios

1.5.1 Small and Medium Discharges

Small discharges are being considered as any release that is less than 2,100 gallons. Medium releases are defined as any release greater than 2,100 gallons but less than 36,000 gallons.

All recorded releases over the last 20 years have been small releases of typically less than 100 gallons. Mechanical failure of system components accounted for the majority of the releases. These releases involved failures of valves, leaks at pump connections, or leaking seals. The largest release of 100 gallons occurred as a result of a compressor failure and was not associated with oil storage or transfer. Other releases were caused primarily from operator error, and included cutting fuel lines that had not been properly drained, opening an unknown valve, or overfilling a vehicle. All releases were mitigated and remediated to the satisfaction of local regulatory agencies.

1.5.1.1 Facility-Specific Spill Scenarios

The most probable small discharge scenario would involve less than 100 gallons of oil and would result from either a minor structural failure (such as leaks from piping, storage tanks, or transformers) or from a truck during a fuel transfer operation or motor vehicle incident.

Releases of up to 1,000 gallons would most likely be handled using BNL's immediately available response assets identified in Section 1.3.2. However, outside contractual support can be called in at any time for assistance including follow-up site remediation and disposal of contaminated debris. Interim storage of recovered liquids would be facilitated using on-site storage tanks.

Discharge scenarios involving greater than 1,000 gallons of oil, including medium discharge scenarios of 2,100 to 36,000 gallons, would require support from outside contractors for control and recovery efforts. Following notification, BNL personnel would focus their efforts on inhibiting the flow of spilled oil to conduits, containing the release, and minimizing impacts to local sensitive habitats.

1.5.1.2 Response Effort Factors

The topography of BNL is such that the surface flow of a small to medium spill predictably would be limited to the actual site of the spill. A larger spill at the MPF that is not contained within the secondary containment would flow in an easterly direction away from the central portion of the Laboratory (See Figure 1-5). Based upon the past five years of spill history, impacts to sensitive environments have been insignificant and remediation of the releases has fully restored the environment. There have been no impacts to wildlife resulting from spills.

As discussed in Section 1.4 aboveground oil storage at BNL consists mostly of persistent oil of classes III and IV, with over 70% of the site's total capacity located at the Major Petroleum Facility (MPF). Reviews of current operations at the MPF indicate an extremely remote probability that response efforts would be affected by a chain reaction of failures. This is based on the fact that MPF personnel are trained and qualified to immediately respond to any spill scenario and initiate spill response actions to reduce the chance of chain reactions (e.g., cease flow of product by securing pumps or valves, transferring oil, installing temporary plugs, and securing all ignition sources to prevent fire).

For impacts to potable water supplies, none would be affected by small, medium or worst case discharges. There are no water supply wells within ½ mile of the major storage facilities, and there are no surface water supplies on Long Island. Additionally, all storage facilities are outside the area of groundwater influence for the BNL domestic water supply. A source water assessment for the BNL

potable water supply has shown that there would be no impact from a release of oil at the major storage facilities.

With the exception of a release associated with a small diesel generator located at the sewage treatment plant, the likelihood of a small or medium discharge reaching surface water or traveling offsite is extremely remote. Soils are very permeable and all small and medium discharges would be contained to within the spill area. Spills to roadways, concrete and other paved areas during inclement weather could potentially impact storm water run-off. However, all storm water conveyance systems discharge to onsite recharge basins, which would contain the spills onsite. If spillage were to occur during refilling of the small diesel generator located at the sewage treatment plant during a heavy rain event, impact to surface water could occur. This tank is however, located indoors, is infrequently filled and a spill response kit is maintained at the facility to immediately mitigate any releases. Additionally, for the majority of the year the Peconic River is fully contained onsite and any release to the river would not impact offsite receptors.

There are only two mechanisms for off-site transport of spilled oils. These are via the groundwater and surface water pathways. As previously stated there is only an extremely remote possibility of transport via surface water. Such a release may result from a spill from a small generator located at the sewage treatment plant. The release scenario would require either failure of the tank or piping and oil escaping the facility during adverse weather conditions.

The BNL maintains several facilities for the storage of spill remediation and mitigation equipment. This includes two response trailers, and a sea-land container of spill absorbents at the MPF. A list of spill response equipment and materials is provided in the Emergency Response Action Plan and Section 1.3.2.

1.5.2 Worst Case Discharge and Planning Distances

BNL is located close to the geographic center of Suffolk County, Long Island, New York. While not directly adjacent to a navigable waterway, the MPF is located approximately 1.25 miles from the Peconic River. BNL's response contractor, MEG, is located in the immediate area of BNL and is a recognized OSRO for spills within the Port of New York area (see Sections 1.3.2 and 1.3.3).

The MPF is the only area at BNL in which a catastrophic event could result in a WCD. The MPF has the largest storage capacity at BNL, receives a high volume of deliveries, and has an adjacent transformer substation. The MPF secondary containment drains are connected to the central sanitary sewer system. These drains are equipped with valves, which are kept locked in the closed position. Drainage of accumulated precipitation is manually controlled and checked for oil before discharge. See Section 3.13 of the SPCC Plan for a complete description of the berm draining procedure. The sewer system has an outfall, which discharges to the Peconic River and is permitted by the State Pollutant Discharge Elimination System (SPDES). Storm drains are located at various points north and east of the MPF. These drains discharge to man-made recharge basins or to wooded areas of the site and do not directly discharge to the Peconic River. BNL's sewage treatment plant is a tertiary treatment plant with aerobic oxidation for removal of the biological matter and nitrification/denitrification of nitrogenous compounds (e.g., ammonia); secondary clarification; sand filtration for final effluent polishing; and ultraviolet light disinfection for bacterial control prior to discharge into the Peconic River. It also has the capability to divert flow to two double-lined, 4,000,000-gallon holding ponds until such time that parameters are within the effluent limitations of the SPDES permit.

Two separate WCD amounts and planning distances have been calculated for BNL’s MPF. Since BNL stores two different groups of oil (i.e., Group 3 and 4) that exceed 10% of the total storage, a WCD calculation was performed for both. Figure 1-4 describes the oil storage facilities located at the MPF. The table shows that, when filled to capacity, the MPF has one large tank that contains approximately 600,000 gallons of heavy fuel oil (i.e., No. 6) and two storage tanks that contain approximately 300,000 gallons each of residual fuel oil (i.e., No. 2). The worst case discharges were calculated using the

following worksheet in accordance with 40 CFR Part 112 Appendix D, Part A, according to the following conditions:

1. There are multiple tanks at the fuel storage facility,
2. All tanks have adequate secondary containment, and
3. None of the tanks are manifolded together.

In accordance with Appendix C, Attachments II and III, since the MPF is located within a sensitive environment (Pine Barrens) and a WCD could impact a state endangered species habitat, the most probable planning distance "D4" was calculated to be 0.24 miles. This is the distance from the nearest opportunity for discharge to Outfall 010, which is located east of the MPF and is a SPDES permitted outfall (See Figure 1-5 for location of outfall). A second, very unlikely planning distance "D1" was calculated to be 1.25 miles. This is the distance from the nearest opportunity for discharge to the Peconic River from sheet flow over land. Although extremely unrealistic due to the need for two modes of failure during heavy rainfall and the natural topography leading to the river, this planning distance was calculated for completeness.

1.5.2.1 Worksheet for Calculating Worst Case Discharge

1. Secondary Containment – Multiple Tank Facilities

   Are all aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility without adequate secondary containment?

   Yes/No: **No**

2. If the answer is yes, calculate the total volume of the aboveground oil storage tanks without adequate secondary containment. If all aboveground oil storage tanks or groups of above-ground oil storage tanks at the facility have adequate secondary containment, ENTER 0:
   0 gallons

3. Calculate the capacity of the largest single aboveground oil storage tank with an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, PLUS the volume from question 2 above.

FINAL WORST CASE VOLUME (Group #3 Oil): 300,000 GALLONS

FINAL WORST CASE VOLUME (Group #4 Oil): 600,000 GALLONS

1.6 Discharge Detection Systems

1.6.1 Discharge Detection by Personnel

BNL policy mandates that anyone discovering an oil spill must immediately report it to his/her supervisor and the BNL Police Group by calling Extension 2222. The Police and Fire/Rescue Groups are simultaneously notified. BNL policy seeks to encourage a positive attitude toward promptly reporting occurrences (including concerns, problems, or adverse conditions) to DOE and other appropriate organizations, both external and internal, as required by DOE orders and as further elaborated by BNL's Subject Area: Occurrence Reporting and Processing System (ORPS). This subject area is available online at:

https://sbms.bnl.gov/sbmsearch/subjarea/74/74_SA.cfm?parentID=74

BNL maintains 24-hour security with a response-trained staff of many armed security inspectors. The site is continuously patrolled and observed using surveillance equipment at fixed posts. The MPF is staffed 24 hours per day by at least two employees who inspect the facility once per shift. In addition, the Facility & Operations Directorate's Site Shift Supervisor, who can also initiate the BNL emergency notification system in case of an event, patrols oil storage facilities during off-hours.

MPF staff inspects storage facilities using a standardized checklist as part of routine operations. These inspections are fully described in Section 1.8.1.1. Figure 1-7 is a copy of the inspection checklist.

Should a spill occur at the MPF, the Senior Stationary Watch Engineer is required to contact the Site Shift Supervisor and the BNL Police Group. Depending on the severity of the spill, the emergency response personnel will notify the Qualified Individual (on duty Crisis Manager), F&O's line management, and other emergency response personnel, as needed, of the event. The line supervisor contacted is required to coordinate remediation efforts, including the cleanup and disposal of any waste. Environmental Protection Division personnel will notify appropriate regulatory agencies, if required, support remediation and disposal efforts, and prepare reports.

1.6.2 Automated Discharge Detection

In accordance with NYSDEC requirements, appropriate overfill alarms or other warning devices are installed on all fuel storage tanks. At the MPF, Tank Nos. 3 through 6, 9, and 10 have high-level alarms, a displacer probe, and a checker. All tanks are also equipped with devices that monitor the level of product in the tank and set off additional high-level alarms. All other applicable fuel oil storage tanks located throughout the site have been similarly equipped with an audible and visual hi-level alarm system.

Procedures for testing the alarms are identified in F&O Work Orders that are sent out by the Facilities Operations Center (FOC). Once completed, the work orders and associated checklists are sent back to the FOC for records management. The alarms are tested by electronic means monthly and by manual operation of activation devices semi-annually, and all tests are logged.

All tanks at BNL are equipped with a means of detecting overflow. These devices range from visual floats and whistle vents on small aboveground tanks to electronic detection for all large storage tanks. All storage tanks at the MPF are equipped with dual alarms, one high level and a second hi-high level alarm. In a high-level alarm, the stationary engineers are notified by audible and visual alarms, the transfer into the alarming tank is discontinued, and transfer continued into another tank with sufficient capacity. If the hi-high level is tripped, the transfer pumps are automatically shutdown.

1.7 Plan Implementation

1.7.1 Response Resources for Small, Medium, and Worst Case Spills

BNL developed plans for responding to petroleum spills of small (fewer than 2,100 gallons), medium (2,100 to 36,000 gallons) and WCD (up to 600,000 gallons) quantities.

BNL has determined that primary cleanup activities for most spills in excess of 1,000 gallons occurring in non-contained and high-risk areas will be performed by the contracted OSRO, MEG. Regardless of who is designated to perform spill response activities, BNL will implement immediate spill containment as described in Section 1.7.1.3 to reduce the spread of petroleum.

Procedures such as the *Local Emergency Plan* (EU-CSF-012) and *First Responder (Operations Level) – Central Steam Facility* (EU-CSF-020), and the SPCC Training Module (TQ-SPCC) have been developed to prepare personnel working at the Major Petroleum Facility for the

Figure 1-7

CENTRAL STEAM FACILITY DAILY TANK STORAGE AND ANCILLARY EQUIPMENT INSPECTION SHEET

Signature _____ Date and Time of Inspection _____

Area	Potential Problems	Area Status		Observations and Comments
		OK	UNSAT	
TANK 3 (611C) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
HEATERS	LEAKS			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			
TANK 4 (611D) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
HEATERS	LEAKS			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			
TANK 9 (611G) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
HEATERS	LEAKS			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			
TANK 10 (611H) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
HEATERS	LEAKS			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			

Area	Potential Problems	Area Status		Observations and Comments
		OK	UNSAT	
TANK 5 (611E) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			
TANK 6 (611F) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			

FUEL TRANSFER FACILITY BUILDING 639				
PUMPS	LEAKS, DRIPS			
STRAINERS	LEAKS, DRIPS			
VALVES	LEAKS, DRIPS			
OUTSIDE LIGHTING	CONDITION			
INSIDE LIGHTING	CONDITION			
DOORS	CONDITION			
WINDOWS	CONDITION			
UNLOADING AREA	CLEAN, NO OIL			
BOOM	CONDITION			
TELEPHONES	OPERATION RINGERS			
LEVEL CONTROL AUTOMATION	NOTE ANY ANOMALIES			
LIGHTING EXTERIOR OF BUILDING 610	LIGHTS NOT WORKING			

NOTE: THIS REPORTS CONSTITUTES A DAILY REVIEW OF THE GENERAL TANK FARM INTEGRITY. ANY COMMENTS WHICH AFFECT THE TANK FARM INTEGRITY SHOULD BE NOTED BELOW.

Leadman Signature _____ (Daily Signature)

Supervisor _____ (Spot Check)

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proper response required in the event of an emergency, including any size spill condition (Exhibit C). On an annual basis, personnel are required to review these procedures (including the SPCC and FRP Plans) and perform response drills. At the conclusion of this training a form is filled out certifying that they understand their duties and responsibilities in the event of an emergency. In addition to the above mentioned site-specific procedures a Lab-wide subject area titled *Spill Response* identifies the responsibilities of all personnel who cause, discover, respond to, or clean up an unexpected release of oil, hazardous substances, radioactive materials, or other regulated pollutants. The spill response guidelines provided in this subject area are implemented on a regular basis as part of normal operations. All training is documented in the BNL training database and/or departmental training records (See Section 1.8.3 – General Training).

Before the initiation of any response action, an evaluation will be made to determine the presence of other hazardous substances or radiological contamination at the scene. Should these contaminants be identified, the response actions will be re-evaluated in accordance with the BNL Emergency Plan and related BNL plans and procedures for response to radiological and hazardous substance incidents.

1.7.1.1 Required Response Resources

BNL's ability to respond to and mitigate a WCD has been calculated in accordance with 40 CFR Part 112, Appendix E. The worksheets contained in this section (Figures 1-8 and Figure 1-9) have been reproduced from Appendix E-1 to Appendix E and has been completed using the following conditions to calculate the required response resources:

1. WCD is 300,000 gallons for Group 3 oil and 600,000 gallons for Group 4 oil. See Section 1.5.2.1 for Worksheet,

2. Products are No. 2 (light petroleum) fuel oil, specific gravity approximately 0.87, Oil group 3, and No. 6 (heavy petroleum) fuel oil, specific gravity approximately 0.95, Oil group 4,

3. BNL's oil storage facility does not directly abut any waterway and receives fuel by tractor-trailer only,

4. The nearest waterway, the Peconic River, is located approximately 1.25 miles from MPF (Planning Distance D1, as described in Appendix C of 40 CFR Part 112),

5. Storm drains do not discharge to the Peconic River. They discharge to a SPDES-permitted outfall (Outfall 010), which is located in an undeveloped, environmentally sensitive wooded area east of the MPF. Therefore, the Planning Distance D4 as described in Appendix C of 40 CFR Part 112 is 0.24 miles. If a large spill occurred, the product would have to travel in excess of one-mile from this outfall to reach navigable waters, and

6. All containment drains discharge via the central sanitary sewer system to the SPDES-permitted BNL Sewage Treatment Facility, then through intermittent sand filters before discharge to the Peconic River.

Figure 1-8		
WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES FOR WORST CASE DISCHARGE AT BNL (Group 3 Oil – 300,000 gallons)		
Part I: Background Information		
Step (A): Calculate Worst Case Discharge in Barrels (See Section 1.5.2)		7,143 Barrels (A)
Step (B): Oil Group		3
Step (C) Operating Area (Choose One): _X_ Inland/Near Shore ____ Rivers/Canals		
Step (D): Percentages of Oil (Appendix E, Table 2)		
Percentages Lost to Natural Dissipation	**Percentage Recovered Floating Oil**	**Percentage Oil On-shore**
30% (D1)	50% (D2)	50% (D3)
Step (E) Oil Recovery		
Step (E1) On-Water Oil Recovery	Step (D2) x Step (A) / 100	3,571 Barrels
Step (E2) Shoreline Recovery	Step (D3) x Step (A) / 100	3,571 Barrels
Step (F): Emulsification Factor (See Appendix E, Table 3): 2.0		
Step (G): On-water Oil Recovery Mobilization Factor (Appendix E, Table 4)		
Tier I **0.15**	Tier 2 **0.25**	Tier 3 **0.40**
Part II: Required On-water Oil Recovery Capacity (barrels/day)		
Tier I Step E1 x Step F x Step G1 = **1,071**	Tier 2 Step E1 x Step F x StepG2 = **1,786**	Tier 3 Step E1 x Step F x Step G3 = **2,857**
Part III: Shoreline Clean-up Volume (barrels)		Step E2 x Step F = **7,143**
Part IV: Maximum On-water Response Capacity by Operating Area (See Appendix E, Table 5) (Amount Needed to be contracted for in barrels per day)		
Tier I **12,500**	Tier 2 **25,000**	Tier 3 **50,000**
Part V: On-water Amount Needed to be Identified but Not Contracted for in Advance (Barrels/day)		
Not Applicable*	**Not Applicable***	**Not Applicable***

* *Since the Maximum On-water Response Capacities (Part IV) exceed the Worst Case Discharge Required Response Capacity (Part II), no additional contracted response resources are required. The Required Response Capacity will be provided through a combination of in-house labor and materials and contracted labor and materials through the Miller Environmental Group.*

Figure 1-9		
WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES FOR WORST CASE DISCHARGE AT BNL (Group 4 Oil – 600,000 gallons)		
Part I: Background Information		
Step (A): Calculate Worst Case Discharge in Barrels (See Section 1.5.2)		14,286 Barrels (A)
Step (B): Oil Group		4
Step (C) Operating Area (Choose One): __X__Near Shore _____ Rivers/Canals		
Step (D): Percentages of Oil (Appendix E, Table 2)		
Percentages Lost to Natural Dissipation	**Percentage Recovered Floating Oil**	**Percentage Oil On-shore**
10% (D1)	50% (D2)	70% (D3)
Step (E) Oil Recovery		
Step (E1) On-Water Oil Recovery	Step (D2) x Step (A) / 100	7,143 Barrels
Step (E2) Shoreline Recovery	Step (D3) x Step (A) / 100	10,000 Barrels
Step (F): Emulsification Factor (See Appendix E, Table 3): 1.4		
Step (G): On-water Oil Recovery Mobilization Factor (Appendix E, Table 4)		
Tier I **0. 15**	Tier 2 **0.25**	Tier 3 **0.40**
Part II: Required On-water Oil Recovery Capacity (barrels/day)		
Tier I Step E1 x Step F x Step G1 = **1,500**	Tier 2 Step E1 x Step F x StepG2 = **2,500**	Tier 3 Step E1 x Step F x Step G3 = **4,000**
Part III: Shoreline Clean-up Volume (barrels)		Step E2 x Step F = **14,000**
Part IV: Maximum On-water Response Capacity by Operating Area (See Appendix E, Table 5) (Amount Needed to be contracted for in Barrels per day)		
Tier I **12,500**	Tier 2 **25,000**	Tier 3 **50,000**
Part V: On-water Amount Needed to be Identified but Not Contracted for in Advance (Barrels/day)		
Not Applicable*	**Not Applicable***	**Not Applicable***

* *Since the Maximum On-water Response Capacities (Part IV) exceed the Worst Case Discharge Required Response Capacity (Part II), no additional contracted response resources are required. The Required Response Capacity will be provided through a combination of in-house labor and materials and contracted labor and materials through the Miller Environmental Group.*

1.7.1.2 Available Spill Response Resources

Brookhaven National Laboratory has an established Emergency Management Program that provides the framework for development, coordination, control, and direction of all emergency planning, preparedness, readiness assurance, response, and recovery actions.

To accomplish this, Emergency Management establishes requirements for comprehensive planning, preparedness, response, and recovery activities of the emergency management programs and effectively integrates planning, preparedness, response, and recovery activities for a comprehensive, all-emergency management concept.

Emergency Management also integrates public information and emergency planning to provide accurate, candid, and timely information to employees, guests, the public, and other government officials during emergencies.

Ultimately, the Emergency Management Program promotes more efficient use of resources through greater flexibility (i.e., the graded approach) in addressing emergency management needs at Brookhaven National Laboratory.

Included in this Emergency Management Program is an Emergency Response Organization (ERO), which is a group of non-uniformed emergency responders that supports the efforts to mitigate and manage an emergency event (e.g., medical emergencies, fires, explosions, collapse, trapped personnel, and hazardous material releases). Exhibit D includes a copy of the ERO Team Roster, schedule, and organizational chart, which provides a high-level summary of available spill response resources included in BNL's ERO.

The BNL facility is equipped with a fire department that provides 24-hour staffing of at least six individuals, including a fire captain. BNL's fire fighting resources are well trained in handling Group 1 – Group 4 oil fires. The BNL Fire Department is equipped with one Class 'A' Engine, one Rescue Unit, and one Ladder/Pumper as described in Exhibit B. The BNL Fire Department would respond to any fires resulting from a petroleum spill in less than three minutes (See Table 1-4). In the event that additional fire suppression resources should be required, mutual aid would be provided through the Suffolk County Fire/Rescue and Emergency Services Department. The acting captain of the BNL's Fire Rescue Group would coordinates on-site and off-site fire departments.

Response equipment capable of responding to Tier 1 and 2 level spills (as high as 36,000 gallons) is located at three specific areas on site (Near Buildings 326, 599, and 610) and can be deployed within 2 hours of a spill. This equipment is designed to operate in BNL's typical operating environment conditions (e.g., since all releases are initially to land, pumps and other response equipment are capable of operating in shallow water or under dry conditions). The equipment is composed primarily of absorbent materials (pads, socks, Speedi-dri, soil), transfer pumps (air-driven diaphragm pumps), hard "mini creek" and soft boom, and other mechanical equipment (hand-tools, graders, backhoes). The total immediately available absorbent capacity onsite is approximately 500 gallons. Total calculated pumping capability is 4,500 bbls per day. Pumps, limited absorbents, and hand tools are maintained in a container at the MPF. Table 1-1 provides a list of response equipment available and Figures 1-1 and 1-2 of Exhibit F identifies the specific location of the response equipment.

As mentioned in Section 1.5 (Discharge Scenarios), with the exception of a release associated with a small diesel generator located in Building 580 at the sewage treatment plant, the likelihood of any size spill (small, medium, or WCD) reaching surface water or traveling offsite is extremely remote. Nonetheless, BNL has sufficient quantities of soft and hard boom available for oil containment/collection and for protection of fish/wildlife and sensitive environments, which

is capable of being deployed within one hour of the spill. Twenty feet of 8" soft boom, approximately 100 feet of 4" "mini-creek" hard boom, and other spill response materials is maintained at Building 580 to immediately mitigate any releases to the surface water. As appropriate, the soft and hard boom would be placed at the downstream side of the sewage treatment plant outfall to protect the Peconic River. As a secondary defense, containment could also be placed on the culvert on the east side of BNL where the Peconic River passes under the powerline access road.

MEG has been contracted to provide response resources up to and including WCD amounts with an initial response time of 6 hours or less depending on spill severity (MEG is located in Calverton, New York, which is just 11 miles east of BNL). The United States Coast Guard routinely completes a review of MEG's response qualifications as an OSRO. Figure 1-10 is a copy of a letter from the Coast Guard (National Strike Force Coordination Center) summarizing MEG's classification as an OSRO based on the resource data provided. A complete list of contractor qualifications is supplied in Exhibit G.

Below are some minimum capabilities against Miller Environmental Group's OSRO Classification:

1. Recovery: 6,000 bbls/day.

2. Containment boom: 4,000 feet.

3. Protective boom: 22,000 feet.

4. Minimum Oil Recovery Equipment - (skimmers, vacuums, etc.): 6,000 bbls/day.

5. Recovered oil storage: Minimum 12,000 bbls of temporary storage capacity.

Total Effective Daily Recovery Capacity (EDRC) available to BNL includes 4,500 bbls per day of on-site resources and approximately 57,991 bbls per day through contract services with MEG. Since the total EDRC available between BNL and MEG is greater than the calculated response resources required for a WCD, BNL and MEG capabilities are sufficient for response to a WCD. BNL resources are more than sufficient for mitigating small and medium releases, even at levels as high as 36,000 gallons.

1.7.1.3 Oil Spill Response – Immediate Actions

The following immediate spill response actions would be implemented to reduce the spread of petroleum regardless of the size of the spill:

- Cease flow of product by securing pumps or valves, transferring oil, installing temporary plugs, etc.
- Warn site personnel by cordoning off area and securing the site to prevent unauthorized access;
- Secure all ignition sources to prevent fire;
- Initiate containment by construction of berms, dikes or application of absorbent;
- Notify regulatory agencies per BNL standard procedure including the National Response Center, the NYSDEC, SCDHS, etc.

Additional measures to be considered for a medium or larger spill (2,100 gallons or more) occurring at the MPF includes:

U.S. Department of Homeland Security
United States Coast Guard

Commander
National Strike Force Coordination Ctr.

1461 North Road Street
Elizabeth City, NC 27909
Staff Symbol:
Phone: 252-331-6000
FAX: 252-331-6012

16465

Miller Environmental Group
Attn: Jim Davey
538 Edwards Ave
Calverton, NY 11933

APR 3 2007

Figure 1-10

Dear Mr. Davey,

During the Coast Guard's transition to Sector organizations you have gained classifications in Sector Southern New England's COTP zone. You have received the following classifications listed in enclosure (1).

Our files have been updated to reflect your current status; please inform your clients of the same. Your classifications will also be listed on the OSRO Classification Matrix available on the Internet at:

http://www.uscg.mil/hq/nsfweb/nsfcc/ops/ResponseSupport/RRAB/OSRODoc/OSRO%20Listing%20By%20COTP%20Zone.pdf

The Coast Guard is transitioning to a Sector organization which consolidates field operational and marine safety functions; enclosure (2) is a consolidated table that explains the changes affected by this transition.

Thank you for your participation in the OSRO program; your efforts to strengthen our national response capabilities are greatly appreciated.

Sincerely,

R.T. GORE
Chief, Response Support Division
U.S. Coast Guard
By direction

2 Enclosures

Copy: Commandant, U. S. Coast Guard (G-3RPP-2) w/o enclosure (2)
Commandant, U. S. Coast Guard (G-3PCV-2) w/o enclosure (2)
Commander, First Coast Guard District (dr) w/o enclosure (2)
Commander, Coast Guard Sector Southern New England
EPA Region 1 w/o enclosure (2)
Pipeline and Hazardous Materials Safety Administration (PHMSA)

MILLER ENVIRONMENTAL GROUP INC.

Individual OSRO Classification Report

0020 Miller Environmental Group

COTP	High Volume Port	Alternate City		Facilities MM	Facilities W1	Facilities W2	Facilities W3	Vessels MM	Vessels W1	Vessels W2	Vessels W3
BALTIMORE	☐		River/Canal	☑	☑	☑	☑	☑	☑	☑	☑
			Inland	☑	☑	☑	☑	☑	☑	☑	☑
			Open Ocean	☐	☐	☐	☐	☐	☐	☐	☐
			Offshore	☐	☐	☐	☐	☐	☐	☐	☐
			Nearshore	☐	☐	☐	☐	☐	☐	☐	☐
			Great Lakes	☐	☐	☐	☐	☐	☐	☐	☐
BOSTON	☑		River/Canal	☑	☑	☑	☑	☑	☑	☑	☑
			Inland	☑	☑	☑	☑	☑	☑	☑	☑
			Open Ocean	☐	☐	☐	☐	☐	☐	☐	☐
			Offshore	☐	☐	☐	☐	☐	☐	☐	☐
			Nearshore	☐	☐	☐	☐	☐	☐	☐	☐
			Great Lakes	☐	☐	☐	☐	☐	☐	☐	☐
BUFFALO	☐		River/Canal	☑	☑	☑	☑	☑	☑	☑	☑
			Inland	☑	☑	☑	☑	☑	☑	☑	☑
			Open Ocean	☐	☐	☐	☐	☐	☐	☐	☐
			Offshore	☐	☐	☐	☐	☐	☐	☐	☐
			Nearshore	☐	☐	☐	☐	☐	☐	☐	☐
			Great Lakes	☐	☑	☑	☑	☑	☑	☑	☑
BUFFALO(OSWEGO, NY)	☐		River/Canal	☑	☑	☑	☑	☑	☑	☑	☑
			Inland	☑	☑	☑	☑	☑	☑	☑	☑
			Open Ocean	☐	☐	☐	☐	☐	☐	☐	☐
			Offshore	☐	☐	☐	☐	☐	☐	☐	☐
			Nearshore	☐	☐	☐	☐	☐	☐	☐	☐
			Great Lakes	☐	☑	☑	☑	☑	☑	☑	☑
DELAWARE BAY(Formerly PHILADELPHIA)	☑		River/Canal	☑	☑	☑	☑	☑	☑	☑	☑
			Inland	☑	☑	☑	☑	☑	☑	☑	☑
			Open Ocean	☐	☐	☐	☐	☐	☐	☐	☐
			Offshore	☐	☐	☐	☐	☐	☐	☐	☐
			Nearshore	☐	☐	☐	☐	☐	☐	☐	☐
			Great Lakes	☐	☐	☐	☐	☐	☐	☐	☐
LONG ISLAND SOUND	☐		River/Canal	☑	☑	☑	☑	☑	☑	☑	☑
			Inland	☑	☑	☑	☑	☑	☑	☑	☑
			Open Ocean	☐	☐	☐	☐	☐	☐	☐	☐
			Offshore	☐	☐	☐	☐	☐	☐	☐	☐
			Nearshore	☐	☐	☐	☐	☐	☐	☐	☐
			Great Lakes	☐	☐	☐	☐	☐	☐	☐	☐
NEW YORK	☑		River/Canal	☑	☑	☑	☑	☑	☑	☑	☑
			Inland	☑	☑	☑	☑	☑	☑	☑	☑
			Open Ocean	☐	☐	☐	☐	☐	☐	☐	☐
			Offshore	☐	☐	☐	☐	☐	☐	☐	☐
			Nearshore	☐	☐	☐	☐	☐	☐	☐	☐
			Great Lakes	☐	☐	☐	☐	☐	☐	☐	☐

ENCL (1)

MILLER ENVIRONMENTAL GROUP INC.

Individual OSRO Classification Report

COTP: SOUTHERN NEW ENGLAND(Formerly PROVIDENCE)

☐ *High Volume Port*

Alternate City:

	Facilities				*Vessels*			
	MM	*W1*	*W2*	*W3*	*MM*	*W1*	*W2*	*W3*
River/Canal	☑	☑	☑	☑	☑	☑	☑	☑
Inland	☑	☑	☑	☑	☑	☑	☑	☑
Open Ocean	☐	☐	☐	☐	☐	☐	☐	☐
Offshore	☐	☐	☐	☐	☐	☐	☐	☐
Nearshore	☐	☐	☐	☐	☐	☐	☐	☐
Great Lakes	☐	☐	☐	☐	☐	☐	☐	☐

Check marks indicate that your company has received classifications in the following areas. Please refer to the OSRO Guidelines for a complete discussion of the 4 classification levels that require different minimum amounts for each Environmental operating area.
MMPD(MM) = Maximum Most Probable Discharge
WCD1(W1) = Worse Case Discharge Tier 1
WCD2(W2) = Worse Case Discharge Tier 2
WCD3(W3) = Worse Case Discharge Tier 3

If an asterisk(*) is displayed after a COTP name, it denotes cities that formerly had COTP authority, but loss that authority and are being considered for designation as an Alternate Classification City(ACC).

- Construction/repair of earthen dikes to contain oil at the affected storage tank or at the storm drain outfall located in the wooded area east of North Sixth Street, if impacted;

- Transfer oils from affected storage tank to other available or spare oil storage facilities;

- In the event of secondary containment drain failure resulting in release of oil to the sanitary sewer, diversion of the sanitary sewer to the lined hold-up ponds to retain any spilled product.

1.7.1.4 Temporary Storage

Sufficient excess storage capacity for any foreseeable oil spill is available via fixed and portable tankage between BNL and MEG. The worksheet in Section 1.5.2.1 of this plan lists all storage capacity available at the MPF and registered as part of the Major Petroleum Facility License. It has been determined that the operational needs (i.e., maximum quantity of product stored at any time) do not require more than 1,425,900 gallons (33,950 bbls). If all other large tanks at BNL were full during a WCD scenario, MEG would have available temporary storage equivalent to 52,857 bbls (2,219,994 gallons). If necessary, two double-lined holding ponds are located east of BNL's Sewage Treatment Plant with a total combined capacity exceeding 6 million gallons. These holdup ponds could be used for temporary storage of recovered oil/water mixtures in the event of a major oil spill during wet weather events.
Any cleanup residuals (i.e., used absorbent pads, Speedi-dri, sand, and oil contaminated soil) would be stored as follows:

Small Quantities:	55-gallon drums 5-cubic-yard "Argonne" bins.
Large Quantities:	20-yard roll-off containers arranged through MEG.

For an extraordinary amount of material, a temporary berm could be constructed at a convenient location, lined with plastic, and the contaminated material held for final disposal.

1.7.1.5 Contractor Responsibility

BNL employs full-time, round-the-clock fire rescue personnel who are tasked with hazardous material release first-response duties. The acting Fire Captain assumes the role of the QI during all response actions and coordinates all mitigative operations until the QI or designee arrives at the site. Fire/Rescue personnel are deployed immediately whenever an emergency call is received. Upon arrival at the scene, the QI and other spill response personnel make an immediate response determination.

If it is determined that on-site response resources are inadequate to mitigate a release, MEG will be contacted for assistance. MEG is responsible for the following:

- As requested by an authorized BNL representative, providing all necessary personnel and equipment to remediate the spill;

- Obtaining and maintaining all necessary permits to transport petroleum waste within the New York Tri-state (New York, New Jersey and Connecticut) area;

- Providing qualified, Hazardous Waste Operations and Emergency Response (HAZWOPER)-trained supervisory personnel to the scene;

- Providing qualified and appropriately trained (HAZWOPER) field personnel to remediate the spill efficiently and safely;

- Working in conjunction with the BNL ES and Safety and Health Services Divisions, NYSDEC, SCDHS, and EPA representatives to ensure that the remediation is complete and performed in accordance with all applicable laws and regulations.

1.7.2 Disposal Plans

BNL's Waste Management Division will coordinate disposal of cleanup residuals. Liquid petroleum products recovered from within the secondary containment or recovered from the ground surface shall be recycled at BNL, to the best extent practicable. Waste that cannot be recycled will be stored and disposed of in accordance with Federal, State, and local laws, regulations, and permit requirements.

Petroleum contaminated materials (e.g., soils, personal protective equipment, spill absorbents) resulting from minor spills are periodically sent off site for disposal. Efforts are made to send large volumes of spill residuals to recycling facilities and avoid disposal at the municipal landfill. Contaminated soil and other material (e.g., spent chemicals used in the cleanup efforts) that is not suitable for disposal at the town landfill or cannot be recycled into a usable end product, e.g., asphalt, would be sent to one of many contracted waste disposal facilities, including:

Beneficial Reuse Facility	
Blue Water Environmental, Inc.	1610 New Highway Farmingdale, NY 11735-1534 (631) 752-2145
Disposal Facility	
Chemical Waste Management, Inc.	1550 Balmer Road Model City, NY 14107
Clean Harbors Environmental Services, Inc.	1501 Washington Street Braintree, MA 02184 (800) 444-4244
Veolia Technical Services	1 Eden Lane Flanders, NJ 07836 (800) 426-2282

These facilities have been audited by BNL and are fully permitted to receive wastes generated by spill response activities. Additional contracted disposal services are also available through MEG and may be used for a large oil spill.

Response equipment will be decontaminated using appropriate solvents and aqueous cleaners. All decontamination solutions will be packaged for off-site disposal unless suitable for disposal via the BNL sewage treatment plant.

1.7.3 Containment and Drainage Planning

This section discusses BNL's ability to contain and control a spill through containment and drainage in order to minimize exposures. The potential release of oil and its impact on vulnerable resources, which are important in assessing a real-time incident, are discussed in Section 1.4. Tank capacities, locations, and oil types are listed in Section 3.9 of BNL's SPCC Plan (BNL 2011).

Storage tanks at the MPF are situated within secondary containment areas. Some of these containment areas are composed of earthen berms mixed with bentonite, while others are lined with Enviromat. Detailed specifications on the berms and their construction materials are presented in Section 3.12 of BNL's SPCC Plan (BNL 2011). All containment areas will contain in excess of 110% of the total tank volumes.

Located within the MPF, BNL maintains a spill response container with portable pumps that could be used in a sump pump capacity. Each berm area has collection sumps that are drained following inspection and piped into the sanitary sewer. Locked valves prevent inadvertent discharge. Pumps and absorbent materials available for spill response are presented in Table 1-1, including their capacity for containment and their locations at BNL.

The construction materials, drainage routes, headwall, and outfalls for the drainage/storm system are identified in Exhibit F, Figure 1-2.

In the unlikely event of a containment breach, the area around the MPF is sloped gently to the east. Since the majority of fuels are residual fuels, overland flow would be impeded by increased fluid viscosity resulting from product cooling. To retard product movement, heavy equipment would be used to contain the oil by creating earthen berms and by trenching.

1.8 Facility Self-Inspection, Training and Meeting Logs

1.8.1 Facility Self-Inspection

The BNL inspects all petroleum bulk storage tanks and secondary containment systems in an effort to prevent and mitigate oil spills at BNL In accordance with 40 CFR Part 112.8(c)(10), supervisors of these facilities will note any deficiencies that are reported during these inspections and take the necessary corrective actions. Evidence of leakage from tanks, piping, seams, gaskets, pumps, valves, etc, is reported immediately and remediated as appropriate. Maintenance requests are forwarded through the BNL FOC to assure proper accountability.

At the MPF, senior stationary engineers monitor and record all tank levels and visually check the tank facility and all pumping operations at least four times during every 8-hour shift. Details on inspections that are performed at the MPF are provided in the following sections.

1.8.1.1 Tank Inspection

Above grade storage tanks are internally inspected periodically and all level indicators and high-level alarms are checked as part of the preventive maintenance system. Designated BNL personnel inspect tanks, foundations, and piping using the checklist provided as Figure 1-7. Designated BNL personnel inspect the tanks, foundations, and piping according to the following criteria:

- Check tanks for leaks, specifically checking for
  - Drip marks,
  - Discoloration of tanks,
  - Puddles containing spilled or leaked material,
  - Corrosion,
  - Cracks, and
  - Localized dead vegetation.

- Check foundations for

  - Cracks,
  - Discoloration,
  - Puddles containing spilled or leaked material,
  - Settling,
  - Gaps between tank and foundation, and
  - Damage caused by vegetation roots.

- Check piping for

  - Droplets of stored material,
  - Discoloration,
  - Corrosion,
  - Bowing of pipe between supports,
  - Evidence of stored material seepage from valves or seals, and
  - Localized dead vegetation.

During inspection, BNL personnel make note of discrepancies in any of the items on the checklist and report them to the F&O Directorate personnel immediately. These records are maintained for five years.

1.8.1.2 Response Equipment Inspection

As previously described in Section 1.3.3, portable equipment, emergency response vehicles and heavy equipment are maintained under F&O's preventative maintenance program. BNL's FOC maintains copies of inspection and maintenance records. Other spill response resources (e.g., spill absorbents) are periodically inspected including:

- Item type and quantity;

- Storage location;

- Accessibility (time to access and respond);

- Operational status/condition;

- Actual use/testing (last test date and frequency of testing); and

- Shelf life (present age, expected replacement date).

Exhibit B contains the checklists used when inspecting the BNL Fire Rescue emergency response vehicles. Any deficiencies noted during the inspection are noted and the inventory adjusted as necessary to ensure an adequate supply of response resources.

1.8.1.3 Secondary Containment Inspection

Using the checklist provided as Figure 1-7, BNL designated personnel inspect secondary containment areas using the following criteria:

- Dike or berm system:

  - Level of precipitation in dike/available capacity,

- Operational status of drainage valves,
- Dike or berm permeability (tested every 5 years),
- Debris,
- Erosion,
- Permeability of the earthen floor of diked area (tested every 5 years), and
- Location/status of pipes, inlets, drainage beneath tanks.

- Secondary containment:

  - Cracks,
  - Discoloration,
  - Presence of stored material (standing liquid),
  - Corrosion, and
  - Valve conditions.

- Retention and drainage ponds: Not Applicable

  - Erosion,
  - Available capacity,
  - Presence of stored material,
  - Debris, and
  - Stressed vegetation.

Note: No retention or drainage ponds are present at BNL for spill control; however, two lined holding ponds used to divert the sewage treatment plant effluent may be used in the event of a spill entering the sewage system.

During inspection, BNL personnel make note of discrepancies in any of the items on the checklist and report them to the F&O Directorate personnel immediately.

1.8.2 Drill and Exercise Programs

1.8.2.1 Facility Drills and Exercises

The BNL oil spill response exercise program follows the National Preparedness for Response Exercise Program (PREP). Elements of the program include both planned and unannounced drills, QI notification drills, emergency procedure drills, spill management team tabletop exercises, and equipment deployment exercises. Drills and exercises will incorporate a WCD release scenario at least once every three years. At the conclusion of each drill/exercise, participating BNL personnel will document and evaluate the drill/exercise actions and use lessons learned to improve the overall response plan. BNL welcomes participation from local and state agencies in the performance of these drills/exercises. These exercises train not only in the area of oil spill response but also for chemical/radiological releases, personnel emergencies (e.g., heart attack), or a security threat. A summary of BNL's PREP Program and examples of template memos documenting the exercises described above is provided in Exhibit J.

1.8.2.2 Documentation of Drills/Exercises

BNL's Office of Emergency Management documents all drills associated with chemical/radiological releases, personnel emergencies, and security threats. Drills and exercises specifically related to PREP elements are coordinated and documented by BNL's Environmental Protection Division. Records of participants, critiques of the exercise, etc. are documented and maintained by both groups. An example exercise is provided in Exhibit J.

1.8.3 General Training

BNL has established training requirements for all BNL employees. Training includes both general Lab-wide training and job-specific training. The BNL Training Office is responsible for developing training and providing guidance to all BNL departments regarding the development and implementation of training plans. Before establishing a training plan, each department/division identifies training requirements through the completion of a job training assessment for each position or job assignment. Job assessment documentation includes job duties, tasks, safety requirements, and potential health threats. Training is conducted at BNL for employees, contractors, guests, visitors, and others who work at BNL. Each department or division is responsible and accountable for training its personnel and has established a departmental training plan that concurs with the BNL training program.

Each department/division documents personnel training with information regarding job duties, tasks, descriptive information about the course, and attendance records. Departments or divisions accomplish this documentation through coordination with the BNL Training Office. For each training course, BNL training documentation includes pertinent, descriptive information about the course, the recommended class size, expatriation date or frequency with which the course should be repeated by trainees, and equipment. Each department/division must keep records of training attendance for required general training, on-the-job training, and recommended training. This documentation will be kept by BNL for five years, or for the period specified by the DOE or by applicable regulatory requirements. Individual training records and information about training courses may be viewed at http://training.bnl.gov/.

1.8.3.1 Response Training

The objectives of the BNL Oil Spill Response Program are to train BNL personnel to respond rapidly, safely, and effectively to an oil spill and to use available materials and equipment. BNL uses the Incident Command System approach to manage emergency response, which is based upon the USCG Training Reference for Oil Spill Response as appropriate. All training is documented in the BNL training database and/or departmental training records.
Training has been designed to be performance-based to ensure that the emergency response personnel can demonstrate knowledge in the following areas, as appropriate to their assigned response duty:

- Notification procedures and requirements;
- Information on the materials stored, transferred, or used, including familiarity with the material safety data sheets, special handling procedures, health and safety hazards, and spill and firefighting procedures;
- Procedures for mitigating or preventing a discharge or substantial threat of discharge of oil;
- Personnel responsibilities and procedures for use of equipment that may be used to mitigate an oil discharge;
- Responsibilities and procedures to initiate and supervise a response by the contracted oil spill removal organization (OSRO) and their operational capabilities to respond to a small, medium, and worst- case discharge at BNL;

- Responsibilities and authorities of the qualified individual, spill management team, and response personnel as identified in the BNL FRP;
- The organizational structure that will be used to manage the response actions (Incident Command System);
- Procedures for post-discharge review of the BNL FRP to evaluate and validate its effectiveness;
- The appropriate Area Contingency Plans, the National Contingency Plan, and the roles and responsibilities of the federal and state agencies in pollution response;
- Available response resources; and
- Spill operations and oil spill cleanup technology.

Field Training Exercises

Field training exercises are conducted to provide hands-on training to all field operations personnel. Actual field deployment of response, containment, and cleanup equipment is included in these exercises.

Field exercises will emphasize facility familiarization (i.e., access road locations), containment, and specialized BNL oil spill response equipment familiarization. Training exercises for field response personnel will emphasize field deployment problems, assess problems relating to sensitive areas, environmental concerns, the need for improvisation in the field, the importance of quick response for containment, the selection of secondary containment sites, and the proper use and limitations of absorbent materials. Discussion and critiques will be conducted after each field training exercise, and written records of the exercise will be maintained by BNL.

The BNL emergency response organizations respond to more than 40 spills of petroleum or other hazardous materials annually. As necessary, these responses require notification of the Qualified Individual, implementation of the emergency paging system, and response by all emergency response personnel. Due to the nature of these releases (i.e., small volume) the majority of the releases, do not require full deployment of heavy equipment, though several do require heavy equipment assistance during remediation. Each of these response exercises is an opportunity to identify response weaknesses and improve overall response efficiencies. A copy of a typical spill report is included with Exhibit J.

BNL personnel will hold oil spill response drills in accordance with PREP Guidelines. Drills will be used to evaluate BNL preparedness to react to an actual spill (to include the worse case scenario), contractor spill response times, communication systems, and response equipment suitability. In addition, these drills provide an opportunity to implement the training program and practice oil spill response skills, such as initiation and implementation of the ICS, incident assessment, and containment and cleanup operations. Discussion and critique will be conducted after each drill, and the BNL EPD will maintain documentation of the drill and critique.

1.8.3.2 Discharge Prevention Training

BNL personnel typically involved in oil spill response and cleanup participate in an annual discharge prevention briefing that is coordinated through BNL's EPD to assure adequate understanding of the BNL's SPCC and Facility Response Plans. At a minimum, this briefing highlights and describes recent discharges or failures, malfunctioning components, changes in

equipment or procedures, and any recently developed precautionary measures.

In addition to the specific discharge prevention training described above, the goal of prevention training at BNL is to teach ***all*** employees the appropriate way to respond to and minimize impacts associated with spills. In addition, all work conducted at BNL is performed with the expectation that should a release occur as part of the activity it is responded to appropriately. This also includes work performed by outside contracted personnel.

The most effective method of delivering this training is via computer-based training courses made available through the BNL Training Office. All Laboratory employees, guests, and visitors are required to take these courses. Two specific courses dealing with spill response and reporting are:

- Emergency Planning & Response (GE-EMERGPLAN) – This course was developed to inform employees of the proper actions to take in an emergency situation, which includes what to do in the event of a hazardous material release or spill.

- Environmental Protection (GE-ENV-GET) – This course focuses on defining the employee's role and responsibility in BNL's commitment to the preservation and protection of the environment including proper spill response procedures. Specifically, a discussion is included on the prevention, identification, mitigation, and proper notification of spills.

1.9 Diagrams

Facility diagrams are provided in the following pages to assist the QI/CM and responding resources in assessing and responding to the incident. Copies of the Site Plan and Drainage Plan are included.

1.10 Security

1.10.1 Site Security

Security at the BNL site is maintained 24 hours per day by a response trained staff of armed Security Police Officers (SPO). Patrols are continuous throughout the site. Patrols are in radio contact with their headquarters and the duty sergeant and would request assistance as required.

Access of persons and vehicles is controlled at the site gates by security personnel. Access is controlled by examination of identity documents and/or BNL issued vehicle stickers. In addition, vehicle data for all vehicles entering the site is recorded.

1.10.2 Oil Storage Security

BNL's F&O Directorate provides 24 hour management coverage using a Site Shift Supervisor. The Site shift Supervisor has overall charge of all F&O facilities during the off hours. He is responsible to make rounds of F&O equipment, investigate unusual occurrences as reported by the SPO, alert BNL management as required, and mobilize F&O forces in response to an environmental emergency.

Aboveground piping and associated transfer operations are protected from vehicular traffic through design (i.e., installed far enough away from traffic) and/or by the use of curbing, bollards, etc. In addition, all oil storage facilities have adequate lighting that will assist in the discovery of discharges occurring during hours of darkness, both by operating personnel and by the SPO.

Additional details on oil storage security are provided below.

Building 610 - Central Steam Facility Oil Storage:

The Central Steam Facility (CSF) is staffed by at least two (2) employees 24 hours per day. The area is neither alarmed nor fenced, but is checked regularly (every two hours) by the engineers on duty. Additionally, the SPO patrol the area every two (2) hours on a random basis.

The unloading facilities are equipped with one way check valves to prevent product from accidentally flowing out if the connection is accidentally severed. Additionally, a ball valve is fitted immediately before the actual truck/transfer interface and a plug (OPW or Evertite) is inserted into the line after it is disconnected. All tank drains are fitted with locked valves and are additionally capped, plugged or fitted with blank flanges as appropriate.

Fuel Oil receiving and transferring procedures are covered in BNL F&O Policies and Procedures EU-CSF-009 and EU-CSF-004 (Exhibit H). These procedures include the requirements to assure the safe transfer of fuel and the requirements to secure the facility when active operations cease. They include such actions as:

1) Requirements and procedures to secure the facility when operations are concluded to prevent unauthorized personnel from entering the facility

2) Requirements to assure that all drain valves and other valves that could permit the discharge of oil to surface waters are properly locked and capped.

Site and Staff Services Oil Storage:

Building 423 – Motor Pool (Site Maintenance Garage)

The Station is secured at the close of business, 1700 hours. All power is secured to the pumps preventing the discharge of any product. The tank fills are secured with pad locks and there are no additional drains to be blanked.

Building 651 – Diesel Tank Farm

The area around the tanks is completely enclosed with a six foot high chain link fence which is secured during the off hours. The unloading facilities are equipped with one way check valve to prevent product from flowing out if the connection is accidentally severed. Additionally, a ball valve is fitted immediately before the actual truck/transfer interface and a plug (OPW or Evertite) is inserted into the line after it is disconnected. All tank drains are fitted with locked valves and are additionally capped, plugged or fitted with blank flanges as appropriate. All power is secured to the pumps preventing the discharge of any product.

Building 630 - Upton Service Station

The Station is secured at the close of business, 1800 hours. All power is secured to the pumps precluding the discharge of any product. The tank fills are secured with pad locks and there are no additional drains to be blanked.

Heating and Emergency Generator Satellite Tanks

There are no loading/unloading facilities associated with these types of tanks. The individual tank fills are secured with pad locks when not in use and any additional drains associated with these types of tanks are blanked off, preventing the discharge of any product.

Transformer Yards

All transformer yards are secured by fencing and locked gates. Failure of a transformer from release of oil would interrupt electrical supply and would be investigated by the site-shift supervisor or electrical supervisor, if on duty. Large transformers are equipped with secondary containment systems with oil/water separators for mitigating oil releases should one fail.

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EXHIBIT A

Inventory of Bulk Petroleum Storage Facilities

Inventory of Petroleum Fuel Storage Facilities

Building #	BNL Tank #	SCDHS Tank #	Capacity	Unit	Material Stored	Location
0030	0030-04	530	4000	Gallons	#2 FUEL OIL	Above/Out
0050	0050-02	843	1000	Gallons	Diesel	Under/Out
0244	0244-09	925	1000	Gallons	#2 FUEL OIL	Above/Out
0321	0321-03	924	1000	Gallons	#2 FUEL OIL	Above/Out
0339	0339-04	926	1000	Gallons	#2 FUEL OIL	Above/Out
0422	0422-05	238	1000	Gallons	#2 FUEL OIL	Above/Out
0423	0423-01	34	260	Gallons	Waste Oil	Above/Out
0423	0423-06	72	8000	Gallons	E-85	Under/Out
0423	0423-07	73	8000	Gallons	GASOLINE	Under/Out
0423	0423-08	220	3000	Gallons	#2 FUEL OIL	Under/Out
0423	0423-16	900	500	Gallons	Motor Oil	Above/In
0423	0423-17	901	500	Gallons	Motor Oil	Above/In
0449	0449-04	937	225	Gallons	Diesel	Above/Out
0452	0452-02	49	275	Gallons	USED OIL	Above/In
0463	0463-19	941	400	Gallons	Diesel	Above/Out
0488	0488-05	938	100	Gallons	Diesel	Above/Out
0490	0490-30	942	400	Gallons	Diesel	Above/Out
0515	0515-03	944	4000	Gallons	Diesel	Above/Out
0526	0526-04	247	270	Gallons	#2 FUEL OIL	Above/Out
0526	0526-14	883	1000	Gallons	#2 FUEL OIL	Above/Out
0526	0526-16	344	250	Gallons	#2 FUEL OIL	Above/Out
0575	0575-05	660	230	Gallons	#2 FUEL OIL	Above/Out
0575	0575-09	845	500	Gallons	#2 FUEL OIL	Above/Out
0580	0580-02	659	140	Gallons	Diesel	Above/In
0599	0599-02	939	225	Gallons	Diesel	Above/Out
0603	0603-01	796	4000	Gallons	Diesel	Above/Out
0611	0611-03	121	300000	Gallons	#6 FUEL OIL	Above/Out
0611	0611-04	122	420000	Gallons	#6 FUEL OIL	Above/Out

Inventory of Petroleum Fuel Storage Facilities

Building #	BNL Tank #	SCDHS Tank #	Capacity	Unit	Material Stored	Location
0611	0611-05	123	300000	Gallons	#2 FUEL OIL	Above/Out
0611	0611-06	124	300000	Gallons	#2 FUEL OIL	Above/Out
0611	0611-09	126	400000	Gallons	#6 FUEL OIL	Above/Out
0611	0611-10	125	600000	Gallons	#6 FUEL OIL	Above/Out
0614	0614-05	---	500	Gallons	Diesel	Above/Out
0618	0618-04	---	500	Gallons	Diesel	Above/Out
0619	0619-04	---	500	Gallons	Diesel	Above/Out
0630	0630-13	943	1000	Gallons	#2 FUEL OIL	Above/Out
0630	0630-06	68	8000	Gallons	GASOLINE	Under/Out
0630	0630-07	69	8000	Gallons	GASOLINE	Under/Out
0630	0630-08	70	8000	Gallons	GASOLINE	Under/Out
0630	0630-09	71	550	Gallons	USED OIL	Under/Out
0630	0630-12	902	280	Gallons	Motor Oil	Above/In
0635	0635-03	---	336	Gallons	Diesel	Above/Out
0639	0639-02	951	1000	Gallons	Bio-Diesel	Above/Out
0651	0651-02	27	10000	Gallons	Diesel	Above/Out
0651	0651-03	28	5000	Gallons	Diesel	Above/Out
0651	0651-04	29	5000	Gallons	Diesel	Above/Out
0725	0725-13	844	250	Gallons	Diesel	Above/Out
0735	0735-01	940	115	Gallons	Diesel	Above/Out
0740	0740-01	---	450	Gallons	Diesel	Above/Out
0740	0740-02	---	450	Gallons	Diesel	Above/Out
0801	0801-38	953	225	Gallons	Diesel	Above/JOut
0911	0911-04	205	1100	Gallons	LUBE OIL	Above/In
0912A	0912A-05	946	3000	Gallons	Diesel	Above/Out
0928	0928-02	209	3200	Gallons	LUBE OIL	Above/In
1000P	1000P-03	576	300	Gallons	Diesel	Above/Out
1002A	1002A-01	570	300	Gallons	Diesel	Above/Out

Inventory of Petroleum Fuel Storage Facilities

Building #	BNL Tank #	SCDHS Tank #	Capacity	Unit	Material Stored	Location
1004A	1004A-01	568	300	Gallons	Diesel	Above/Out
1005	1005S-01	396	500	Gallons	Diesel	Above/Out
1006A	1006A-01	575	300	Gallons	Diesel	Above/Out
1008A	1008A-01	572	300	Gallons	Diesel	Above/Out
1010A	1010A-01	571	300	Gallons	Diesel	Above/Out
1012A	1012A-01	569	300	Gallons	Diesel	Above/Out

EXHIBIT B

Fire Rescue Emergency Response Instrumentation and Equipment Inventory

Brookhaven National Lab Fire Rescue Specialty Equipment Cache

Metering Capability

- HazMat ID (portable infrared spectrometer)
- Ahura 1st Defender (handheld raman spectrometer)
- APD 2000 (gamma detector, WMD agents)
- Draeger CMS (multiple types of gas detection)
- 2 MSA Solaris 4 gas detector (co, 02, h2s, lel)
- TIF combustible gas detector
- TIF leak detector (refrigerant)
- BADD Kits (biological agents testing kits)
- PalmRad
- Industrial Scientific Photo ionizing detector
- 3 MSA personal O2 meters
- 10 electronic personal dosimeters
- 1 Ludlum with pancake probe

Testing Capability

- M-8 Paper
- CM-9 Paper
- PH Paper
- Mercury Test Kit
- Leak Tek

Mitigation

- 55 gallon drum of Green Stuff
- 55 gallon drum of speedy dry + multiple bags
- ½ case sodium bicarbonate
- 2- 5 gallon pales of Stergo
- Mercury vapor powder suppressant
- Case of Clorox bleach
- Oil, acid, and bases spill kits
- Multiple type of socks and pads (oils, acids, bases, solvents,etc)
- 5 gallons hydrated lime
- 5 gallons caustic neutralizer
- 5 gallons of metal-x powder
- 2 quarts of acid neutralizer

Specialty Equipment

- Entry Link wireless hazmat camera system
- Zistos camera system
- 3 MSA thermal imaging cameras
- 10 PAPR’s with multiple cartridges
- Hurst mini lite system
- Geotech peristaltic pump with tubing
- 3 portable electric pumps
- 2 manual pumps
- Chlroine A & B kits
- Multiple types of plug, patch and clamp kits
- Non sparking tools
- 150 DuoDote kits (atropine & 2Pam auto injectors)

ES-6
HAZ-MAT
Trailer
(red)

March 22, 2011

Rear Door Seal # <u>0151851</u>
<u>Side Door Seal# 0151854</u>

CAGE #1 SUITS AND BOOTS
Seal # 0151649

TOP SHELF

2	Bags Kotex
1	Roll Chem Tape 1
5	Rolls Chem Tape 2
4	Rolls Duct Tape
1	Bag Cooling Vest (4 sets)
1	Chart for Chem Tape Use
2	Boxes of each Gloves (Med, Lg, X-Lg
3	Pairs Kevlar Gloves
3	Bag Green Gloves
1	Pkg Sight Savers

MIDDLE TOP SHELF

2	XL Level A w/Flash Protection
2	2 XL Level A w/Flash Protection
12	Red Splash Suits (M&L)

MIDDLE BOTTOM SHELF

1	Large Level A w/Flash Protection
1	3XL Level A w/Flash Protection
1	4XL Level A w/Flash Protection
12	Red Splash Suits (XL&2XL)

BOTTOM SHELF

1	Bag Haz Proof Boots 8 & 9 (Orange)
1	Bag Haz Proof Boots 11 & 10 (Orange)
1	Bag Haz Proof Boots 12 & 13 (Orange)

CAGE #2 SUITS
Seal # 0151947

TOP SHELF

1	XXXL
8	XXL Tyvek Suits
5	XL Tyvek Suits
1	Large Tyvek Suits
	Decon Shower Bag

MIDDLE TOP SHELF

2	XXL Level B Suits Encapsulated Suits
6	XXXL Level B Suits Encapsulated Suits

MIDDLE BOTTOM SHELF

2	XXXL Level A Suits
1	XXL Level A Suits

BOTTOM

1	XXL Level A Suits
2	XL Level A Suits

CAGE #3 DECON
Seal # 0351924

TOP SHELF

2	3 Gal Multipurpose Sprayer Green
1	2 gal Multipurpose Sprayer Blue
	Clean Area Mat
1	Manifold 2 ½" x 6 – Garden Hose Orange
4	Shower Nozzles
2	QT. Spray Bottles
1	Tarp 30x60 Gray
1	Tarp 18x12 Blue

BOTTOM SHELF

1	Length 1 ¾" Hose
1	Length 3" Hose
1	Manifold 1 ½ x 4 Garden Hose Black
4	Lengths of Garden Hose Black
1	Decon Hoop
2	1 ½" Clear Pump Hose

DECON BIN

1	Gallon bleach
4	Rolls Rag on roll
1	Roll paper towels
3	Spray nozzles for garden hose
1	Package washers
1	Wye for garden hose
1	5 lbs box Borax
1	2 ½ Female garden hose adapter
11	Hand sponges
6	Soft bristle hand brushes
2	Hard bristle hand brushes
2	Portable exit signs (English/Spanish)
3	Portable Electric Pumps

HAND PUMP BIN

1	Double Female 2 ½"
1	Double Male 2 ½"
2	Reducer 2 ½" to 1 ½"
3	Reducer 2 ½" to garden
1	Manual Pump w/1" hose
1	Manual Pump w/ 1 ½" hose
1	Flotec Pump
1	Air Foot Pump

CAGE #4 MITIGATION
Seal # 0351911

1	Roll of Salvage Plastic
3	Plastic Scoops
4	Pairs of Oven Gloves White
1	Blue Bin PH Paper / Tags
1	4 qt Funnel
2	

GRAY BIN

2	1 H Jar Talc
3	Sodium Bicarbonate (5 lbs)
2	MT Pain Cans
2	8 oz Power Dam
2	Quarts Acid Neutralizer
1	Tongs

CLEAR BIN

1	Dust Pan
10	Box Baking Soda
1	Box N95 Mjask
1	Tube Silicone Adhesive Sealant
4	Safety Goggles

MIDDLE SHELF

1	Pail of Stergo
1	Pail of Speedy Dry
1	Pail Metal X-Powder
3	Tarps 20’ x 30’
1	Tarp 12’ x 20’ Green
1	Tarp 9’ x 11’ Blue
1	Rad Rope Reel
2	Metal Funnels
1	Box Green Gloves

BOTTOM SHELF

2	
2	5 gallons Caustic Neutralizer
2	5 gallons Hydrated Lime
	5 gallons Stergo

CAGE #5 PIGS AND BOOMS
Seal # 0351929

TOP SHELF

2	Bag Booms 8” x 20’

MIDDLE SHELF

1	Bag Oil only Absorbent Pads
2	Bag Pigs Socks (large) 3” x 20’

BOTTOM SHELF

2	Bags Absorbent Pulp Acid & Base only (pink)
1	Bag Absorbent Pulp
1	Bin Blue Pig Socks (oil)
1	Bin Absorbent Pads for (acid, caustics and solvents)
1	Bag Pig Socks (white)

TOP OF CAGE

4	Bags Absorbent Pads

CAGE #6 MODESTY GEAR AND REHAB
Seal # 0150893

TOP SHELF

2	White Round Cooler 10 Gallon
1	Misting Fan
1	Extension Cord

MIDDLE SHELF

1	Blue Cooler
1	Box Shoe Covers
2	Packages Bar Soap
1	Qt Hand Sanitizer
2	Rolls Caution Tape
1	Blue Bin Coveralls
1	Blue Bin Plastic Bags
1	Small Blue Bin Safety Wipes
2	Bags Cups
2	Gatorade Containers (16 oz)

SIGNS	Deceased
	Delayed
	Immediate
	Minor
	Enter
	Decon
	Exit
BOTTOM SHELF	Green Bin Modesty Suits (4 Large & 4 Med)
1	Green Bin Modesty Suits (8 X-Large)
1	Gray Bin Modesty Suits (4 XXL & 4 XXXL)
1	

FRONT WALL SHELVES #7

1 Package	Plastic Bags Clear (8x10)
2	Saw Horses
1	Light
2	Litter Conveyors
6	Crates
2	Cans of Spray Pain (Yellow and Red)
3	Markers (Red, Blue, Black)
2	Chlorine (A & B Kits)
1	Tent Behind Pools
4	Decon Pools
1	Duct tape
TOP OF SHELVING	
1	
1	Caution Tape
1	Green Bin (Tent Accessories)
1	Roll Oil Pad
2	Black Box – Light
2	Case Clear bags
2	Green Shovels
1	Mallets
1	Bag Electric Zip Ties
2	Funnel
1	Extension Cords
HANGING ON SIDE OF SHELVING	Grabber
	Metal Shovel

ON FLOOR

1
IN CORNER 95 gallon Over pack Drum with 55Gal. Blue Drum Inside
4
2
4 Car Brushes
1 Brooms
Generator Honda 6500
2 **Drag** Sked **on gray garbage can**

OTHER MISCELLANEOUS ITEMS

2 Chairs
4 Garbage Pails
2 Plastic Back Boards (Hanging on Wall)
1 Grocery Cart (Inside 12 Red, 12 Yellow, 12 Green Cones)
2 Caution Cone
1 Propane Hot Shower System (Driver Side Front Corner)
1 HEPA Vac
1 Spool of Rope
3 Sections of Decon Showers
4 Collapsible Benches
3 White 5Gal Pails
2 Skeds 2 Pumps

ON TOP OF CART 1 AND 2

4 Tyvek 2XL Suits
2 Tyvek 2XL Suits
3 Tyvek XL Suits
3 Tyvek 4XL Suits
3 Tyvek 3XL Suits
2 Carboys

REMARKS:

Inspector: Date:

W:\My Documents\FIRE\Red HazMat Trailer Inv.doc

ES-8
HAZ-MAT
Trailer
(White)

March 22, 2011

Side Door Seal # <u>0151719</u>

Rear Door Seal # 0151724

Front of Trailer

6	Conveyers
	Backboard (Blue)
1	Case(10x10)Drip Pans

Locker

	Brooms, Shovels
4	Buckets
2	White helmets w/ face shields
	Fire Line/Caution Tape

Shelf L-1

Top

Drum Lids

Top Middle

8	Tote Bin Allwik Drip Pans
Box	Allwik 3” x 8’
Box	Allwik 3’ x 4’
	Hippo Oil Pads (200 Bale)
4	Broom Heads

Middle

	Allwik 3” x 12”
	Haz- Sock 3” x 4”
2	Haz- Sock 3 x 12”

Bottom Middle

	Maintenance Pads 15 ½ x 20 1/2
2	Universal Pads Chemical 16 x 20

Bottom

	Clorox (case)
	Oil Spill Kit
	Acid & Bases Spill Kit
2 Boxes	Blue Socks 3” x 4’
	Chemical Spill Kit (on floor)

Cart #7

On Top Of Cart

6 White Shallow Drip Pans

Top

White Salvage Drum (8 x 10 oil boom)
2 ½” x 4 Garden Hose Manifold
Yellow Salvage Drum (power-sorb kit)
Electrical Cord for generator

Bottom

6	Cam Scrubs	Assorted Red Suits
1	Decon Tent	

Shelf L-2

Top

Plastic Bins
Tyvek Suits
Plastic Bags

Top Middle

Green Bins 400 (8x10) Bags
Blue Tarp 8'x10'
Blue Bin
Assorted Gloves
Butyl Rubber Gloves

Middle

8 Boots Green
2 Large Blue Bin
    Disposable Coveralls
    Disposable PPE
2 Gray Tarps
95 Gallon Salvage Drum
6 55 Gal. Blue Drums

Bottom Middle

Large Blue Bin
    Disposable Rain Suits
    Booties
    Extra Modesty Clothing

Bottom

2 Green Tarps 30' x 40'
Handcart
5 Blue Drums (1 with speedy dry)
3 Garbage pails
3 Clear Bins
Drum Cart

Bottom Right Wall

Garbage pail (oil pillows 14 x 25")
4 White Backboards
5 Green Cones
2 Street Brooms
4 Black Decon Pools
Safety Bar

Rear OF Trailer

2 Fold Up Tents

REMARKS:

Inspector: Date:

CAR #1 (COMMAND)

2002 Ford Excursion

WEEKLY INSPECTION CHECK LIST

March 22, 2011

REAR COMMAND CENTER

BNL Mobile Radio (receive only) MAYDAY ALERT received: _____
(P-3 turns off Sonic Alert)

BNL Mobile Radio
County Mobile Radio F1 radio check: _____
Computer Screen
Accountability Tag Collection Ring

COMPARTMENT ONE (1)

Medical Bag
2 Sterile Water Expires: ____
2 Glucose Expires: ____
Oxygen Bag Present: ____psi
Manual Suction Kit
ABC Fire Extinguisher HT_____
AED Life Pak 500 Defibrillator w/Accessory Bag
2 Adult Pad Expires: ____
1 Child Pad Expires: ____
PCR Forms

NEXT TO COMPARTMENT

Power Cord

COMPARTMENT TWO (2)

E-Z up Tent Side Curtains
Weather Station Hand Held
Digital Camera in case
Bull Horn
Bumper Chute
Atomic Clock
Caution Tape (one roll)
Run Card Book

COMPARTMENT THREE (3)

	Bioterrorism Guide to First Responders
	Chemical/ Nuclear Terrorism Guide to First Responders
	CMC Field Guide Rope Rescue Guide
	Chemical Protective Clothing
	IC Resource Manual
	Emergency Flow Chart
	Emergency Action Plan (‘06)
	Firefighters Handbook of Hazardous Materials 7th ed.
	NIOSH Pocket Guide to Chemical Hazards
	Airborne Vapors/Gases from thermal decomposition
	Re-occupancy clearance level chart
	Facility Response Plan (’06)
	Various Laminated Log Sheets and Quick References
	BNL Phone Book 2004
	NFPA Pocket Guide Haz Materials
	Emergency Response Guidebook (2008)
	Emergency Response to Terrorism Job Aide
	On Scene Commander Guide
	ATF Card
4	Field Guides
	EMS Field Guide
1	Fire and Rescue Field Guide
	NIMS Field Guide
	Homeland Security Field Guide
2	Wind Tape (blue, yellow)
	Bobs Rigging & Crane Handbook
	Rapid Guide to Hazardous Material in the Workplace
	Suffolk Atlas
	SOP’S CAR 1
	Building Hazard Survey
5	Coast Guard Hazardous Response (CHRIS)
1	Ever bridge Notification Folder

BACK DOOR

6 Boxes Nitrile Gloves (assorted sizes)

COMPARTMENT FOUR (4)

Fireground Tactical Command Sheet
Incident Commander Checklist
Incident Briefing sheets
Eraser and markers
Assorted nails
Building and Road Atlas
Electric and Mechanical Site Maps
Site Maps
Tactical Sheets
NSLS II Gate Map

COMPARTMENT FIVE (5)

Portable Canopy with Pole
Maps of Surrounding Fire District (left of Comp. #3)

COMPARTMENT SIX (6)

Incident Commander Vests with Clipboard
Logistics Vest with Clipboard
Staging Vest with Clipboard
Communications vest with Clipboard
Operations vest with Clipboard
Safety Officers vest with Clipboard
EMS vest with Clipboard
2 Note Pads
Security Officers Clipboard
Incident Commander Vest w/o Clipboard
Emergency Management Vest
P.I.O Vest
DOE Vest
Crisis Manager Vest
Rescue Vest w/Clipboard

COMPARTMENT SEVEN (7)

Pager List
Assorted folders
OEM EPHA Book
Fire Rescue Rain Slickers
USB Extender
100 ft. of patch cord
BNL Phone Book

COMPARTMENT EIGHT (8)

Various stationary items
Web Camera

CENTER SECTION

D7460 Printer
Media Card Reader (Missing)
Portable Weather Station
Suffolk County Atlas (rear of driver seat)
Water Rescue Throw Rope (Rear Passenger Seat)

14’ Patch Cable
Bolt cutters on the floor
Survivor flashlight
2 Safety vest-1Rear Passenger Seat,1 Rear of Driver Seat

COMPARTMENT (9)

Various reference materials
Ordinance map
Building Key Plan

REAR CENTER CONSOLE

800 Mhz. Mobile radio
BNL Mobile Radio
Spotlight
Bushnell Binoculars
SCBA
Burn permits Folder/clip board
NSLSII gates 1-5 in binder
Building Index
N95 Masks
Hard Hat

FRONT CENTER CONSOLE

Car 1 Route Book
HFBR Keys
Gate Keys
Grove St. NSLSII gate #2 and EW Howell key
BP solar project, North St. gate key
House Keys
Elevator Keys
Alarm Keys
BNL Mobile Radio — MAYDAY ALERT check: _____
County Portable Radio — F1 radio check: _____
County Mobile Radio — F1 radio check: _____
UHF Portable Radio
Leak Detector
MSA O_2 Meter

DOT ERG Guidebook 2008
Knox Box key and Security Box
LED Flash Light

REMARKS:

INSPECTED BY: _____

DATE: _____

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LADDER 1
5-20-1

WEEKLY
INSPECTION CHECK LIST

Tuesday, March 22, 2011

2010 Pierce 95’ Tower Ladder
2000 GPM

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CAB

- 200 ft - 120/20Amp Fire Power Reel
- Inspect Turn table Access Ladder, Webbing and Ladder Lock Mechanism.

Compartment L – 1

- Stream light
- 3 Nozzles (Akron 5170, 2 x TFT)
- 1 ½" double female
- 1 ½" double male
- 1 ½" cap
- 2 ½" female x 1 ½" male
- 1 ½" female x 1" male reducer
- 2 ½" double female
- 2 ½" double male N.S. x N.Y.C
- 2 ½" NYC female x 2 ½" Male adapter
- 2 ½" N.H. adapter
- 2 ½" cap
- 1 ½" Nozzle gate handle w/ 15/16th and ½" tips
- (4) sets 2½" Double female w/ 2½" double male adapters
- 2 ½" X 1½" reducer
- 2 ½" Nozzle Gate w/ handle
- 5" Storz x 2½" Female 30 degree elbow
- 5" Storz x 4½" Female adapter
- 5" Storz x 2½" Female adapter
- PIV Handle
- Mallet
- Extension Pipe
- Radio Mics (UHF, BNL, Low)
- Wall Hydrant Key
- Gasket Bundle

Two (2) Wheel chocks under running board

MPO Panel

- Storz Spanner Set (4)
- Spanner & Hydrant Wrench Combo Rear Wall
- 2 ½ Inch Yellow w/ 2 ½" TFT Nozzle
- 1¾ Red Hose w/ Solid Bore Nozzle
- 1¾ Blue Hose w/ TFT Nozzle
- Inspect MPO Platform

Compartment L -2A

- ABC 10lb Fire Extinguisher Bar Code # 012410

Compartment L -3

- Chauffeur's Gear location (Clear)
- Traffic Cones (4)
- 2 - 1lb "Green Stuff"
- Plastic Container w/ 1 Box of
- Gloves
- 2 x Firepower to 120 volt pigtail
- 2 circle "D" Lights
- 1 Firepower to 3 Outlet Strip
- OMTB – 4 Yellow Caution Tape

Compartment L – 2B, Compartment L – 2C

- Each has a 45 Minute SCBA Air Cylinder

Compartment L – 4

- Top Shelf 5" - Hose Roller, Foam Nozzle, Foam Inductor Hose
- Mid Shelf – Rope Bag, 2 – Utility Ropes (50')
- Mid Shelf-Rope Bag #2-Yellow with white tracer
  Mid Shelf-OMTB – Bucket Safety Belts
- Bottom Shelf
  1 10lb Halon Fire Extinguisher, Bar Code # 012019
  1 H_2O Fire Extinguisher,
  3 Fans

2 Truck Mounted Halogen Scene Lamps on Left Side and Right Side
2 Ground Jack Pads

Compartment L – 5

- **Top Shelf**
- 2 – 50’ 2 ½” lengths of hose Green
- 2 – 50’ 1 ¾” lengths of hose
- Water Thief
- **Middle shelf**
- 2 x 1 ½ High Rise Packs w/ Straight Bore Nozzle

- **Bottom Shelf**
- 2 slots for 5” hose 1-35’ w 5” x 4 ½” adapter & 1 25’
- 2 slots 3” hose 50’ each-orange
- 2 slots for 2 ½” hose 50’ each-green
- Jewel Bag (black) Contains the following:

    - 1¾” In Line Gauge In Pelican Case
    - 1 ½” Nozzle – Smooth bore 15/16th w/ Pistol Grip
    - 1 TFT Midmatic Fog Nozzle
    - 1 ½” Quick Brass Snap connect Adapter
    - 2 ½” NS Female to 1 ½” NS Male Reducer Adapter
    - 1 ½” Cap
    - 2 ½” Double Male Adapter
    - 2 ½” Double Female Adapter
    - 1 ½” Double Female
    - Hose Strap
    - Hand Wheel
    - Rubber Mallet
    - (2) Spanner Wrenches
    - Pipe Wrenches 14”& 18”
    - (2) Wire Brushes
    - Assortment Chocks

OFFICERS FRONT CAB

County Radio Check √ _____

SCBA Inspection Complete _____

Batteries Changed _____

- Spotlight
- Streamlight
- Safety Vest
- Thermal imaging Camera, Battery
- BNL Building Guide
- 2008 ERG
- Hagstrom Street Guide
- Radioactive Guide
- Low Band Portable Radio
- Officer SCBA L-1A

Glove Box

- (2) Squirt Bubbles
- Spring Loaded Center Punch
- Repair Putty Stick
- (2) M-8 Papers
- Black Marker
- Accident Forms
- Seals Blue
- Pen

- 4 Rechargeable Hand lights
- 4 SCBA L-1B, L-1C, L-1D, L-1E
- First Aid Compartment
  - First Out Bag Items with Expiration Dates
  - Sterile Water _____
  - Glucose _____

    Boxes Of Gloves XL, L, M

    Under Center Bench Seats

- Box Kleenex
- Box Micro Wipes
- (6) Cold Packs
- BVM's
- Emergency Blanket
- Box Face Shields (25 count)
- Bucket Hearing Protection

Under outboard SCBA Seat Officers Side

- Portable Oxygen _____ psi

In Refrigerator

- Water Bottles

Compartment R-1

- Flares (min 10)
- Tac Stick – K-Tool – Duck Bill Lock Breaker
- 1 -3' Closet Hooks, 2 Sets of Irons, Bolt Cutter
- Pick headed axe and Maul
- Hydra Ram
- Search Rope
- Tool Bag Containing
    - Ardis Tool
    - Zip Ties
    - Sprinkler Tongs
    - Duct Tape
    - Open End Wrench ½" X 7/16th
    - (4) Crescent Wrenches (10", 12", 16", 6")
    - Vise grips
    - (2) Slotted Screwdrivers
    - Phillips Screwdriver
    - Lineman Pliers
    - Wire Cutters (dikes)
    - Channel Locks
    - Assorted Size Gaskets
    - T-Lug Wrench
    - Wire cutters (Cable)
    - Wedges Wooden Min 2
    - (2)11Pc hex key sets
    - (2) Ball Peen Hammers
    - 19mm Combination Wrench
    - Rubber Mallet

Right Side Inlet and Discharge Panel

- Storz Spanner Set Front Wall
- Spanner & Hydrant Wrench Combo Rear Wall
- Wye – 5” x 2 ½” x 2 ½” x 2 ½” with 3 Double Females

Compartment R-2 Saws & Generator

- Honda Generator – Tele – Light 2000 Fuel Level _____
- K 960 Saw- with saw sling
- Cutter’s Edge Chain Saw-with saw sling
- Gas Cans (1 Can Straight gas _____ and 1 can oil/gas mix _____)
- Saw Blade s(front wall)
- Bar Oil, Mix, Saw Tool

Compartment R-2-A, R-2-B, R-2-C

- Each has a 45 Minute SCBA Air Cylinder

Compartment R – 3 Dewalt & Tools

- 1- Screw Gun
- 2- Impact Drivers
- 1- Sawzall
- 1- Swivel Head shear
- 1- Circular saw
- 1- Right Angle Drill
- 1- Cordless Cut Off Tool
- 1- Flash light1- Box of drill bits
- 1- Box Saw Blades
- 3- Spare Batteries in Chargers
- Tool box with assorted wrenches, screw drivers, pliers and ratchet set

Rear Ladder Compartment

- Stokes Basket above 24’ Ladder with back board and 2 sets of webbing
- SKED Stretcher
- 6’ Sheetrock Hook
- 3 – 6’ Hooks
- 2- 8’ Hooks
- 2 – 12’ Hooks
- 1 - 24’ Extension Ladder
- 2 - 16’ Roof Ladder
- 35’ Extension Ladder
- 14’ Extension Ladder
- 10’ Folding Ladder

Rear Controller Compartment

- Jack Controller Wand

Rear Hosebed

- Hydrant Bag – Contents:

Bucket / Ladder Tip

- Left Side of Ladder
    - 10’ hook
    - Folding Ladder
- Right Side of Ladder
    - Haligan Hook
- 4- Truck Belts
- 2- Spanners
- 2- Stangs, one with stack tips and stream straightener

Dunnage Area

- Stokes Basket Bucket Brackets
- Foam Cans (6)

Comments:

Inspected by _____ Date _____

ENGINE 2

5-20-2

WEEKLY
INSPECTION CHECK LIST

March 22, 2011

1993 EMERGENCY ONE
500 GAL. WATER TANK
30 GAL. FOAM TANK - AFFF-ATC
HALE SINGLE STAGE 1500 GPM PUMP

*** Denotes Equipment on 1st due Engine**

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ENGINE 2 INVENTORY

1. Front Bumper

1 5" x 25 ft Hose
2 1 3/4" x 50 ft Hose
1 1 ½" Nozzle (75 psi)
2 Spanner Wrenches
1 Hydrant Wrench

2. Rear Seats

4 SCBA
4 Safety Vests

Rear Shelves

1) Shelf Top

4 Rechargeable Hand lights
1 RIT Bag
1 TIC
1 Search Rope (200 ft)

2) L-1 Compartment

1 Box Eye/Face Shields
1 Box Cold Pack
3 Boxes Latex Gloves, 1 XL, 1 L, 1 M
1 Box Facial Tissues

3) L-2 Compartment

First Out Bag
Life-Pak AED Adults _____Child _____
PCRS and Clipboard

4) L-3 Compartment

1 BVM's
Portable Oxygen _____ psi

Items with Expiration Dates

Sterile Water _____
Glucose _____
Aspirin _____

5) M-1 Compartment

1 Rabbit Tool
1 Tac Stick

6) M-2 Compartment
2 Rolls Traffic Tape
1 Lockout Tag Out Kit
1 Roll paper towels

7) M-3 Compartment
1 Box Ear Protection and Safety Glasses
Water bottles

8) Compartment R-1
1 Ludlum Meter Cal Due Date _____
MSA Solaris Meter and Probe
1 O2 Monitor MSA

9) Compartment R-2
*Assorted Response Plans, Emergency Plans
1 BNL Bldg and Road Atlas

10) Compartment R-3
Key Box
Key Tag List

3. Compartment L-4 and (Outside storage behind Jump Seat Doors)
4 SCBA Bottles
1 Length Air Hosex25'

4. Midship under Deck Compartments
L-5
1 length 3" Hose x 25 ft

5. Above Pump Panel
1 Demountable Deck Pipe with Stacked Tips

6. Cross lays
Forward - 200 ft – Red - 1 3/4 Hose with Nozzle SB 15/16"
Middle - 200 ft – Blue - 1 3/4 Hose with Nozzle TF 70-200 GPM
Rear - 200 ft. - Yellow - 2 1/2 Hose with Nozzle TF 70-250 GPM

7. Storage compartment behind Pump Panel
4 Cans, 5 gallons each, AR-AFFF 3%-6% (Total 20 gallons)

8. Left Side Top

1 - 6" Hard Suction, with strainer

8A. Left Running Board

1 Wheel chock

9. Compartment L-6

A) Top Shelf

1 Hydrant Wrench /Hydrant adaptor/Storz adaptor
1 Mallet, Rubber
1 2 ½ Nozzle 70-250 PSI Akron Turbo Jet
1 T-Wrench for Bldg. 1005E Wall Hydrant
1 Adapter 5" Storz Hose to 2 ½" Female
1 Adapter 5" Storz to 2 ½" 45^0 Female
1 Booster Spanner
Assorted Gaskets
Nozzle 11/2 TFT 100 PSI

B) Bottom Shelf

Fittings including:

1 2 ½" NS Female to 1 ½" NS Male Reducer
3 2 ½" NS Double Female Adapters
3 2 ½" NS Double Male Adapters
2 1 ½" NS Double Male Adapter
1 1 ½" NS Female Thread Cap
2 1 ½ Double Females
1 1 ½" Foam Adapter Inductor
1 2 ½ Female Cap
2 2 ½" Male Caps
1 2 ½" Female to Garden Hose Male
1 Foam Bucket Wrench
2 Spanner Wrenches
1 Handle, PIV
2 chock
1 Breaker bar (Alongside tray)
1 21/2'' NYC Male to NH Female

10. Compartment L-10

1 Rolls Tape, Yellow Fire Line
1 "K" Tool
1 Whizzer Tool
1 Pick Head Ax e 1Flat Head Axe/ Haligan Flat Head Axe

1 6’ Sheetrock Hook
1 18” Bolt Cutters

11. Compartment L-8

1 SCBA Cylinders, 45 Min.

12. Compartment L-11

1 SCBA Cylinder, 30 min for Whizzer tool
1 SCBA Cylinder - 45 mins.
4 Small Traffic Cones
2 Drag SKED (yellow)

13. Compartment L-7

1 Can of gas – Level E, ¼, ½, ¾, Full
1 Hurst Gas Unit
1 Hurst Combi-Tool
1 Spare Hose Orange

14. Compartment L-9

1 Closet Hook, 4 Ft
1 Shovel, Long Handle, Flat Blade
1 Rope 9mm white 100’
1 Rope 8mm blue 50’
1 Emergency Scene Ahead and Stand

15. Compartment L-12

6’ Pike Pole
1 – 8’ Roof Hook

16. Compartment M-4

Tool Bag with:

1 Ardis Tool
2 Hammers (1 Ball Peen)
1 Chisel
1 Pry Bar
4 Crescent Wrenches (Assorted Sizes)
6 Open End Wrenches
5 Slotted Screwdrivers
3 Phillips Screwdriver
1 Wire Cutter
1 Channel Locks
1 Sprinkler Chock
1 Duct Tape
2 Allen Keys
1 Vise grips with chain
1 Set of Open End Wrenches (small)
1 Lineman Pliers
1 Regular Pliers

1 Tool Box with Assorted Sockets (red)
1 MX – Foam Jet Nozzle
1 Floor Tile Puller
1 Hose Drain Roller
1 Hurst Tool Hose(Green)
1 Hurst Manifold
3 Orange Road Cones

17. Compartment M-5

1 Hurst "O" Cutter
1 Fan
1 Z Bar
1 Smoke Ejector Fan w/ Household-Firepower Adapter Cord

18. Rear Deck

4 Wrenches 5" Storz
2 Wrenches, Spanner
1 Hydrant Wrench

19. Hose Bed

A) Left Side - 500 ft 3" Supply Hose w/ 1 – 2 ½" double Female and Gate
B) Middle
700 ft 5" Supply Hose
1 Hydrant Gate
1 Hose Strap
1 Hydrant Wrench
C) Inside Right - 500 ft - 2 ½"" Hose
D) Right Pre-connect - 200 ft - 3" Supply Hose
1 Water Thief

20. Right Side Top

1 Ladder, Extension, 24 ft.
1 Ladder, Roof, 14 ft.

21. Right Side Over Wheel

Attic Ladder, 10 foot.
10' Pike Pole

21A. Right Running Board

1 Wheel chock mounted in front of rear wheel

22. R-10 and R-11 Standpipe Roll-Ups (Below Ladders)

1 200 Ft 1 3/4 Hose with Solid Bore Nozzle
1 200 Ft 1 3/4 Hose with Solid Bore Nozzle

23. Compartment R-9

1 Halon Extinguisher

1 Bag of Forestry Hose
1 Fog Nozzle Akron Turbojet

24. Compartment R-7

1 Ground Mount Base for Deck Pipe
1 PW Fire Extinguisher
1 Stream Strainer
1 Roll, 5” Hose, 48ft
1 Blitz Fire Appliance
1 Roll, 5” Hose, 25ft

25. Compartment R-8A

1 Extinguisher, ABC, 10 Lb

26. Compartment R-8

1 SCBA Cylinders, 45 Min.

27. Compartment R-6

A) Top Shelf

Road Flares _____
1 Jewel Bag (black)
1 1 ¾” In – Line Gauge
1 Clamp, Pipe, "C" Type
2 Wrench, Spanner
1 1 ½” NPT Female to 1 ½” NS Male Adapter
1 2 ½” NS Female to 1 ½” NS Male Adapter
1 2 ½” Double Female Adapter
1 2 ½” Double Male Adapter
1 1 ½ Double Male Adapter
1 1 ½ Double Female Adapter
1 Rubber Mallet
1 1 ½” Smooth bore nozzle, 15/16 tip
1 1 ½” Vary-Stream nozzle
4 Door Wedge
1 14” Pipe Wrench
1 18” Pipe Wrench
2 Wire Brushes
1 Hose Strap
1 NPT – 2 ½” NS Male 4” long nipple
1 ½” Solid bore Nozzle Tip
1 11/2’ Cap

B) Bottom Shelf

4 2 ½” NS Double Female Adapter
2 2 ½” NS Double Male Adapter
1 Hydrant Wrench
2 Wrench, Spanner
1 2 ½” gated wye x 1 ½” x 1 ½”
1 2 ½” gated wye x 2 ½” x 2 ½”

28. Compartment R-5

1 Box	Road Triangles
1 Length	3” Hose x 25’

29. R-4 SCBA Compartment Bottles

4	SCBA Cyls 45 min

30. Officer’s Seat - Cab

A) Glove Box

1 Pair	Safety Glasses
1	Owners Manual
1 Bottle	Leak-Tec
1 Package	Litmus Paper
1	2008 Emergency Response Guidebook
1	Set of Fire Alarm And PIV Keys
1	Package M-8 paper
1	M-9 Test Paper
1	Envelope Accident Form
1	Wood Chock
11	Seals (BLUE)
2	Note Pad
1	Radioactive Material Shipment Reference Sheet Airborne Vapors/Gases from Thermal Decomposition Re-occupancy clearance level chart
1	Plastic repair Putty (Epoxy Stick)

Ear plugs

B) Front Seat

1	SCBA
1	Cab Jack Handle (Along side officer seat)
3	Extra Seat Back Inserts (Behind Officer Seat)
1	Radio, Portable, Low Band, County ("Portable 2")
1	Traffic Vest

County Radio Check √ _____

SCBA Inspection Complete _____

Scan Complete _____

REMARKS

INSPECTOR’S/ DATE:

RESCUE 4
5-20-4

WEEKLY
INSPECTION CHECK LIST

Tuesday, March 22, 2011

2002 Emergency One
Heavy Rescue

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I. **Front Bumper**

1 Jumper Cables – Officer Side
1 Winch
2 Wire Slings – (1 – 3' sling, 1-5'sling)
2 Ram Extension Chain holders

II. **Cab (Front) -** Under Driver Seat

2 Winch Controls
RHIC/Perimeter gate/PIV Keys
Safety Glasses
Safety Vest compartment on Door

III. **Crew Cab (Rear)**

2 SCBA 45 min wall mount
2 SCBA 60 min in jump se
4 Stream Light Flashlights
1 Telelight Control (L/S)
1 County Portable Radio (# 131770)
1 MSA Evolution 5000 Thermal Imaging Camera w/spare battery(Not on 4)
1 200' Search Rope
2 Scotchlite Safety Vests
2 Pike Pole & Hooks,1 Haligan Tool , a Small Sledge Hammer Drivers side

IV. **L-1 Compartment**

3 Air Cylinders, 3 – 60 min SCBA RIT / PAK
3 Fire Extinguishers (Halon 1211, ABC, Pressurized Water)
Fan ½ hp
Flare Can (12)
Water Throw Rope 75'
Spanner and Hydrant Wrench Set Under Sliding Tray-Valve Key
Wheel Chock Man Hole Tool
4 Foot Step Ladder
1 Drag SKED (yellow)
4 Road Cones 2(Riged Fan Chutes)

V. **L-2 Compartment**

A) Front Tool Boards

5 Firepower cords
1 Electrical Cord (House Plugs)
Assorted Fire Power Pigtails and Junction Boxes

B) Top Shelf

1 Rigid Fan Chutes
1 Positive Pressure Fan Chute 1 Manhole Adapter

C) Middle

5 Circle D lights
1 Regular Extension Cords

D) Bottom Shelf

2 Class "D" Fire Extinguisher
1 Large Fan

VI. L-3 Compartment

A) Top Shelf

10 absorbent pads
10 Pigs
10 Absorbent Pillows
3 Plastic catch basins
5 Drip pans

B) Shelf 2 Oil Pads

1 Belly Patch Kit
1 Peristalic Pump w/ tubing
2 Mercury Spill Kit
1 Plastic Bottle

C) Shelf 3

Drum Patch Kit
Pipe Patch- Assorted sizes
Gasket & Sealing Kit **-** green box
Plug & Patch Kit – green box
Multi Purpose Repair Kit Exp 9/2002
Gas Leak Detector 4 oz. Jar
1/2 Case Sodium Bicarbonate 10/07/09- exp.
Grabber Tool
2 Plastic Shovels
1 Whisk Broom
2 1LB Cont. Green Stuff
3 Yellow disposal bags
3 Scoop

D) Bottom Shelf

2 Pails Speedy Dry
1 Scoop
Spare Pails
Garbage Bags
Stergo Absorbent
Honda 2000 Generator Light Oil Level_____ Fuel Level_____
Mercury Vapor Powder w/ scoop

VII. L-4 Compartment

6 Confined Space SAR Air Packs w/pass alarms
2Scott Boxes (3 packs & 3 packs) with one extended strap
3 Gear Bags w/ Air Lines 2 -100', 2- 50'
1 Pelican Box w/ 24 Light Sticks Exp_____
2 Extender Strap in Scott Box
1 Red Gear bag with 4 spare regulators and masks
(1 Small,1 Medium, 2 Large)

VIII. L-5 Compartment

A) Shelves

1 Orange Bag w/ Air Bag Hoses- 2 Red & 2 Blue
1 Air Bag Controller w/hoses
4 Air Bags (13 ton, 2-2.5 ton, 1 ton)
Plywood Plates
Air Chisel and Air Drill w/Bits
Ajax Air Hammer
Paratech Regulator 135 psi
Hoses
Mud flaps
Canvas Bag with belly patch air bags
Canvas bag w/ Air line/tool adapters

B) Floor

Scott Air Cart
Air Source Cart
26 and 34 Ton Air Bags

IX. L-6 Compartments (Belly)

2 Air Bags (34, 42 ton)
1 Plywood Board

X. R-5 Compartment

1 Electric Hurst Pump and reel with hose
1 Tool Bag (Duct Tape, various tools, glass punch + cutter, seat belt cutter)
1 Gray Box Maintenance Tools
1 Yellow Box of RAM Attachments
1 Red Box Hurst Airbag Safe
1 Power Hawk Ram
1 Hurst Multi-Tool
1 Large Ram 60 and 1 Small Ram 30
2 Portable Gas Power Unit
1 T-32 Jaws
1 O Cutter
1 Gas Can for Hurst Tool (1 gallon – E – ¼ - ½ - ¾ - Full)
1 L Bracket
4 4” X 4” Composite Chocks

XI. R-4 Compartment

A) Top Shelf

1 Craftsman Tool Bag (missing 1 Torx Wrench)
1 Craftsman Sockets + Wrench Kit
1 Tool Bag A+ (Bonding Cable in Bag A)
1 Tool Bag Non-Sparking, with 24” non-sparking crowbar
1 One Bag Wire Ties 29’’
1 Tool Bag B
1 Water Valve Bag

B) Bottom Shelf

Elevator Keys
Electric Sawzall w/ goggles
Dewalt Battery Tools-Drill & Sawzall –battery changed_____
½" Drill
Circular Saw w/goggles (Goggles missing)
Pipe Clamps + Plugs

XII. <u>R-3 Compartment</u>

A) Top Shelf

Metal Plate
Wood Cribbing
Plywood Plates

B) Middle Top

Plastic Cribbing
Step Chocks Plastic Large

C) Middle Bottom

Paratech Struts and Bases

D) Bottom

Cargo Strap Bag
Shark Chocks Large/Small
Safeway Slings and J Hooks

XIII. <u>R-2 Compartment</u>

Tool Boards:

A) Bolt Cutters - 1 large – 1 small
B) Flathead Axe + Haligan
C) 12 lb maul + pry bar
D) Folding Hand Truck
E) K Tool

Top Shelf

Plunger
Auger Bit
6 Slim Jims
1 Hand saws
2 Floor Pullers

#2 Shelf

6 Goggles & Foam Ear Plugs
1 Green Bag (Spare Blades for K950/K950,Shoulder Strap)
Tool Box for K12 and K950
Bottle Jack & Handle

#3 Shelf

1 Gal. Gas can– For all saws Fuel Level ¼ ½ ¾ F

1 K-12 Partner Saw (Metal)

#4 Shelf

1 K-950

XIV. R-1 Transverse Top Shelf

Milk Crate w/ 3 Helmets
Bag of Chaffing Rollers
LSP – Halfback (Yellow Bag)
Rope Bag #3 (Rope # 08-01 300'Blue/White)
Rope Bag #4 (Rope # 08-02 Dark Red Rope 300')
Rope Bag # 6 (Rope 400' White/Blue)
Primary Team (Black Bag) Red Tape(Missing Light on Helmet)
Secondary Team (Black Bag) Yellow Tape
2 Accessory Bag Green/Blue & Green/Yellow
Life Line Bag with Harnesses

Transverse Shelf

Stokes Basket (Yellow Tape)	**SKED (Red Tape)**
Rope Bag#5 (Rope# 03-05 Tan 250')	4:1 Mech Adva Bag (Red/BlueTape)
Belay Bag (Yellow/Orange Tape)	Belay Bag (Red/Orange Tape)
Secondary Safety (Yellow/Brown Tape)	
Patient Packaging Bag #1	Primary Safety Bag (Red/Brown Tape)
Horizontal Bridle Bag (Rope Bridle)	Patient Package Bag # 1
Tripod w/Chain	Carabiner Pole (yellow)

Bottom Shelf
3 45 min Scott Bottles
3 60 min Scott Bottles
3 Tarps- Blue
2 Tarps- Orange
1 Traffic Sign and Quad Stand
1 Valve Key
1 Manhole Cover Tool

XV. Inside Walk In

Left Side:

Compartment 1: Top Shelf:
TIF Leak Detector
APD 2000- (6 Filter Tips)
TIF Combustible Gas Detector
Drager CMS Analyzer
Airborne Vapors/Gases from thermal decomposition chart
Re-occupancy clearance levels chart
(4) AA size Batteries
The following chips are inventory
(2) Nitrogen Dioxide 0,5…25PPM
(3) Hydrochloric Acid 1...25PPM
(1) AmmoniaK 2...50PPM
(1) AmmoniaK 100……..2000PPM
(1) Phosphine 1…25PPM
(2) Phosgene Open 0,052PPM
(2) Ethanol 100....2500PPM
(3) Ozone (1)opened 25…1000PPM
(2) Carbon Monoxide 5..150PPM
(1) Chlorine 0,2…10PPM
(3) Vinyl Chloride 0,3….10PPM
(1) Hydrogen Sulfide 20...500PPM

(2) Hydrocyanic Acid 2…..50PPM

Plastic box w/ Sampling Containers/ Sampling Hose
M–8 Paper CM 9 Paper
Litmus paper
Palm Rad Meter
BADD Kit (10) Exp. Date:_____
Ahura Meter Ahura Test Vials

Bottom Shelf:
Haz Mat ID Accessories Haz Mat ID Kit
Rope Rescue Manual Bio Terrorism Guide
Hazmat Injuries NIOSH Pocket Guide to
Condensed Chemical Dictionary Chemical Hazards
2008 DOT ERG Handbook of Hazardous
Chemical/Nuclear Terrorism Guide Materials (2008)
Coast Guard Books Chemical Research ("C.H.R.I.S") 5 books
Chemical Synonyms/ Trade Names Gas Data Book
Fire Protection Guide on Hazardous Materials 7th ed. (1978)
Smiths- Smiths Detector-Jane's Chem-Bio Handbook

Shelf between Compartments 1 and 2
800 FRES Radio
800 Brookhaven Town Fire Marshal Radio
4 HT Portables with charger 4-1, 4-2, 4-3, 4-4
Charging Units
1 Multi-Gas Solaris Meter (no calibration date)
1 Spare Dewalt Battery
Spare Batteries & Chargers

Shelf between Compartments 2 & 3:
Zistos Camera
APR Kits

Compartment 3:
2 First Aid bags
Oxygen Bag – _____ PSI
AED Adult Pads_____ Ped. Pads_____
5 Packs Disposable Splints
1 Adult BVM
1 Bag of Straps

Items with Expiration Dates:
Sterile Water _____
Glutose _____

Left Rear Shelf:
3 Pipe Plugs

Right Side:
Compartment 1: Bottled Water
Personnel privacy kits
Rubber Shoe Covers
Pens and Pads

4 Chest Harness
Assorted Wipes
1 Chem Tape
1 Duct Tape
Belly Patch Kit (On top of Compartment)

Between Compartments 1 and 2:
3 Cases Entrylink Camera
1 reel with 500ft of Cable

Compartment 2 (Top Shelf)
3 Face shield frames
3 Face shields
6 Goggles
4 Ear protectors
Box of N-95 Masks

(Bottom Shelf)
Assorted gloves
Plastic garbage bags

Above Compartments 2 & 3 are:
2 Long Board (1 wooden w/Reeves Sleeve)
1 Folding Stretcher

Shelf between compartments 2 and 3:
2 MCI Bags
1 Oregon Spine Splint
1 KED in Black Bag
1 Reeves Sleeve Accessory Bag

Compartment 3:
1 Infectious Control P.P.E. Face Mask
6 Medical Gloves 2 Box 3M-8210 Face Masks
PCR & Triage Tag Book 1 Spider Strap
3 Disposable Blankets Bio-Hazard Bags
1 Pack of Disposable Head Beds 2 Sani Cloth Wipes Can
1 Set of Head Blocks
Cervical Collars

Right Rear Shelf:
Mini Hurst Tool Power Unit

In Front of/ On/ Next to Seat:
2 Long Handle Shovel
1 Backboard (Plastic)
5 Brooms
1 Spades
2 Squeegees
1 Little Giant Ladder
1 Confined Space Entry/ Exit Ladder
1 Ajax Tool
1 Hurst Mini Cutters and Hand Pump-On Bench Seat

Under Seat:

1 Entrylink Tripod
1 Exhaust Hose for Car 1
1 Sheetrock Hook
1 3/8 Kernmantle rope (Blue)

Under Compartments 2 & 3:

1 Ladder 14'
2 Entrylink Tripods
2 Backboard-(wood)

XVI. Cab Officer Seat

Officer Seat:

1 SCBA 60 min pack Scan _____
Suffolk County Atlas
DOT Emergency Response Guide (2008)
Radioactive Material Shipment Reference
Rigging Hand Book
Accident report forms under seat
Cab Jack Handle next to seat
Safety Reflectors
Intermediate Rope Rescue Book
Confined Space Rescue Book
Holmatro Rescuers Guide to Vehicle Safety Systems
Yellow Tape

REMARKS:

Inspector: _____ Date: _____

W:\My Documents\FIRE\Rescue 4 Inv.doc

+

ES-7
UTILITY
FORD

March 22, 2011

Compartment 1

Glove Box

	ERG 2008 Book
	Radio Books
	Ford Owners Guide
	Accident Report Form
	Can Of Tick Spray
	Vehicle Registration Card(Missing)
Pkg.	Valve Seals

Open Area

	Suffolk County Atlas
	Traffic vest

Bench Seat

	County Mobile Radio	F1 radio check: _____
	BNL Mobile Radio	
Sheet	Barcode stickers	

Compartment 2

2A

2	Spanner Wrenches
1	Hydrant Wrench
4	Storz Wrench
2	P.I.V Handles
	Ratchet Set
	Pliers and Screw Driver Set
Box	XL Gloves
Box	L Gloves
Roll	Rag on roll
Roll	Paper towels
	Rubber Mallet
1	Roll Fire Line tape
1	Spray Bottle Rust Blaster

2B

	Utility Bag
2 bags	Tie Wrap
	McCarthy Disc
Pkg.	Valve seals
Sheet	BNL Labels
	Garbage Bags
	Gloves
	Brush
10	Extinguisher Hooks
	Medical Bag
	Drain Covers 24x24
	Drain Cover 18x18

	Box Booms
Can	Yellow Paint Spray
Can	Red Paint Spray
1 Box	Black garbage bags

Compartment 3

3A

11	Absorbent Drip Pans

3B

Pillow

3C

Oil Drop Pads
2 1LB. Cont. Green Stuff
1 Whisk Broom

Compartment 4

Assorted Pig Socks
Assorted Absorbent Pads
Plugs 2”, 3”, 4”
Chem Tape

Compartment 5 (Comp. Broken) reported to Capt.

2	17 lbs ABC Fire Ext
	30 lbs Amerex Class D ext with Cone
	Wheel chocks

Compartment 6

	Shovel
2	Brooms
3	Over pack Drum with Power Sorbs Pads
	5 Gallon Buckets of Speedy Dry
	20 Gallon Container of Speedy Dry
	Oil Spill Kit
	Acid Spill Kit
	Valve Key

Metal Detector (In garage when not in use)
2 Empty 5 gallon buckets with Lids

Compartment 7

3	Green Cones

Compartment 8

8B

Drain Cover 36x36
Drain Cover 42x42

Compartment 9

9A.

1.5 rolls	Caution Tape
	Heavy Duty Hitch
	1 Box L Gloves.

9B

Box	XL Nitrile Gloves-In Plastic Storage Box
Box	H-95 face masks-In Plastic Storage Box
Box	H-95 face masks
Pail	1 Stergo, 5 gal.

Compartment 10

10A

	24” Crow Bar
	Large Bolt Cutter
	Gas Boy
2	Manhole hook

10B

Honda Light Generator 1000 Fuel Level: _____

REMARKS:

INSPECTOR: **DATE:**

EXHIBIT C

Standard Operating Procedures for Emergency Response at the MPF (Building 610)

First Responder Operational Level Central Steam Facility

1.0 PURPOSE

To provide guidelines for the Senior Stationary Engineers as First Responders – Operations Level at the Energy & Utilities Division, Central Steam Facility (CSF).

This procedure must be followed as written.

2.0 SCOPE

This procedure is to be followed by the Stationary Engineers at the CSF when they encounter any spill condition.

3.0 POLICY

The Stationary Engineers will be responsible for the implementation of this procedure. Any changes or deviations from this procedure must first be approved by the responsible authority of the CSF.

4.0 REFERENCES

4.1 Major Oil Storage Facility (MOSF) Oil & Chemical Spill Prevention Control and Countermeasure (SPCC) Plan

4.2 Major Oil Storage Facility - Facility Response Plan

4.3 SBMS Subject Area Spill Response

4.4 DF-ESH-105, Personal Protective Equipment Issuance

4.5 F&O ESHT&Q Personal Protective Equipment Web Page

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5.0 DEFINITIONS

5.1 First Responder – Operations Level: Senior Stationary Engineer who first discovers a spill or leak of fuel oil or other hazardous chemical at the CSF or the Major Oil Storage Facility. First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures.

5.2 Responsible Authority: Facility Project Manager, Complex Facility Manager, Energy & Utilities Division Manager, in that order.

5.3 Responsible Engineer: Senior Stationary Engineer who discovers the spill event.

6.0 PROCEDURE

6.1 Prerequisites

6.1.1 On a yearly schedule, the Senior Stationary Engineers will review the Major Oil Storage Facility (MOSF) Oil & Chemical Spill Prevention Control and Countermeasure (SPCC) Plan and the Major Oil Storage Facility – Facility Response Plan.

6.2 Precautions

6.2.1 When performing the duties of first responder, do not undertake any action that will put yourself or others at imminent risk of injury or death. Use appropriate personal protective equipment (PPE) at all times per DF-ESH-105, Personal Protective Equipment Issuance and the F&O ESHT&Q Personal Protective Web Page.

6.3 When in the routine course of the operation of the CSF, the responsible engineer discovers any spill or leak of fuel oil or hazardous chemical he/she will assume the role of first responder and initiate defensive action to minimize further damage.

- Observe the magnitude of the leak or spill. Is it a drip, spray, or a gusher?

- Where is the spill or leak occurring on concrete, asphalt, a containment berm, or grassy area?
- What is the product that is leaking?
- What impact will it have on the operation of the CSF?

6.4 Where, if practical, in the best judgment of the responsible engineer, mitigate or reduce the adverse environmental impacts of the spill.

- Close valve or secure pump to reduce flow
- Put drip pan under leak or drip
- Divert flow from drain or catch basin

6.5 Notify Laboratory Protection Division Emergency Management about the spill (X2222). Give all pertinent information to the duty officer. Return to the site to direct emergency response as appropriate. Assist the Incident Commander with the incident report as required.

6.6 Continue with mitigation and or remediation as required.

- Transfer fluid from leaking tank to other appropriate storage tanks.
- Reroute oil to avoid the affected leaking piping
- Setup pumps or hoses as required transferring oil to alternate storage tanks
- Supply clean up supplies, hoses, booms, shovels or absorbents from the spill trailer as required
- Call additional senior stationary engineers or others as required or directed

7.0 ATTACHMENTS

7.1 EU-CSF-020A, Certification of Annual Refresher Training

Certification of Annual Refresher Training

I _____ herby certify that I have reviewed Brookhaven National Laboratory procedure EU–CSF–020, First Responder Operations Level Central Steam Facility and the reference documents:

1. -Major Oil Storage Facility (MOSF) Oil & Chemical Spill Prevention Control and Countermeasure (SPCC) Plan

2. Major oil Storage Facility – Facility Response Plan

and understand my duties and responsibilities as a First Responder Operations Level Central Steam Facility.

_____ _____

Please sign above Date

I _____herby certify that the above named person has demonstrated to me their knowledge of the requirements of First Responder Operations Level Central Steam Facility.

_____ _____

Please sign above Date

Local Emergency Plan

1.0 PURPOSE

To prepare personnel working in the 610 complex for the response required in the event of an emergency.

This procedure must be followed as written.

2.0 SCOPE

The emergency plan covers Buildings 603, 610, 633, 636, 639, the Fuel Oil Tank Farm, and assorted structures. This area is referred to as the 610 complex.

2.1 The types of emergencies considered credible for the 610 complex that would require activation of all or part of the emergency plan are:

- **Operational**
  - Fire
  - Explosion
  - Personal Injury
  - Release of Hazardous Toxic Material
  - Major Oil Spill
  - Radiological or Toxic Material released from another Facility or area outside of the 610 Complex
- **Weather**
  - Tornado
  - Hurricane

- **Terrorist Threat or Act**
    - Bomb Threat
    - Overt or Convert Action (including sabotage)

2.2 Emergencies are divided into 6 classes depending upon the potential for a degradation of the level of safety.

- Personnel Emergency
- Unusual Event
- Operational Emergency
- Alert
- Site Emergency
- General Emergency

General characteristics of each emergency are detailed in the Brookhaven National Laboratory Emergency Response Plan.

3.0 POLICY

3.1 The Laboratory's Emergency Supervisor is management's representative as designated in the response plan. The supervisor is in charge at the scene of all emergency operations. The line of succession and responsibilities are also detailed in the response plan.

3.2 The Manager of Energy & Utilities Division is responsible for the preparation and implementation of the local emergency plans for the 610 complex. In addition the Manager will:

- Ensure that personnel are adequately trained in emergency procedures and in the use of emergency equipment required under this plan.
- As required, relieve the Local Emergency Coordinator (LEC) at the scene if he feels it is prudent.

3.3 The Facility Project Manager is the Local Emergency Coordinator. His responsibilities are detailed in the response plan. In addition, he will:

- Become thoroughly familiar with the potential emergencies that can arise at the 610 complex.
- Plan and conduct training as required for the Local Emergency Plan.
- Annual conduct emergency drills.
- Developing and implementing the procedure for securing the Steam Plant and associated equipment for various emergencies.
- Training of the 610 complex personnel in securing procedures.

3.4 This Local Emergency Plan, when used in conjunction with the Brookhaven National Laboratory Emergency Response Plan, is considered to be a complete emergency plan for the 610 complex.

4.0 REFERENCES

4.1 SBMS Subject Area Emergency Preparedness

4.2 SBMS Subject Area Spill Response

4.3 Spill Prevention and Countermeasure (SPCC) Plan

5.0 DEFINITIONS

None

6.0 PROCEDURE

6.1 Prerequisites

None

6.2 Precautions

None

6.3 Declaration of local emergency:

- Personnel Emergency: This may be called in by any employee at the 610 complex who is aware that an emergency exists by calling Police Headquarters (x2222) and stating the nature of the emergency.

- Unusual Event Emergency: The Local Emergency Coordinator or the alternate has the responsibility to declare an unusual event condition.

- An operational emergency, alert, site emergency, and general emergency is declared by the laboratory's emergency supervisor.

6.4 Personnel at the 610 complex are responsible for:

- Assuring their own safety and assisting in removing from the area any injured persons without undue danger to themselves.

- Summoning the Laboratory's emergency forces by telephone (x2222) or by pulling a manual fire alarm.

- Taking any steps which may be called for in an operational or Local Emergency Plan to minimize the effects of the emergency.

- Communicating with or instructing someone to communicate with Energy & Utilities Division Local Emergency Coordinator and/or his alternate.

- Remaining at the scene of an emergency until the arrival of the Local Emergency Coordinator and/or the Laboratory's emergency forces to advise what has occurred and assist as required.

- Following any instructions issued by the Local Emergency Coordinator, the Local Emergency Supervisor, or the Laboratory's emergency forces.

6.5 BNL Emergency Signals

- Site Warning Signal: Site siren continuously sounded or Plectron notification only when so directed by the Local Emergency Supervisor. When this is heard, the personnel present in the 610 complex will make any preparations necessary for securing the plant in accordance with

existing procedures and will leave the area and reassemble in Building 326, where they will await instructions about returning to their workplace.

- Site Evacuation Signal: This is the intermittent sounding of site sirens or Plectron notification when directed by the Local Emergency Supervisor. Personnel assembled in Building 326 will ignore this signal, unless otherwise directed by their supervisor. They will wait word as to when the 610 complex can be safely reentered and with what precautions, as directed by the Local Emergency Supervisor.

6.6 Building 610 Complex Signals

Note: The fire alarm is also activated by the Halon system in the control room. Evacuation would be ordered orally by either the local emergency supervisor or coordinator if the supervisor has not yet arrived.

- The only building signal in the 610 complex is the fire alarm which can be activated by pulling either of three manual fire alarm boxes in Building 610, one outside Building 636, or one outside Building 639.

- The boiler systems in the 610 complex have audible and visual automatic alarms which may precede an emergency.

6.7 Bomb Threat

- All bomb threats will be treated as valid. The BNL Bomb Alert Plan will be used as a guide by the building coordinator.

- The Facility Project Manager, Central Steam Facility is the Building Coordinator of the 610 Complex.

6.8 Oil Spills

- The SPCC Plan, in conjunction with its Oil Pollution Response Plan, will be followed for oil spills. Responsibilities, emergency equipment, and forces to be used are detailed in this plan.

6.9 Emergency Control and Assembly Areas

- The Steam Plant's supervisor's office is the emergency control point.

- The police captain's vehicle is the alternate control point.
- Other than site emergency, the assembly area is in the parking area of Trailer 650T. The lobby of Trailer 650T is to be used in inclement weather.
- For a site emergency, the assembly area is Building 326, unless otherwise directed by the Manager of Energy & Utilities Division or the Local Emergency Supervisor.
- The Local Emergency Coordinator or his alternate will assign one person to record the names of all the persons at the assembly area.
- The names of the persons no present or accounted for will be immediately transmitted to the Local Emergency Supervisor and/or Coordinator.

6.10 Re-entry into the Complex

- The Local Emergency Supervisor and Coordinator will determine when re-entry into the complex is permitted.
- Re-entry into the specific areas where the investigation is underway will not be permitted unless authorized by the Local Emergency Supervisor.

6.11 Laboratory Emergency Forces

- When notified, police and fire rescue groups will respond to all emergencies.
- Appropriate personnel of the ESH&Q Division will respond to an oil spill emergency in accordance with the BNL SPCC Plan
- When requested by the Local Emergency Supervisor, EMTs and the appropriate ES&H personnel will respond to the emergencies.
- Any special conditions, changes, etc., in the complex will be immediately transmitted to the fire and rescue groups upon arrival.

6.12 Drills and Training

- The Local Emergency Coordinator, through the Facility Project Manager of the Steam Plant, will ensure that all personnel assigned to the 610 complex are aware and familiar with the emergency plan.

- A minimum of one unannounced drill will be conducted annually. The drill will be prearranged with the police, and fire rescue groups via the BNL Emergency Planning Coordinator.

- The drill will be critiqued and documented in accordance with the BNL Emergency Response Plan Manual.

6.13 Facility Complex

- The Central Steam Facility (building 610) consists of four steam boilers operating at 125 psig saturated steam pressure, with a nominal design capacity of 410,000 lbs/hr. The existing boiler data is:

Boiler #	Boiler Maker	Type	Rated Capacity	Date Installed
1A	B&W	FM10	45,000 lbs/hr	1963
5	CE	VU60	180,000 lbs/hr	1965
6	CE	28A-14	125,000 lbs/hr	1985
7	B&W	FM117-97	125,000 lbs/hr	1995

- Steam is distributed from the Central Steam Facility through an underground steam and condensate piping grid to the major buildings onsite.

- The Temple Place Substation (Building 603) consists of four 60 Hertz, three phase transformers.

    - 20/26.7/29.87 MVA, 60 -13.8 kV, LTC

- Electrical power for the site is supplied by LIPA at a voltage of 69 kV over either one or two overhead transmission lines (preferred or alternate). These lines terminate in two widely separated BNL owned substations. The two substations are Building 603 (which is part of the 610 complex) and Building 631. There is an interconnecting 69 kV line such that all power to both substations is supplied by one line. The main power

distribution of the Laboratory is a modified radial 13.8 kV underground system.

- The fuel oil transfer and receiving facility (Building 639) contains fuel oil pumping and control systems to receive, monitor, and transfer fuel oil in the tank from complex.

- The Manager of Energy & Utilities Division is responsible to keep the fire and safety groups current of all changes, modifications, etc. at the 610 complex.

6.14 Designated Personnel

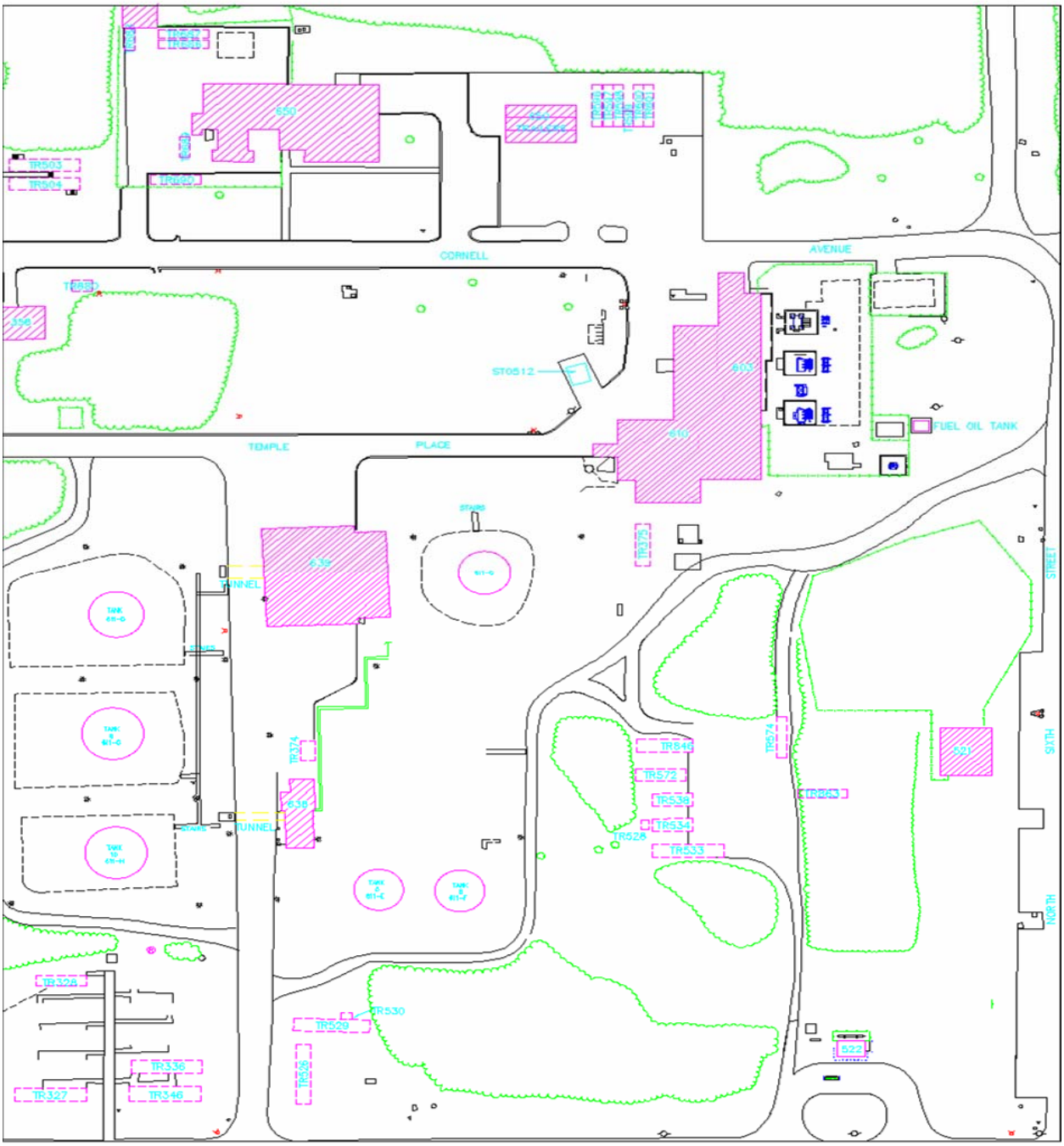
Title	Name	Extension	Cell
Manager, EU Chief Engineer	E. Murphy	3466	872-8968
Utilities Complex Manager	W. Chaloupka	7136	514-1282
Utility Project Engineer	W. Bay	4958	457-3690
Facility Project Manager, Central Steam Facility	E. Simon	5327	576-5835

7.0 ATTACHMENTS

7.1 EU-CSF-012A, General Site Plan: 610 Complex

7.2 EU-CSF-012B, Physical Characteristics of Fuel Oil Storage Tanks

General Site Plan



Physical Characteristics Fuel Oil Storage Tanks

Descriptive Notes:

Tank Level: Remote and Local

1. Rosemont radar level indicators.
2. Automatic Tape Scale (Protectoseal Model 12000 A or equal).
3. Scale board with cable and float.
4. Manual sounding tape or stick.

Tank High Level:

1. Transdata Model 6699-40 Annunciator System with Model 6693-L operation checkers.
2. Alarm from Rosemont radar level indication through a programmable logic controller.
3. Pneumeracator Model LC (1, 3, or 4) SA-NCL Level Indication System.

Support Type:

1. Circular ring.

Physical Characteristics Fuel Oil Storage Tanks

Table 1
PHYSICAL CHARACTERISTICS OF FUEL OIL STORAGE TANKS
Brookhaven National Laboratory Central Steam Facility

Tank Number	Capacity Barrels	Product Stored	Service IN/OUT	Axis	Year Installed (Built)	Diameter (feet)	Height Length (feet)	Floor (ends)	Shell Thickness	Roof Thickness	Material	Tank Remote Level*	Tank Local Level*	Tank High Level*	Support Type*	Manufactuters Design Criteria & Notes*
3 (611C)	7143	#6 Oil	IN	Vertical	1964	40.00	32.00	1/4" Pl	0-16'H=1/4" 16-32'H=3/16"	3/16" Pl	ASTM-A283 Grade C	1	3,4,5	1,2	1	Buffalo Tank API Std.650
4 (611D)	9524	#6 Oil	IN	Vertical	1974	42.50	40.00	1/4" Pl	1/4" Pl	1/4" Pl	ASTM-A283 Grade C	1	3,4,5	1,2	1	Chicago Bridge API Std.650
5 (611E)	7143	#2 OIL	IN	Vertical	1983	38.00	35.50	1/4" Pl	1/4" Pl	3/16" Pl	A-283-C	1	3,4,5	1,2	1	Buffalo Tank API Std. 650
6 (611F)	7143	#2 OIL	IN	Vertical	1983	38.00	35.50	1/4" Pl	1/4" Pl	3/16" Pl	A-283-C	1	3,4,5	1,2	1	Buffalo Tank API Std. 650
9 (611G)	9330	#6 Oil	IN	Vertical	1989	48.00	30.00	1/4" Pl	1/4" Pl		SA-283-C	1	3,4,5	2	1	Pittsburg-Desmoines API 650
10 (611H)	14115	#6 Oil	IN	Vertical	1989	48.00	45.00	1/4" Pl	1/4" Pl-Ring 1 1/4" Pl-Ring 2-5		A-36 A-283-C	1	3,4,5	2	1	Pittsburg-Desmoines API 650

Capacity 54,398.00 BARRELS
2,284,716 GALLONS

Notes: Tank Level: Local and Remote
1 Rosemount Model 5400 Ragar Level Gauge
2 Automatic Tape Scale - (Protectoseal Model 12000 or equal
3 Scale Board with cable and float
4 Manual sounding with tape or stick

Tank High Level
1 Transdata Model 6699-40 Annuciator System with Model 6693-L Operation Checkers
2 Alarm from Rosemount Radar Level indicator system

Support Type
1 Circular Ring

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EXHIBIT D

BNL On-Site Emergency Response Organization Structure and Responsibility

Brookhaven National Laboratory
Emergency Response Organization – ERO
Emergency Operations Center Team

Position		Team 1	Team 2	Team 3
Crisis Manager		George Goode	Lenny Butera	Ed Murphy
BHSO Emergency Manager		Mike Holland (Primary)	Maria Dikeakos (Secondary)	
Public Information Unit	BNL PIO	Kathy Geiger	Ken White	Pete Genzer
	BHSO PIO	John Carter (Primary)	Frank Crescenzo (Secondary)	
	Writer	Jim Green	Will Safer	Joe Gettler
EOC Operations Chief		John Amabile	Mike Pena	Mike Pena
Fire Rescue		Chuck LaSalla	Marcel Rosenfeld	Tim Kelly
Police		Thomas Gilbert	Mike Delph	Dave Peter
EOC Planning Chief		Rich Ohlsen	Joe Terranova	Mike Venegoni
BHSO Planner		Robert Desmarais (Primary)	Bob Gordon (Secondary)	
Consequence **A**ssessment **T**eam	CAT Team Lead	Bob Lee	Chuck Schaffer	Steve Coleman
	Industrial Hygiene	John Peter/ Fred Horn	Wai-Lin Litzke	Chris Weilandics
	Radiological	Henry Kahnhauser	Dennis Ryan	Andrea Epple
	Environmental	Jason Remien	Steve Ferrone	Debbie Bauer
	Modeler	Benny Hooda	Jeff Williams	Peter Pohlot
Situation Report Unit		Joe Terranova	Clayton Hamilton	Steve Moss
		Jerry Granzen (Primary)	Pete Kelley / Pat Sullivan (Secondary)	
Documentation Unit		Patricia Carr/ James Vaz	Mindy Markstaller/ Celia Mauro	Sara Mahler/ Andrea Wund
EOC Logistics Chief		Mike Venegoni	Rich Ohlsen	Joe Terranova
Facility Support		Peter Stelmaschuk	Lance Warren	Thomas Baldwin
Information Technology				

BHSO Representatives will be activated by primary and secondary positions to fill positions in any of the three EOC Teams.

EMERGENCY OPERATIONS CENTER TEAM SCHEDULE

	Crisis Mangers
Team 1	George Goode
Team 2	Len Butera
Team 3	Ed Murphy

- Each team is on call for the entire month
- Any team member has may have a conflict and will not be available can arrange coverage for their position from another team

Month	Team on Call
January	EOC Team 1
February	EOC Team 2
March	EOC Team 3
April	EOC Team 1
May	EOC Team 2
June	EOC Team 3
July	EOC Team 1
August	EOC Team 2
September	EOC Team 3
October	EOC Team 1
November	EOC Team 2
December	EOC Team 3

EMERGENCY RESPONSE ORGANIZATION

POSITION ROLES AND RESPONSIBILITIES

BROOKHAVEN NATIONAL LABORATORY

Operated by

Brookhaven Science Associates, LLC

Prepared by:

BNL

Office of Emergency Management

Laboratory Protection Division

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INTRODUCTION

The Incident Command System (ICS) is a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to enable effective and efficient domestic incident management. A basic premise of ICS is that it is widely applicable. It is used to organize both near-term and long-term field-level operations for a broad spectrum of emergencies, from small to complex incidents, both natural and manmade. ICS is used by all levels of government—Federal, State, local, and tribal—as well as by many private-sector and nongovernmental organizations. ICS is also applicable across disciplines. It is normally structured to facilitate activities in five major functional areas: command, operations, planning, logistics, and finance and administration.

SUMMARY

The BNL Emergency Response Organization (ERO) is developed under ICS which is a key feature under the National Incident Mangement System (NIMS). The ICS is a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to enable effective and efficient domestic incident management. A basic premise of ICS is that it is widely applicable. It is used to organize both near-term and long-term field-level operations for a broad spectrum of emergencies, from small to complex incidents, both natural and manmade. ICS is used by all levels of government—Federal, State, local, and tribal—as well as by many private-sector and nongovernmental organizations. ICS is also applicable across disciplines.

The information contained below delineates the roles, responsibilities and tasks assigned to each position within the ERO. Staffing from BNL and the Brookhaven Site Office (BHSO) are integrated in the positions outlined below unless otherwise indicated.

INCIDENT COMMAND

INCIDENT COMMANDER

Role:

The Incident Commander (IC) is the Emergency Director until this role is transferred to the Crisis Manager. The IC oversees all aspects of an emergency response; including quickly developing incident objectives, managing all incident scene operations, application of resources as well as responsibility for all persons involved.

Responsibilities:

- Assess situation;
- Establish incident objective and priorities;
- Ensure incident safety;
- Establish incident command post;
- Determine categorization and classification of the event;
- Determine protective actions and protective action recommendations;
- Notification of Operational Emergencies;
- Authorize release of information to the media

Tasks:

- Ensure welfare and safety of incident personnel;
- Develop incident objectives;
- Categorize and classify the incident;
- Implement protective action;
- Notify off-site community of protective action recommendations;
- Initiate and ensure Operational Emergency notifications are sent;
- Transfer Emergency Director responsibilities when EOC is declared Operational

COMMAND STAFF

CRISIS MANAGER

Role:

The Crisis Manager assumes the role of Emergency Director of the incident and is responsible for the overall management of the incident.

Responsibilities:

- Assess the situation and obtain a briefing from the Incident Commander;
- Determine Incident Response Objectives and Strategy;
- Establish immediate priorities;
- Ensure that adequate safety measures are in place;
- Coordinate activity for all Command and General Staff;
- Authorize release of information to the news media;
- Ensure support is provided to the Incident Commander;
- Authorize protective actions and protective action recommendations;
- Activate the Emergency Information Center when necessary;
- Assign spokesperson and technical briefers when required.

Tasks:

- Ensure minimum staffing is met;
- Declare EOC operational;
- Require current status briefing from IC;
- Assume role of Emergency Director;
- Establish objectives;
- Ensure site safety with protective actions if necessary;
- Ensure off-site safety with protective actions recommendations if necessary;
- Ensure EOC staffing is adequate;
- Review and revise incident response objectives as necessary.

BHSO EMERGENCY MANAGER

Role:

The BHSO Emergency Manager is responsible for providing US Department of Energy (DOE) coordination to the incident and Crisis Manager (CM).

Responsibilities:

- Assess the situation and obtain a briefing from the Incident Commander;
- Determine Incident Response Objectives and Strategy with the CM;
- Establish immediate priorities with the CM;
- Ensure that adequate safety measures are in place with the CM;
- Authorize release of information to the news media with the CM;
- Ensure support is provided to the Incident Commander with the CM;
- Coordinate protective actions and protective action recommendations with the CM;
- Assign DOE spokesperson and technical briefers when required;
- Directly request the activation of any DOE or Federal resources to support the incident response;
- Assume role as Crisis Manager when necessary.

Tasks:

- Ensure BHSO Communicator has established communication with DOE Headquarters;
- Participate in current status briefing from IC with the CM;
- Request activation of Federal resources when necessary;
- Authorize release of contingency funds;
- Authorize exposures above DOE administrative control limits;
- In concurrence with the CM the BHSO EM shall:
    - Establish incident response objectives
    - Review and concur with press releases
    - Review and concur with site safety protective actions
    - Review and concur with termination of the event

PUBLIC INFORMATION OFFICER

Role:

The Public Information Officer is responsible for directing the preparation, coordination, and release of public information to internal and external communities, elected officials, government agencies, and the news media during emergency incidents and accidents.

Responsibilities:

- Direct CEGPA response activities and keep CEGPA ALD informed;
- Direct the activities of the EOC writer;
- Manage the preparation and release(s), statements and other emergency communications and obtain approvals from Crisis Manager, BHSO Emergency manager, and Authorized Derivative Classifier (where appropriate);
- In coordination with the Crisis Manager, select a spokesperson and technical briefers (where appropriate) and assign to the EIC/JIC (or offsite JIC) to support press briefings;
- Recommend activation of the Emergency Information Center (EIC) or Joint Information Center (JIC);
- Assist in determining whether the primary, alternate EIC/JIC or offsite JIC should be activated based upon site safety information reported in the EOC;
- Maintain communication with the EIC/JIC manager regarding new or changing information and control/correction of rumors or misinformation;
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- Report to EOC and obtain status of emergency and determine if activation of EIC or JIC is needed;
- If PIO and Crisis Manager confer that EIC/JIC is needed, initiate CEGPA Organization Emergency Phone Tree call down to open EIC/JIC;
- Direct EOC writer to develop initial press release and obtain approval from CM and an Authorized Derivative Classifier (if appropriate);
- Ensure that first press release is sent within one hour of declaration;
- Direct writer to develop subsequent press releases/statements , obtain authorization to release from the CM, DOE HQ (through DOE BHSO), and Authorized Derivative Classifier;
- Provide briefing to CM on employee, community, government and media inquiries, and media monitoring and rumor control;
- Coordinate assignment of Spokesperson and Technical Briefer(s) for media conference
- Provide approved information to public information personnel including EIC staff for dissemination;
- Assist in publicizing termination of emergency event;
- Collect and consolidate emergency documentation from EOC public information personnel and provide to EOC Manager for retention.

PUBLIC INFORMATION WRITER

Role:

The Public Information Writer is responsible for the preparation and release of public information to internal and external communities, elected officials, government agencies, and the news media during emergency incidents and accidents.

Responsibilities:

- Develop draft press releases, statements and other emergency communications (internal and external) for release to internal personnel, news media, government officials/agencies and the general public and submit to PIO for review/approval;
- Assist in the distribution of all approved news releases, statements and internal/external emergency communications;
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- At the direction of the PIO, write draft news releases, statements and other communications intended for release to news media, general public, and internal and external communities;
- Locate and ensure that news release approval stamp is used in documenting communications approvals;
- At the direction of the PIO, provide approved information to the EIC and/or JIC on the incident/accident for dissemination;
- Ensure information from EIC/JIC personnel on media, internal/external queries and rumor control is shared with PIO and CM;
- Assist the PIO with publicizing termination of emergency event;
- At the conclusion of the emergency, hand in copy of checklist/log to the EOC manager; Assist the PIO with any after-action reports.

EOC OPERATIONS SECTION CHIEF

Role:

The Operations Section Chief is responsible for ensuring communications with incident command, managing overall impact of the event, on-site operations, provides needed information about facilities and processes, and monitoring personnel status and accountability.

Responsibilities:

- Maintain contact with Incident Command Post and other agencies involved in the incident;
- Ensure staffing of Police and Fire Rescue representatives in EOC;
- Request additional resources to support operations;
- Relay information and situation status from operations room to the CM;
- Implement Protective Actions as directed;
- Coordinate actions and information with the Planning Section;
- Oversee staging area operations and coordination;
- Assist with developing incident response objectives;
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- Request resources and support as indicated by the IC and/or CM;
- Keep CM informed of the status of operational efforts;
- Keep Planning Section up-to-date on resource tracking and situation status;
- Implement protective actions and evacuation routes recommendations with Planning Section and Consequence Assessment team;
- Ensure site fire protection and security is adequate during the event;
- Provide ongoing situation updates received from the incident scene.

EOC LOGISTICS SECTION CHIEF

Role:

The EOC Logistics Chief is responsible for ensuring logistical support requests are met for response support equipment, supplies and communications.

Responsibility:

- Coordinate all facilities, transportation, communications, supplies, equipment maintenance, fueling, food and medical services for incident personnel and all off-site resources;
- Identify anticipated and known incident service and support requirements;
- Activate Functional Work Centers (FWC);
- Ensure logistics staffing requirements are adequate in the EOC;
- Track all requests for resources including final dispensation;
- Activate the Finance FWC to assist and coordinate with resource request and procurement;
- Coordinate with EOC Fire or Police Rep for activation of offsite mutual aid response through NYS, Fire Communications, Med Communications or local towns;
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- Activate FWC's;
- Track and/or assign FWC's activities;
- Coordinate with Operations for resources requests;
- Coordinate with Planning for potential needs;
- Develop traffic management plan in coordination with Operations;
- Develop Communication Plan.

EOC PLANNING SECTION CHIEF

Role:

The Planning Section Chief is responsible for the collection, evaluation, and dissemination of all operational information concerning the incident.

Responsibilities:

- Collect, evaluate, and record information regarding the incident;
- Assist with developing the incident objectives and priorities;
- Develop solutions to meet incident objectives;
- Coordinate with other section chiefs on incident information;
- Prepare and document the Incident Action Plan (IAP) if required;
- Develop Protective Actions and Protective Action Recommendations;
- Maintain situational awareness and document situational status;
- Manage the Consequence Assessment Center activities;
- Manage the Situation Unit activities;
- Manage the Documentation Unit activities;
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- Coordinate and manage all branches of the planning section;
- Evaluate situational information;
- Ensure OE initial notification was transmitted with correct information;
- Ensure subsequent OE notification are transmitted when conditions warrant;
- Ensure current information is collected and situation report provide updates;
- Ensure the CAT Team evaluates hazardous conditions and establishes health, safety, and environmental controls;
- Review bases for emergency action levels, event categorization and classification, and advise Crisis Manager on any changes that should be implemented;
- Review bases for on-site protective actions and off-site protective action recommendations;
- Ensure Tone Alert Radio notifications are transmitted when requested;
- Ensure all incident timelines are captured and all documentation is collected;
- Prepare and maintain incident maps.

EOC BHSO PLANNER

Role:

The BHSO EOC Planner is responsible for coordinating the collection, evaluation, and dissemination of all operational information concerning the incident with the EOC Planning Chief.

Responsibilities:

- Collect, evaluate, and record information regarding the incident;
- Serve as the BHSO Emergency Manager when necessary;
- Serve as the EOC Planning Section Chief when necessary;
- Assist with developing the incident objectives and priorities;
- Review Protective Actions and Protective Action Recommendations;
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- Coordinate and manage all branches of the planning section;
- Evaluate situation information;
- Ensure OE initial notification was transmitted with correct information;
- Ensure the CAT Team evaluates hazardous conditions and establish health, safety, and environmental controls;
- Review bases for emergency action levels, event categorization, and classification and advise the Crisis Manager on any changes that should be implemented;
- Review bases for on-site protective actions and off-site protective action recommendations.

PLANNING SECTION - DOCUMENTATION UNIT

Role:

The Documentation Unit is responsible for documenting, obtaining, and tracking information during an incident.

Responsibilities:

- Capture and document major activities and events to include times;
- Maintain incident timeline and action of events;
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- Obtain and file forms and reports submitted by incident personnel;
- Obtain file copies of official forms and reports;
- Submit all documentation to OEM at the conclusion of the event;
- Maintain incident timeline and actions of events;
- Update the Situation Board with current information.

PLANNING SECTION - SITUATION UNIT

Role:

The Situation Unit is responsible for providing situational status and emergency notifications.

Responsibilities:

- Transmit Operational Emergency(OE) notification forms after activation of the EOC;
- Transmit Tone Alert Radio (TAR) messages upon activation of the EOC;
- Initiate communications with DOE HQ;
- Obtain information to provide situational awareness for OE notifications and TAR messages;
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- Ensure the initial OE notification form was transmitted and with the correct information;
- Initiate tracking of OE notifications forms;
- Prepare, obtain authorization and transmit subsequent OE notifications as instructed;
- Ensure communications are established with DOE HQ;
- Prepare, obtain authorization, and transmit subsequent Tone Alert Radio (TAR) notifications as instructed;
- Coordinate information with the Documentation Unit;
- Obtain information and updates from Planning, Logistics and Operations.

PLANNING SECTION - CONSEQUENCE ASSESSMENT TEAM

Role:

The Consequence Assessment Team is responsible for determining the health, safety, and environmental impacts of an event on site.

Responsibilities:

- Review and evaluate potential and actual health and safety impacts to site personnel, the public, and the environment;
- Develop Protective Action and Protective Action Recommendations;
- Review Emergency Action Levels for categorization and classification;
- Organize and manage field monitoring/sampling personnel;
- Maintain current weather conditions and forecast;
- Ensure all regulatory notification are conducted;
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- Determine protective actions and protective actions recommendations;
- Determine appropriate personnel protective equipment requirements for the incident;
- Perform continuous consequence modeling;
- Review protective action criteria;
- Activate field monitoring and sample resources as necessary;
- Provide protective action criteria for event classification and protective action/protective action recommendations;
- Coordinate with off-site modeling personnel (e.g., NARAC, State, DOE);
- Obtain current weather conditions and forecast.

LOGISTICS SECTION - FACILITIES AND OPERATIONS

Role:

The Facilities and Operations (F&O)Representative is responsible for coordinating all on-site F&O support, services, and equipment.

Responsibilities:

- Identify anticipated and known incident service and support requirements;
- Activate additional F&O support staff as necessary;
- Track all request for F&O related resources including final dispensation;
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- Identify and track available on-site resource and inform the Logistics Chief;
- Establish and maintain communications with complex managers, facility engineering and maintenance crafts personnel as necessary, and coordinate their support;
- Assign complex managers, facility engineering and maintenance crafts personnel as necessary to support the incident;
- Provide coordination with off-site utilities as necessary.

OPERATIONS SECTION - POLICE GROUP REPRESENTATIVE

Role:

The Police Representative in the EOC serves as the police point of contact between the ICP and off-site law enforcement coordination.

Responsibilities:

- Report to the Operations Section Chief;
- Maintain communication between the ICP , EOC, and the Police Group;
- Provide the Operations Section Chief situational and operational updates;
- Provide resources and support to the ICP and Police supervisor;
- Coordination of site security;
- Development of Tactical Plans for security related events;
- Responsible for:
    - Traffic control
    - Route alerting
    - Evacuations
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- Establish communications with Police supervisor at the ICP or in the field;
- Obtains current status of police operations;
- Ensure security at event scene is adequate;
- Ensure site security is maintained;
- Develop site security plan for incident;
- Coordinate with local law enforcement;
- Provide support or resources for enforcement or security operations.

OPERATIONS SECTION - FIRE RESCUE REPRESENTATIVE

Role:

The Fire Rescue Representative in the EOC serves as the fire/medical point of contact between the ICP and off-site fire and medical coordination.

Responsibilities:

- Report to the Operations Section Chief;
- Maintain communication between the ICP and the EOC;
- Provide the Operations Section Chief situational and operational updates;
- Provide resources and support to ICP and Fire Rescue supervisor;
- Capture and record significant event information in the Unit Log (ICS-214).

Tasks:

- Establish communications with Fire Rescue supervisor at the ICP or in the field;
- Coordinate resources requests;
- Track all operational resources and maintain situational maps;
- Provide ICP with recommendations from Consequence Assessment;
- Obtains current status of fire and/or medical operations;
- Ensure fire protection and medical response on site is maintained;
- Provide coordination with Staging Area;
- Coordinate requests for support or resources for fire or medical operations.

SUPPORT OPERATIONS

EMERGENCY/JOINT INFORMATION CENTER

Role:

The Emergency/Joint Information Center is responsible for supporting the internal and external emergency information activities for BNL.

Responsibilities:

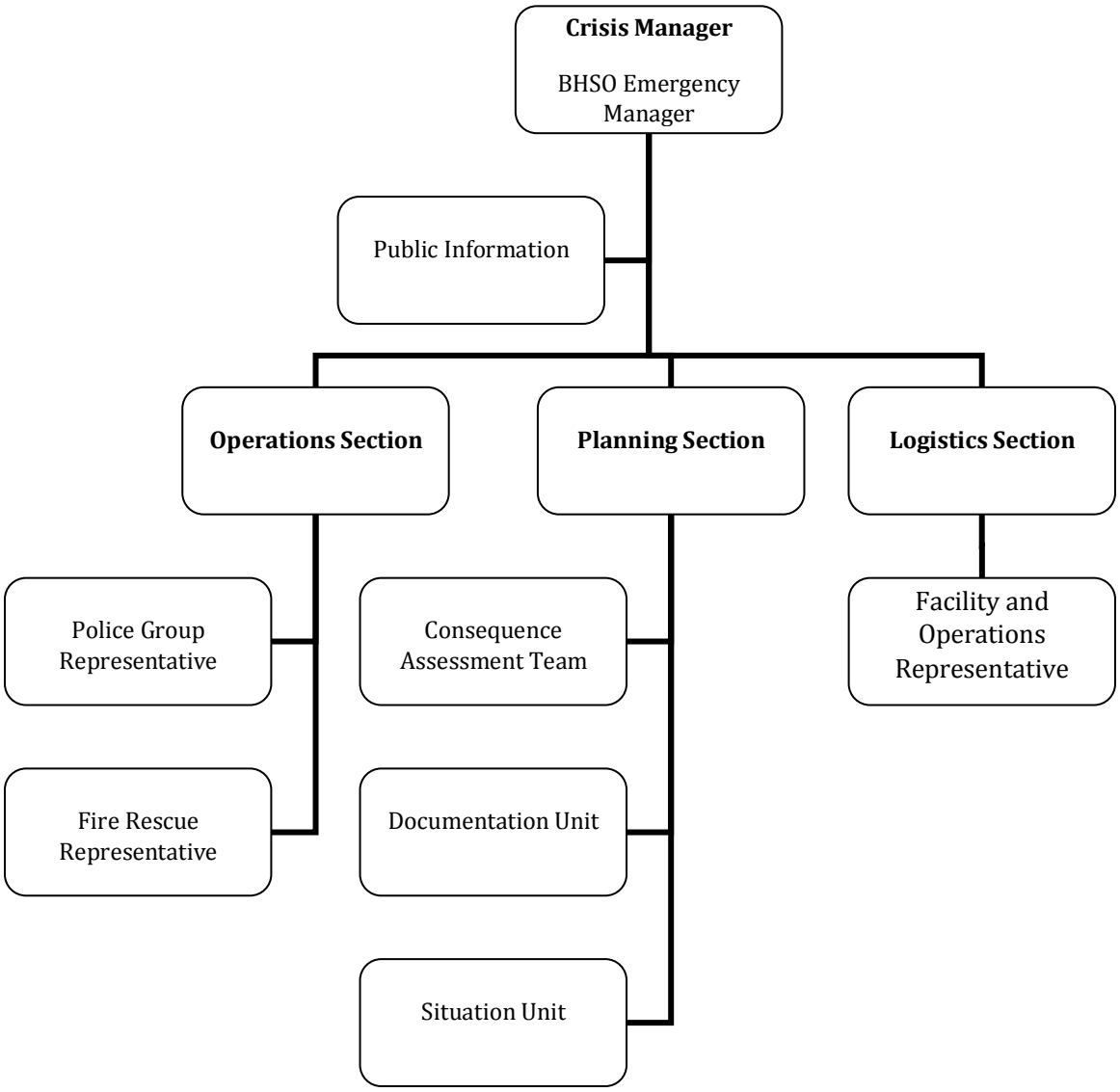
- Activation of emergency public information personnel;
- Preparation and dissemination of news releases and announcements;
- Communication with employees, news media, and the public;
- Control of rumors;
- Coordination of media briefings;
- Coordination of public information with off-site organizations;
- Coordination of information inquiries from elected officials.

Tasks:

- Activation of emergency information center;
- Establish communication with EOC PIO;
- Preparation, approval, distribution of news releases and other communications concerning emergency;
- Prepare for and conduct press briefings and media interviews;
- Identification, control and correction of rumors and misinformation;
- Response to telephone inquiries from elected officials, public, stakeholders, and news media;
- Employee information dissemination.

APPENDIX 1 - ORGANIZATION CHART

EMERGENCY OPERATIONS CENTER TEAM



APPENDIX 2 – UNIT LOG ICS-214 FORM

INCIDENT COMMAND SYSTEM (ICS) FORM 214

Purpose. The Unit Log records details of unit activity or individual activity. These logs provide the basic reference from which to extract information for inclusion in any after-action report.

1. Incident Name	**2. Operational Period (Date/Time)** From: To:	**UNIT LOG** **ICS 214**

3. Unit Name/Designators	**4. Unit Leader (Name and ICS Position)**

5. Personnel Assigned

NAME	ICS POSITION	HOME BASE

6. Activity Log (Continue on Reverse)

TIME	MAJOR EVENTS

7. Prepared by:	**Date/Time**

APPENDIX 3 - ACTIONS AND NOTIFICATIONS

Action	Time Frame	Responsible Party
OE Notification	Within 15 minutes of event recognition, identification, discovery	Incident Commander/Emergency Director
EOC Operational	Within 30 minutes during business hours	Crisis Manager
	Within 1 hour off-hour	
Initial press release	Within 1 hour of declaration of an OE	PIO and/or CEGPA
OE Notifications - Updates	Within 15 minute of change in conditions, PA and/or PAR	Situation Unit
Tone Alert radio	As directed	Before EOC operational - CAS
		After EOC operational – Situation Unit
Communications with DOE HQ	As soon as time permits	Before EOC operational - CAS
		After EOC operational – Situation Unit

APPENDIX 4 - ACRONYMS AND ABBREVIATIONS

Acronyms and Abbreviations	
ALD	Assistant Laboratory Director
BHSO	Brookhaven Site Office
CAS	Central Alarm Station
CAT	Consequence Assessment Team
CEGPA	Community, Education, Government, and Public Affairs
CM	Crisis Manager
CP	Command Post
DOE	Department of Energy
ED	Emergency Director
EIC	Emergency Information Center
EM	Emergency Manager
EOC	Emergency Operations Center
ERO	Emergency Response Organization
F&O	Facilities and Operations
FWC	Functional Work Center
HQ	Headquarters
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
JIC	Joint Information Center
NIMS	National Incident Management System
OE	Operational Emergency
OEM	Office of Emergency Management
PA	Protective Actions
PAR	Protective Action Recommendations
PIO	Public Information Officer
TAR	Tone Alert Radio

EXHIBIT E

New York State Threatened, Endagered, Exploitably Vulnerable, and Species of Special Concern at BNL

Exhibit E: New York State Threatened, Endangered, Exploitably Vulnerable, and Species of Special Concern at BNL.

Common Name	Scientific Name	State Status	BNL Status
Insects			
Frosted elfin	*Callophrys iris*	T	Likely
Mottled duskywing	*Erynnis martialis*	SC	Likely
Persius duskywing	*Erynnis persius persius*	E	Likely
Pine Barrens Bluet	*Enallagma recurvatum*	T	Confirmed
Fish			
Banded sunfish	*Enniacanthus obesus*	T	Confirmed
Swamp darter	*Etheostoma fusiforme*	T	Confirmed
Amphibians			
Eastern tiger salamander	*Ambystoma tigrinum tigrinum*	E	Confirmed
Marbled salamander	*Ambystoma opacum*	SC	Confirmed
Eastern spadefoot toad	*Scaphiopus holbrookii*	SC	Confirmed
Reptiles			
Spotted turtle	*Clemmys guttata*	SC	Confirmed
Eastern hognose snake	*Heterodon platyrhinos*	SC	Confirmed
Eastern box turtle	*Terrapene carolina*	SC	Confirmed
Worm snake	*Carphophis amoenus*	SC	Confirmed
Birds (nesting, transient, or potentially present)			
Horned lark	*Eremophila alpestris*	SC	Likely
Whip-poor-will	*Caprimulgus vociferus*	SC	Likely
Vesper sparrow	*Pooecetes gramineus*	SC	Likely
Grasshopper sparrow	*Ammodramus savannarum*	SC	Confirmed
Northern harrier	*Circus cyaneus*	T	Confirmed
Cooper's hawk	*Accipiter cooperii*	SC	Confirmed
Osprey	*Pandion haliaetus*	SC	Confirmed
Shap-shinned hawk	*Accipiter striatus*	SC	Confirmed
Plants			
Stargrass	*Aletris farinosa*	T	Confirmed
Butterfly weed	*Asclepias tuberosa*	V	Confirmed
Spotted wintergreen	*Chimaphila maculata*	V	Confirmed
Flowering dogwood	*Cornus florida*	V	Confirmed
Pink lady's slipper	*Cypripedium acaule*	V	Confirmed
Winterberry	*Ilex verticillata*	V	Confirmed
Sheep laurel	*Kalmia angustifolia*	V	Confirmed
Narrow-leafed bush clover	*Lespedeza augustifolia*	R	Confirmed
Ground pine	*Lycopodium obscurum*	V	Confirmed
Bayberry	*Myrica pensylvanica*	V	Confirmed
Cinnamon fern	*Osmunda cinnamomera*	V	Confirmed
Clayton's fern	*Osmunda claytoniana*	V	Confirmed
Royal fern	*Osmunda regalis*	V	Confirmed

Exhibit E: New York State Threatened, Endangered, Exploitably Vulnerable, and Species of Special Concern at BNL.

Common Name	Scientific Name	State Status	BNL Status
Crested fringed orchid	*Plantathera cristata*	E	Likely
Swamp azalea	*Rhododendron viscosum*	V	Confirmed
Long-beaked bald-rush	*Rhynchospora scirpoides*	R	Confirmed
Stiff goldenrod	*Solidago rigida*	T	Confirmed
New York fern	*Thelypteris novaboracensis*	V	Confirmed
Marsh fern	*Thelypteris palustris*	V	Confirmed
Virginia chain-fern	*Woodwardia virginica*	V	Confirmed

Notes:

* Table information is based on 6 NYCRR Part 182, 6 NYCRR Part 193, and BNL survey data.

No federally listed Threatened or Endangered Species are known to inhabit the BNL site.

E = Endangered

R = Rare

SC = Species of Special Concern

T = Threatened

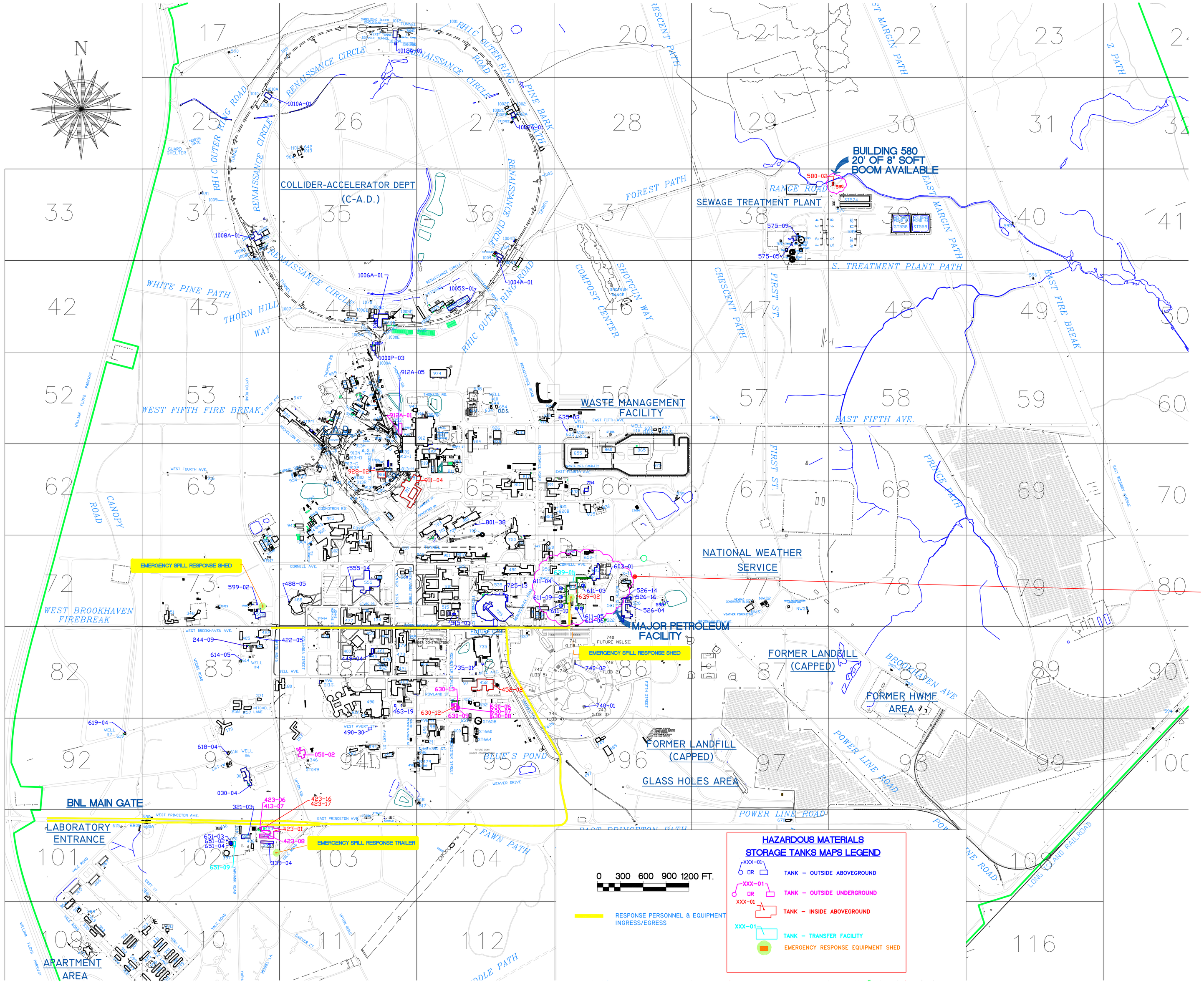
V = Exploitably Vulnerable

Exhibit F

Brookhaven National Laboratory Site Diagrams

List of Figures

Figure	Title
1	Site Plan Diagram
1-1	BNL Site Plan Tank Locations
1-2	Major Petroleum Facility Site Plan
2	Site Drainage Plan Diagram
2-1	Storm System Map
2-2	Sanitary System Map
2-3	Watershed Map
3	Electrical Distribution System
3-1	Transformer Locations (13.8kV/69kV)
3-2	Transformer Locations (2,400V)



NOTES:

1. SEE DRAWING 1.1-4 FOR DETAILS OF THE MAJOR PETROLEUM FACILITY

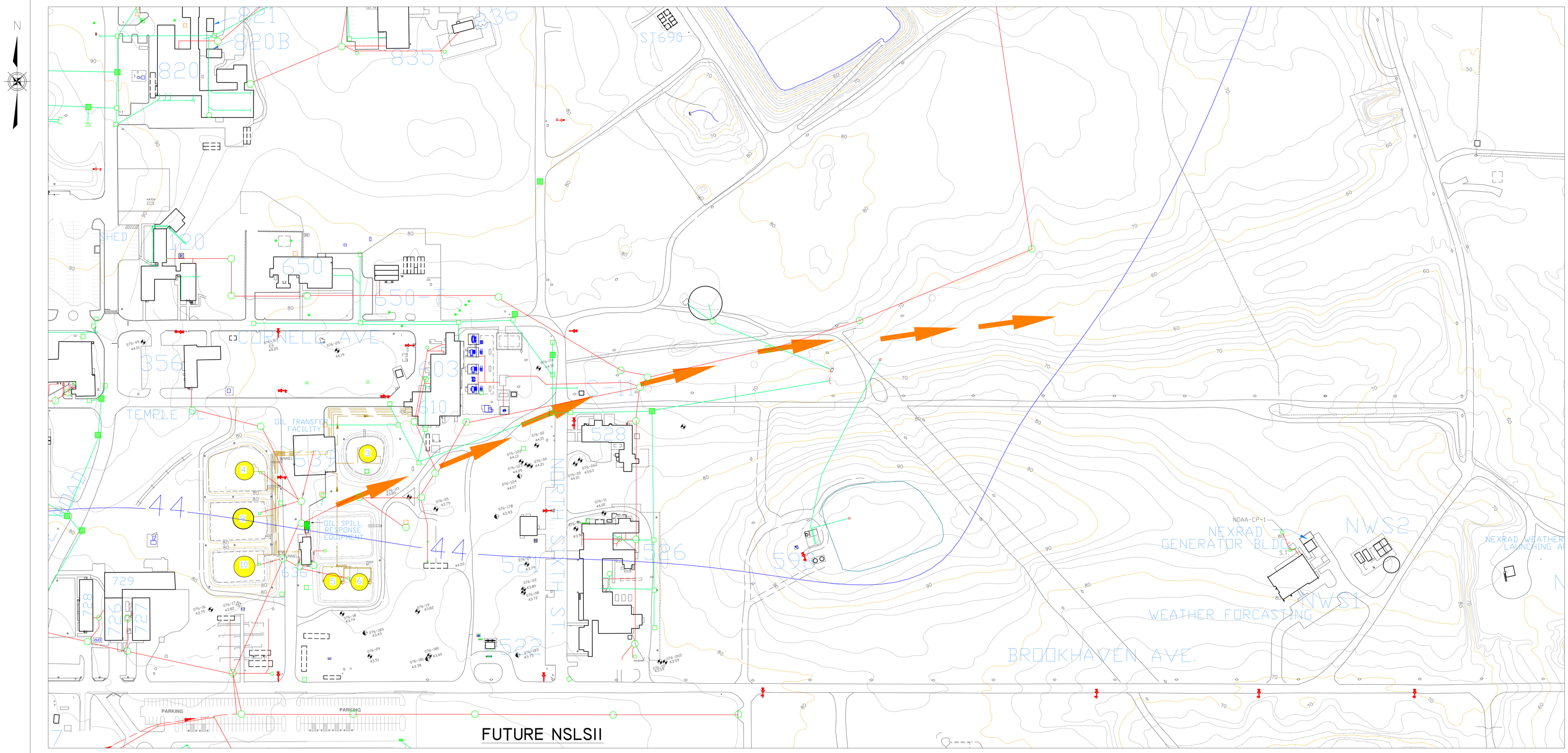
2. REFER TO ATTACHED TABLE FOR TANK CONTENT AND CAPACITIES

JOB NO.	SHEET	NO	REVISION	DATE	DWN.	APP'D.	QA

BROOKHAVEN NATIONAL LABORATORY

UNDER CONTRACT WITH
UNITED STATES DEPARTMENT OF ENERGY
FACILITIES & OPERATIONS, MODERNIZATION PROJECT OFFICE
UPTON, NEW YORK 11973

JOB TITLE: FUEL OIL STORAGE TANKS		DWG. TITLE: BALANCE OF PLANT TANK LOCATIONS	
ILR,GPP,LNI, HEM	DATE: 01/23/2012	ACCT. NO.	SHEET 1 OF 1
SCALE	DWN. BY: WCB / REV'D BY	JOB NO.	DWG. NO. FIG 1.1–3 ALSO WITH FIG 1–1
ESHQ RISK LEVEL	APP'D. BY: WLC	BLDG. NO.: SITE	
PATH:			



MOSF Tank Capacities

Oil Storage Tank Information									Secondary Containment Information					
Tank Number	Building Number	Tank Capacity Barrels	Tank Capacity Gallons	Product Stored	Axis	Year Installed	Diameter (Feet)	Height (Feet)	Berm Width	Berm Length	Berm Depth	Berm Capacity Cubic Feet	Berm Capacity Gallons	% Tank Capacity
										Diameter				
3	611C	7143	300006	#6 Oil	Vertical	1964	40.00	32.00		*51.0*	5.5	44,942	336,166	112%
4	611D	9524	400008	#6 Oil	Vertical	1974	42.50	40.00	132.0	100.0	5.0	66,000	493,680	123%
5	611E	7143	300006	#2 Oil	Vertical	1983	38.00	35.50	110.0	150.0	3.5	57,750	431,970	144%
6	611F	7143	300006	#2 Oil	Vertical	1983	38.00	35:50	110.0	150.0	3.5	57,750	431,970	144%
									Two Tanks in a common Berm					
9	611G	9330	391860	#6 Oil	Vertical	1989	48.00	30.00	132.0	100.0	5.0	66,000	493,680	126%
10	611H	14115	592830	#6 Oil	Vertical	1989	48.00	45.00	132.0	100.0	7.0	92,400	691,152	117%

Oil Spill Response Equipment

Item	Description	Quantity	Capacity (size)
Pumps	LeRoi Air Operated Diaphragm	5	1900 GPH @ 50 foot Head
Hose	3" Wire Reinforced	4	Length @ 25 Feet
	3" Wire Reinforced	3	Length @ 20 Feet
	2" Wire Reinforced	3	Length @ 25 Feet
	2" Wire Reinforced	1	Length @ 20 Feet
Absorbents:	Loose Absorbent Material	3	30 Gallon Pails
	Loose Absorbent Material	10	50 Pound Bag
	Absorbent Pads	6	Bundle (200 Sheets)
Miscellaneous:			
	Shovels	2	Square, Long Handle
	Shovels	2	Spade, Long Handle
	Squeegee	2	Rubber, Long Handle
Boom (hard):		9	100' sections

GROUNDWATER CONTOUR MAP
JUNE 22, 2009
PREPARED BY: D. PAQUETTE

LEGEND

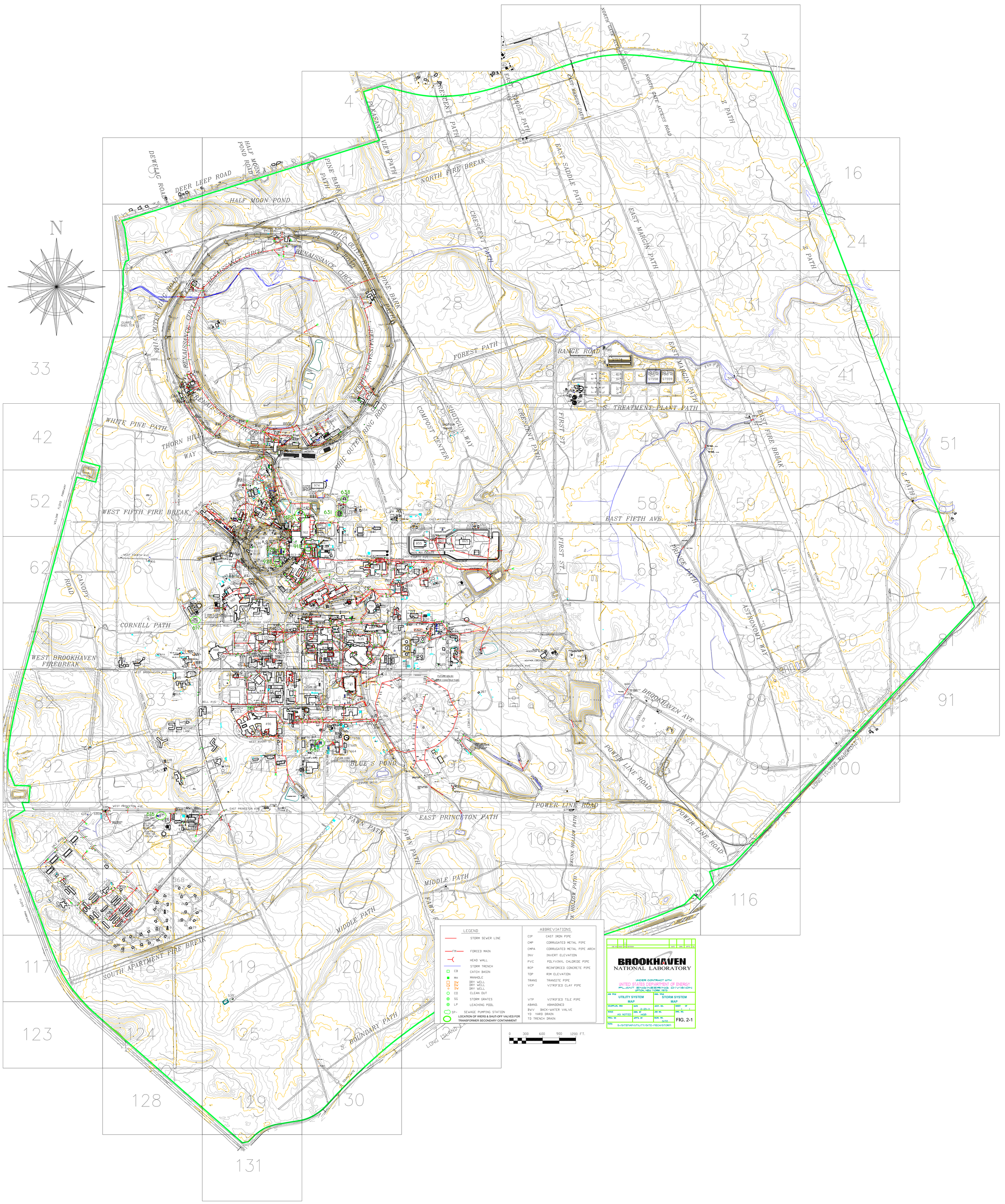
- WELL LOCATION
- 076-04 Grid No.-Well No.
- 39.91' Water Table Elevation (Feet Above Sea Level)
- Line of Equal Water Table Elevation
- General Groundwater Flow Direction
- Hydrant
- Direction Of Oil Spill Flow
- SANITARY LINE
- STORM LINE
- FUEL LINE

JOB NO.	SHEET NO.	△	REVISION	DATE	DWN.	APP'D.	QA

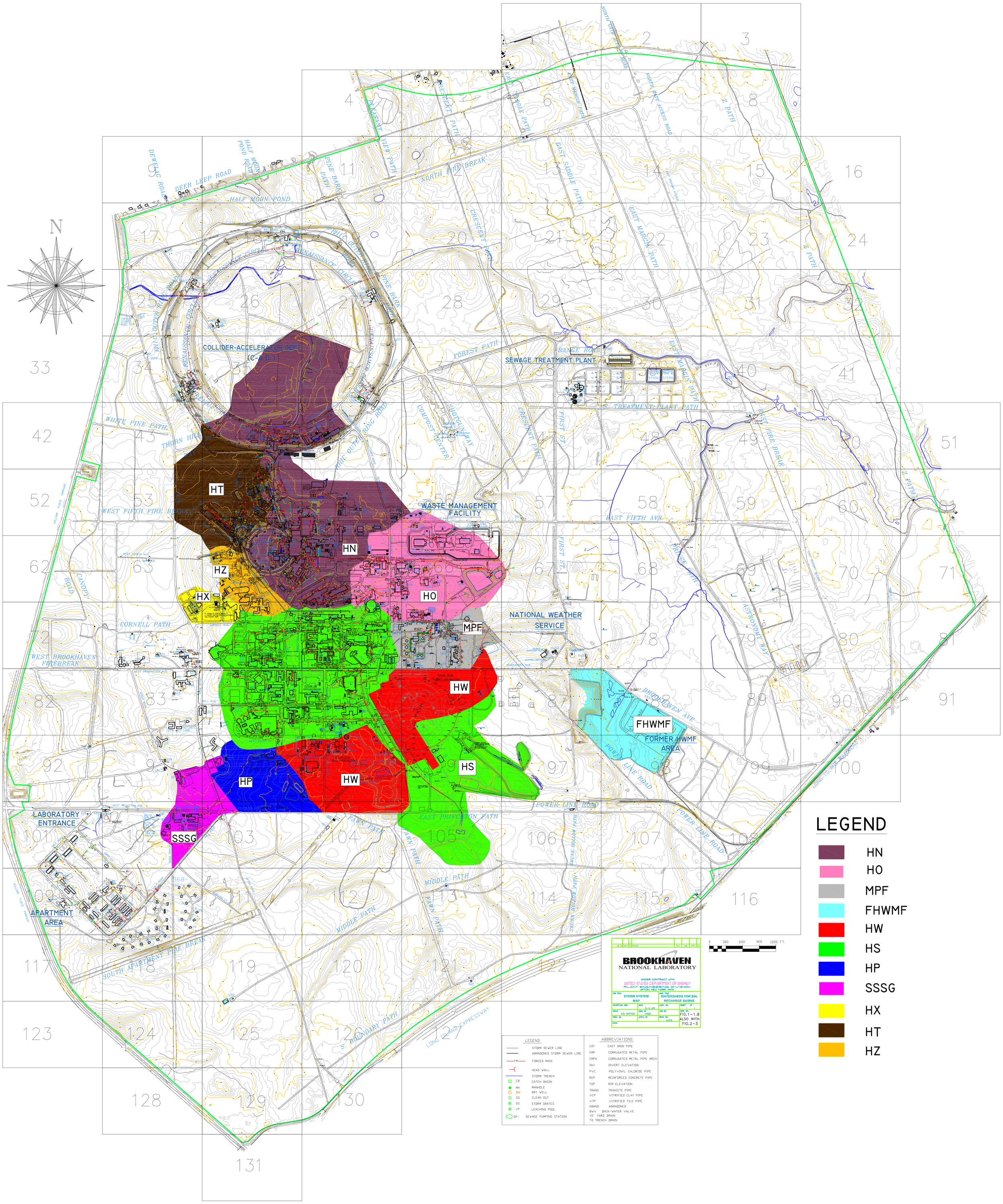
BROOKHAVEN NATIONAL LABORATORY

UNDER CONTRACT WITH
UNITED STATES DEPARTMENT OF ENERGY
PLANT ENGINEERING DIVISION
UPTON, NEW YORK 11973

JOB TITLE: MAJOR PETROLEUM FACILITY SITEPLAN		DWG. TITLE: GRID REF. 75, 76, 77 CENTRAL STEAM FACILITY BUILDING 610 & TANK FARM	
ILR,GPP,LNI, HEM	DATE: 3-23-11	ACCT. NO.	SHEET XX OF XX
SCALE: 1" = 80'-0"	DWN. BY: W.G.B.	JOB NO.	DWG. NO. FIG 1.1-4 ALSO WITH FIG 1-2
PROJ. QA	APP'D. BY: W.L.C.	BLDG. NO.	
PATH:			


N
DEER LEEP ROAD
HALF MOON POND
HALF MOON POND ROAD
DEWFLAG ROAD
PLEASANT VIEW PATH
PINE BARK PATH
NORTH FIRE BREAK
CRESCENT PATH
EAST SADDLE PATH
EAST MARGIN PATH
NORTH GATE ACCESS ROAD
Z PATH
RHIC OUTER RING ROAD
RENAISSANCE CIRCLE
FOREST PATH
RANGE ROAD
S. TREATMENT PLANT PATH
WHITE PINE PATH
THORN HILL WAY
COMPOST CENTER
SHOTGUN WAY
FIRST ST.
EAST FIRE BREAK
WEST FIFTH FIRE BREAK
EAST FIFTH AVE.
PRINCE PATH
CANOPY ROAD
CORNELL PATH
WEST BROOKHAVEN FIREBREAK
ASTRONOMY WAY
BROOKHAVEN AVE
POWER LINE ROAD
BLUE'S POND
LONG ISLAND RR
EAST PRINCETON PATH
FAWN PATH
MIDDLE PATH
SKUNK HOLLOW PATH
SOUTH APARTMENT FIRE BREAK
S. BOUNDARY PATH
LEGEND
STORM SEWER LINE
FM FORCED MAIN
HEAD WALL
STORM TRENCH
CB CATCH BASIN
MH MANHOLE
DW DRY WELL
CO CLEAN OUT
SG STORM GRATES
LP LEACHING POOL
SP- SEWAGE PUMPING STATION
LOCATION OF WIERS & SHUT-OFF VALVES FOR TRANSFORMER SECONDARY CONTAINMENT
ABBREVIATIONS
CIP CAST IRON PIPE
CMP CORRUGATED METAL PIPE
CMPA CORRUGATED METAL PIPE ARCH
INV INVERT ELEVATION
PVC POLYVINYL CHLORIDE PIPE
RCP REINFORCED CONCRETE PIPE
TOP RIM ELEVATION
TRANS TRANSITE PIPE
VCP VITRIFIED CLAY PIPE
VTP VITRIFIED TILE PIPE
ABAND. ABANDONED
BWV BACK-WATER VALVE
YD YARD DRAIN
TD TRENCH DRAIN
0 300 600 900 1200 FT.
BROOKHAVEN NATIONAL LABORATORY
UNDER CONTRACT WITH
UNITED STATES DEPARTMENT OF ENERGY
PLANT ENGINEERING DIVISION
UPTON, NEW YORK 11973
UTILITY SYSTEM MAP
STORM SYSTEM MAP
SCALE AS NOTED
DWN. BY HGB
DATE 2-23-11
FIG. 2-1

N
DEER LEEP ROAD
HALF MOON POND ROAD
DEWELAC ROAD
HALF MOON POND
PINE BARK PATH
PARASANT VIEW PATH
CRESCENT PATH
NORTH FIRE BREAK
EAST SADDLE PATH
EAST MARGIN PATH
NORTH GATE ACCESS ROAD
Z PATH
RHIC OUTER RING ROAD
RENAISSANCE CIRCLE
COLLIDER-ACCELERATOR DEPT (C-A.D.)
FOREST PATH
RANGE ROAD
SEWAGE TREATMENT PLANT
S. TREATMENT PLANT PATH
EAST FIRE BREAK
WHITE PINE PATH
THORN HILL WAY
COMPOST CENTER
SHOTGUN WAY
FIRST ST.
WEST FIFTH FIRE BREAK
EAST FIFTH AVE.
PRINCE PATH
CANOPY ROAD
CORNELL PATH
WEST BROOKHAVEN FIREBREAK
NATIONAL WEATHER SERVICE
ASTRONOMY WAY
BROOKHAVEN AVE
POWER LINE ROAD
LONG ISLAND RAILROAD
BLUE'S POND
WEAVER DRIVE
EAST PRINCETON PATH
FAWN PATH
MIDDLE PATH
SKUNK HOLLOW PATH
LABORATORY ENTRANCE
SOUTH APARTMENT FIRE BREAK
S. BOUNDARY PATH
LONG ISLAND EXPRESSWAY
SOUTH GATE
0 300 600 900 1200 FT.
ABBREVIATIONS
C.I. CAST IRON
C.L.D.I. CEMENT LINED DUCTILE IRON
D.I. DUCTILE IRON PIPE
EL.TOP.RIM ELEVATION OF MANHOLE COVER
INV. INVERT
P.V.C. POLYVINYL CHLORIDE
TRANS. TRANSITE
VITRIFIED TILE PIPE
LEGEND
SANITARY LINE
SANITARY FORCED MAIN
DIRECTION OF FLOW
SANITARY MANHOLE
CP CESSPOOLS
S.T. SEPTIC TANK
C.O. CLEAN OUT
G.T. GREASE TRAP
SE- SEWAGE PUMPING STATION
PIV PIV VALVE
LEACH FIELD
LEACHING POOL
AERATION LINE (SEWAGE TREATMENT PLANT ONLY)
SLUDGE LINE (SEWAGE TREATMENT PLANT ONLY)
BROOKHAVEN NATIONAL LABORATORY
UNDER CONTRACT WITH
UNITED STATES DEPARTMENT OF ENERGY
PLANT ENGINEERING DIVISION
UPTON, NEW YORK 11973
JOB TITLE UTILITY SYSTEM MAP
DWG. TITLE SANITARY SYSTEM MAP
DATE 2-22-11
SCALE AS NOTED
DWN. BY HGB
SHEET 1 OF 1
PATH S:/UTILITY/SITE-MECH/SANITARY
FIG. 2-2


N
COLLIDER-ACCELERATOR DEPT
(C-A.D.)
SEWAGE TREATMENT PLANT
WASTE MANAGEMENT
FACILITY
NATIONAL WEATHER
SERVICE
FORMER HWMF
AREA
LABORATORY
ENTRANCE
APARTMENT
AREA
HT
HN
HZ
HX
HO
MPF
HW
HS
HP
SSSG
FHWMF
LEGEND
HN
HO
MPF
FHWMF
HW
HS
HP
SSSG
HX
HT
HZ
BROOKHAVEN
NATIONAL LABORATORY
UNDER CONTRACT WITH
UNITED STATES DEPARTMENT OF ENERGY
PLANT ENGINEERING DIVISION
UPTON, NEW YORK 11973
STORM SYSTEM
MAP
WATERSHEDS FOR BNL
RECHARGE BASINS
AS NOTED
FIG.1-1.8
ALSO WITH
FIG.2-3
LEGEND
STORM SEWER LINE
ABANDONED STORM SEWER LINE
FM FORCED MAIN
HEAD WALL
STORM TRENCH
CB CATCH BASIN
MH MANHOLE
DW DRY WELL
CO CLEAN OUT
SG STORM GRATES
LP LEACHING POOL
SP- SEWAGE PUMPING STATION
ABBREVIATIONS
CIP CAST IRON PIPE
CMP CORRUGATED METAL PIPE
CMPA CORRUGATED METAL PIPE ARCH
INV INVERT ELEVATION
PVC POLYVINYL CHLORIDE PIPE
RCP REINFORCED CONCRETE PIPE
TOP RIM ELEVATION
TRANS TRANSITE PIPE
VCP VITRIFIED CLAY PIPE
VTP VITRIFIED TILE PIPE
ABAND. ABANDONED
BWV BACK-WATER VALVE
YD YARD DRAIN
TD TRENCH DRAIN
0 300 600 900 1200 FT.

NOTES:

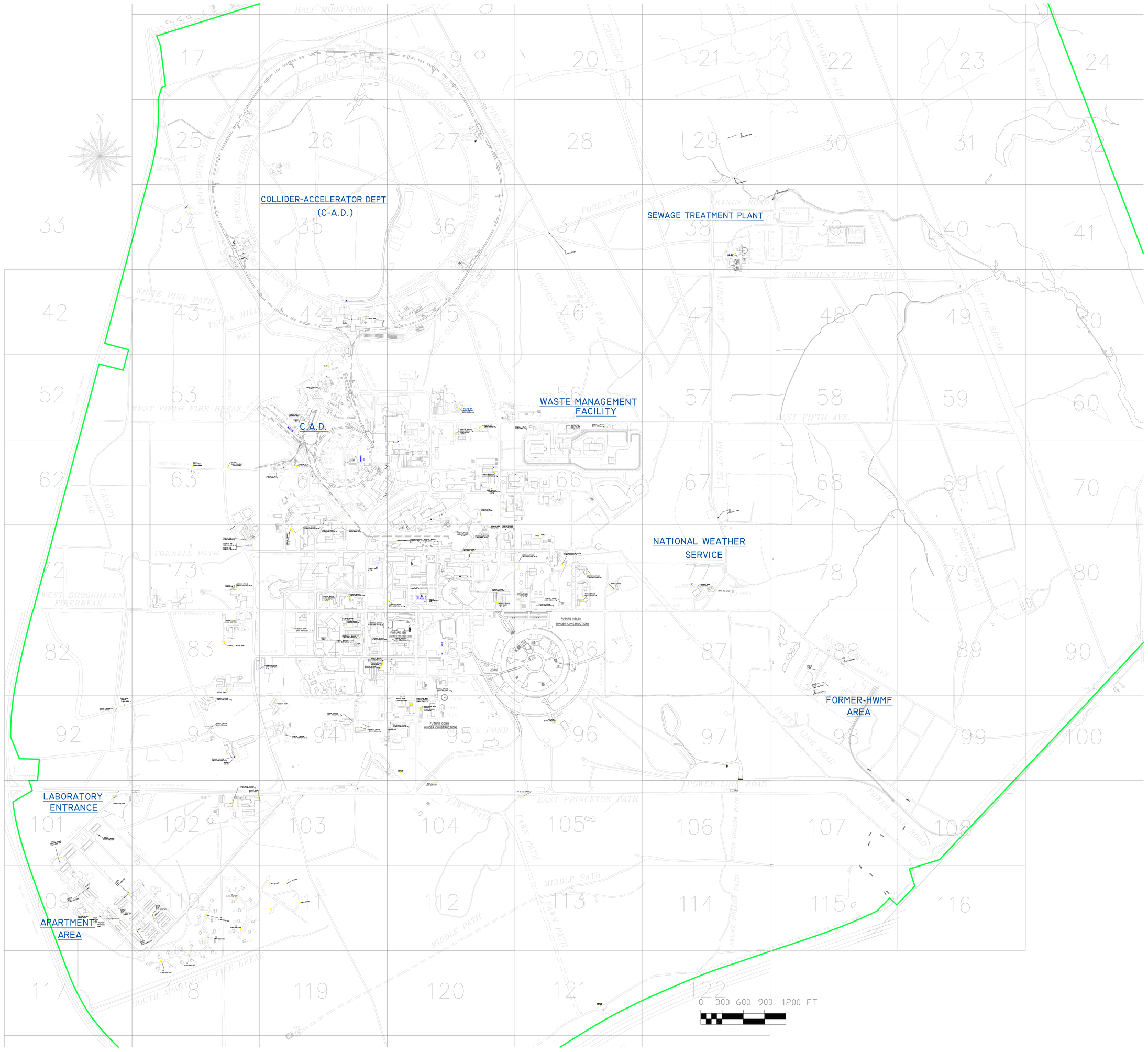
1. REFER TO TABLE 6 FOR TANK CONTENT AND CAPACITIES

JOB NO.	SHEET	NO	REVISION	DATE	DWN.	APP'D.	QA

BROOKHAVEN NATIONAL LABORATORY

UNDER CONTRACT WITH
UNITED STATES DEPARTMENT OF ENERGY
FACILITIES & OPERATIONS, MODERNIZATION PROJECT OFFICE
UPTON, NEW YORK 11973

JOB TITLE: UTILITY SYSTEM MAP		DWG. TITLE: 13.8kV ELECTRICAL TRANSFORMER LOCATIONS	
ILR,GPP,LNI, HEM	DATE: 01/31/11	ACCT. NO.	SHEET 1 OF 1
SCALE	DWN. BY: WGB / REV'D BY	JOB NO.	DWG. NO.
ESHQ RISK LEVEL	APP'D. BY: WLC	BLDG. NO.: SITE	FIG 3-1
PATH:			



NOTES:

1. REFER TO TABLE 6 FOR TANK CONTENT AND CAPACITIES

JOB NO.	SHEET	NO	REVISION	DATE	DWN.	APP'D.	QA
		A					

BROOKHAVEN NATIONAL LABORATORY

UNDER CONTRACT WITH
UNITED STATES DEPARTMENT OF ENERGY
FACILITIES & OPERATIONS, MODERNIZATION PROJECT OFFICE
UPTON, NEW YORK 11973

JOB TITLE: UTILITY SYSTEM MAP		DWG. TITLE: 34kV ELECTRICAL TRANSFORMER LOCATIONS	
ILR,GPP,LNI, HEM	DATE: 01/31/11	ACCT. NO.	SHEET 1 OF 1
SCALE	DWN. BY: WGB / REV'D BY	JOB NO.	DWG. NO.
ESHQ RISK LEVEL	APP'D. BY: WLC	BLDG. NO.: SITE	FIG 3-2
PATH:			

EXHIBIT G

Qualifications of the OSRO Contractor

MILLER ENVIRONMENTAL GROUP INC.

January 9, 2012

Jason Remien
Brookhaven National Laboratory
Building 120
Upton, NY 11973

Re: 2011 OSRO PREP Documentation

Dear Mr. Remien

Miller Environmental Group, Inc. (MEG) is identified in your Facility/Vessel Response Plan(s) as your Oil Spill Removal Organization (OSRO). As such, we are required by the United States Coast Guard (USCG) and the United States Environmental Protection Agency (US EPA) to annually document our Equipment Deployment Exercises in compliance with the Preparedness for Response Exercise Program (PREP). Enclosed is MEG's **2011 PREP** documentation for your records. Additionally, MEG's equipment is inspected and maintained under a formal preventative maintenance program as required. Our personnel also receive annual classroom and practical training to maintain a constant state of Emergency Response preparedness in accordance with OSHA 29 CFR 1910.120. In 2012 MEG's Environmental and Emergency Response Services will be billed at the rates established in our current price schedule as enclosed, or at existing contract rates, whichever is applicable.

Facility Covered
Brookhaven National Laboratory Upton, NY

In addition to our Full Service Environmental Spill Response, Industrial Cleaning, and Remediation capability we at MEG can assess and implement all your PREP & HAZWOPER training needs including the documentation necessary to comply with EPA/USCG inspections. We also have a professional compliance division capable of managing your response/prevention plans such as (FSP, SPCC, FRP, State Spill Plans, etc.), regulatory inspections and regulatory submittals. MEG also designs, facilitates, and/or participates in Spill Management Team Table Top Exercises (SMTTX) for each of our OSRO customers. Please call or email to coordinate a representative to attend or to request a proposal to design and facilitate your annual SMTTX.

Thank you for your continued confidence and support of MEG's services to your organization. We look forward to servicing you with quality and professionalism in 2012.

Very truly yours,

George Wallace III

George Wallace III, CET, CHMM
VP/Chief Commercial Officer

Enclosure

Miller Environmental Group, Inc.
538 Edwards Ave., Calverton, NY 11933
(800) 394-8606 (631) 369-4900 www.millerenv.com

MILLER ENVIRONMENTAL GROUP INC.

2011 OSRO PREP Equipment Deployment Documentation

Date	D/S/A	Client	Location	Vessel/Skimmer/ Recovery Type	QTY	BOOM TYPE	QTY
1/7/2011	S	Entergy	Buchanan, NY	MEG 1000 Skimmer	1	18"	500'
1/17/2011	A	NRC/Penn Maritime	Marcus Hook, PA	25' Workboat	1	18"	1500'
1/27/2011	A	Dynegy	Newburgh, NY	MEG 3000 Skimmer	1	18"	1,200'
1/31/2011	A	Owens Corning	Kearny, NJ	22' Utility Boat	1	18"	1200'
2/1/2011	A	GenOn Bowline	West Haverstraw, NY	MEG 5000 Skimmer	1	18"	1,800'
2/15/2011	A	Owens Corning	Kearny, NJ	22' Utility Boat	1	18"	1200'
3/9/2011	D	USCG	Maurice River, NJ	34' Workboat MEG 3000 Skimmer	5 1	18"	6000'
3/12/2011	A	National Grid	Northport, NY	Joel Miller	1	18"	1000
3/15/2011	A	Owens Corning	Kearny, NJ	22' Workboat	1	18"	1200'
3/15/2011	S	DNREC	Slaughter Beach, DE	25' Workboat	1	18"	1000'
3/17/2011	A	National Grid	Northport, NY	Erin Miller	1	18"	1000
5/27/2011	S	NRG Astoria	Astoria, NY	33' Workboat	1	18"	100'
5/30/2011	S	USCG	Freeport, NY	N/A	1	18"	100'
6/20/2011	A	Owens Corning	Kearny, NJ	22' Workboat	1	18"	1200'
6/28/2011	S	USCG	Patchogue, NY	14' Tin Boat	1	18"	100'
7/15/2011	S	USCG	Hampton Bays, NY	14' Tin Boat	1	18"	200'
7/26/2011	D	BP	Curtis Bay, MD	27' Workboat	1	18"	1000'
8/10/2011	A	Vane Brothers	Marcus Hook, PA	25' Workboat	1	18"	1500'
8/15/2011	D	DBRC	Woodbury Creek, NJ	19' Workboat	4	18"	1500'
8/29/2011	S	GenOn Bowline	West Haverstraw, NY	MEG 1000 Skimmer	2	18"	400'
9/23/2011	A	Meredith Management	Lake Champlain	MEG 1000 Skimmer	1	18"	1,100'
9/27/2011	A	Owens Corning	Kearny, NJ	22' Workboat	1	18"	1200'
10/5/2011	A	Thalle Construction	Ashokan Reservoir			18"	500'
10/27/2011	S	S. Coraluzzo/Chartis	Conowingo Dam, PA	19" Workboat MEG 1000 Skimmer	1 1	18"	800'
11/1/2011	S	NRG Astoria	Astoria, NY	33' Workboat	1	18"	100'
11/22/2011	A	Seaboats, Inc.	Baltimore, MD	27" Workboat MEG 1000 Skimmer	1 1	18"	1000'

Miller Environmental Group, Inc.
538 Edwards Ave., Calverton, NY 11933
(800) 394-8606 (631) 369-4900
www.millerenv.com

Buyer	Amount	Contract Number
Carol Pulley	**20,000**	**188994**

BROOKHAVEN NATIONAL LABORATORY
BROOKHAVEN SCIENCE ASSOCIATES, LLC
P. O. Box 5000
UPTON, L.I., N.Y. 11973-5000

Miller Environmental Group
538 Edwards Avenue
Calverton, NY 11933

CONTRACT

This is a Contract (the "Contract") between the party above named (the "Contractor"), and Brookhaven Science Associates, LLC ("Brookhaven"), the latter acting under Prime Contract No. DE-AC02-98CH10886 with the United States of America (the "Government") represented by the United States Department of Energy ("DOE"):

I. **Scope of Work:** The Contractor shall provide all necessary labor, materials, tools, and equipment and services as the designated Oil Spill Removal Organization, pursuant to the requirements of Brookhaven Facility Response Plan and Oil Pollution Act of 1990 on the grounds of Brookhaven National Laboratory. This contract is in accordance with U. S. Department of Labor and Wage Determination No. 1996-0223 Rev. 28 dated 11/24/2010 and Specifications – Emergency Oil Spill Response dated Feb. 7, 2011. The Contractor shall submit a Contractor Plan in accordance to BNL Specifications, and ORSO Classification and certification. Specifically, the Contractor shall provide the following services:

- ✓ Respond with equipment and manpower 24 hours per day, 365 days per year as required by BSA QI or his/her designee.
- ✓ Contractor shall supply all tools, equipment, materials, labor and supervision and other related items to respond, dispose or store on site at BSA material released into the environment.
- ✓ Remove any spilled product to satisfaction of the BSA-QI, and all regulatory agencies (USEPA, NYS DEC, SCDHS).
- ✓ Contractor shall work in accordance with all BSA, Local, State and Federal environmental regulations and statutes.
- ✓ Contractor shall supply all labor, trained in accordance with OSHA, BSA and all other applicable safety regulations.
- ✓ Contractor shall document all site activities related to the sampling, containment, clean-up and storage or transportation of released materials. Contractor shall prepare and maintain daily job reports and logs pertaining to all activities performed on behalf of BSA.

Service Description The services required are varied and will be appropriate to the extend of the spill, quantity of product spilled, nature of the product spilled and the proximity of the spill to the navigable waters of the United States of America. The services required are, but not limited to the following:

- ✓ Labor: Provide appropriate labor, properly trained to remove spilled product, remediate the area and dispose of the residual material.
- ✓ Land Based equipment: Including but not limited to vacuum trucks and trailers, storage tanks, frac-tanks, Guzzlers, dump trucks, excavators, roll off containers and pressure washers.
- ✓ Remediation Equipment: Including but not limited to drill rigs, geoprobes, sampling pumps and sampling van.
- ✓ Support equipment: Including but not limited to air compressors, fork lifts, generators, wood chippers and portable lifts.
- ✓ Personal Protective Equipment: Including but not limited to self contained breathing equipment, protective clothing and coveralls and respirators.
- ✓ Communication Equipment: Including but not limited to video cameras, digital cameras, radios and global positioning equipment.
- ✓ Sampling and Testing Equipment: Including but not limited to air monitoring equipment, Oxygen monitoring equipment, PCB and Halogen test kits, and gas chromatographs.
- ✓ Decontamination Equipment: Including but not limited to decontamination showers, eye wash stations, HEPA vacuums and decontamination tents.
- ✓ Pumping Equipment: Including but not limited to hydraulic pumps, hoses, screens strainers and skimmers.
- ✓ Marine Based Equipment: As required.
- ✓ Absorbents and additional Materials: Including but not limited to plywood, fencing, pads, sweeps, booms and absorbent particles.

A. Reports/Deliverables: The Contractor shall provide the following deliverables:

1. Reports, logs, daily time sheets
2. All sampling results and disposal records.
3. Contractor shall supply a Safety Plan as described below, including any and all elements that may be reasonably required under this contract. The plan must be approved by BSA.

B. BSA shall perform support services for this project as follows:

1. Secure all equipment pumps, valves and tanks.
2. Provide Lock Out-Tag Out as required.
3. De-energize and reenergize the equipment.
4. Assist and or direct in the placing and or storage of contractor's equipment or materials.

C. **Safety Plan** - The Contractor is solely responsible for construction safety for the duration of this contract. Contractor shall prepare and submit a Safety Plan before commencement of any work. This plan will be reviewed and be approved by the Plant Engineering and the Safety and Health Divisions and shall include but not limited to the following:

- ✓ Specific assignment of an individual, employed by the Contractor and named in the Plan, who shall be responsible for job site safety.
- ✓ A letter of certificate, indicating that the contractor is aware of, has reviewed, and will comply with the safety regulations of both OSHA Standards (29 CFR 1926/1910) and the BSA Safety Manual (available for references at Facilities and Operations).
- ✓ A copy of the company record of past injury, accident, fire and property damage

experience, including motor vehicle, for the past two years. In lieu of this data, the contractor may submit the previous two years industrial insurance experience modifiers or rates.

- ✓ A description of the Contractor's safety program indicating:
  - Provision for first aid.
  - A program for training employees in the recognition and avoidance of unsafe conditions and in the safety regulations applicable to this project.
  - A program certifying the safe operating conditions and assuring the proper maintenance of permanent and or temporary light, power and electrical equipment, including protective devices (GFCI) for portable electric tools.
  - A program to provide for the frequency and regular inspection and reporting of job site conditions relating to safety.
  - A program certifying the safe operating conditions and assuring the proper maintenance of equipment, cranes, vehicles, lifts, hoists and other such equipment.
  - Provisions for meetings, established contacts or other means, for the mutual exchange of information with Contractor and sub contractor on:
    - Changes in scope of work
    - Recognized hazards
    - Identified phases of work
    - Potential problem areas
    - Coordination of crafts
- ✓ A program for training employees about the hazardous chemicals to which they are exposed.

II. **Period of Performance:** This Contract shall be effective on the date executed by Brookhaven provided that the Contractor executes the Contract without exception or alteration. The Contract shall remain in effect until April 18, 2012.

III. **Ceiling Amount, Compensation, Limitation of Costs and Payment:**

A. **Ceiling Amount:** The ceiling amount of this Contract is Twenty Thousand dollars ($20,000). The Contractor shall not be reimbursed in excess of this amount without written authorization from Brookhaven's Procurement and Property Management Division.

B. **Compensation:**

B.1. **Labor:** The Contractor shall be compensated at the fully burdened rates as follows:

Personnel	Hourly Rate
Technicians	See Wage Determination No. 1996-0223

B.2. **Travel Expenses:** The Contractor shall be reimbursed for travel and per diem including lodging, meals and incidental expenses authorized by Brookhaven's technical representative in accordance with Federal Travel Regulations. Reimbursement rates under this policy include (a) airfare at actual expense equal to coach class, (b) per diem, which includes lodging, meals and incidental expenses, (c) mid-sized rental vehicles at actual cost, and (d) use of private automobile at $.50 per mile plus tolls. All travel requires pre-approval by Brookhaven's technical representative.

B.3 **Miscellaneous Expenses**: The Contractor shall be reimbursed for various miscellaneous expenses including fuel surcharge.

D. **Payment**: Brookhaven will pay the Contractor monthly upon receipt and approval of properly certified invoices that sets forth the total number of hours worked, by labor category, during the previous month and all travel expenses, if applicable. ***To support this invoice, the Contractor shall submit all receipts for travel expenses incurrred. No payment will be made without these documents.*** Payment terms are Net 30.

Address all submissions to: BSA, William L. Chaloupka, Assistant Manager, Operations and Equipment, Building 452, Upton, N.Y. 11973. Mark all submissions: Contract No. 188997, EMERGENCY OIL SPILL RESPONSE.

Invoices, in duplicate, shall be directed to Brookhaven's Accounts Payable Section, Contracts Division, Bldg. No. 400d. In addition, the Contractor shall indicate the final invoice by clearly marking such invoice as "FINAL". A copy of the final invoice must be submitted to Brookhaven's Contractual Representative.

IV. **Authorized Representatives:**

A. **Brookhaven's Technical Representative:** William Chaloupka of the Energy & Utilities Division, located in Building 452 is Brookhaven's Technical Representative, hereunder. He shall act as liaison between Brookhaven and the Contractor in technical matters only. He can be reached at 631 344-7136 phone), Cell Phone 631 514-1282 Chaloupka@bnl.gov (e-mail). In the event of a major petroleum spill at BSA, the qualified individual or his/her designated representative are authorized to request the services of the OSRO. Mike Bebon (Qualified Individual), Work Phone 631 344-3434, Cell Phone, 631 453-4507, L. Bates (ALD – F&O), Work Phone 631 344-7600, Cell Phone 865-414-2118. Mr. E. Simon (Facility Project Manger, Work Phone 631 344-5337, Cell Phone 631 655-9788, Mr. E. Murphy (Energy and Utilities Manager) Work Phone 631 344-3466,. Cell Phone 631 872-8968.
Mr. George Goods, Work Phone 631 344-4549, Cell Phone 631 872-8804, and Mr. Leonard Butera, Work Phone 631 344-4691, Cell Phone 631 453-5866.

B. **Brookhaven's Contractual Representative:** Carol Pulley, located in Building 355, telephone no. 631 344-2244, pulley@bnl.gov (e-mail), is Brookhaven's Contractual Representative. Any change or modification in the terms and conditions of this contract shall require the written approval of Brookhaven's Procurement and Property Management Division's Manager, or his designee.

C. **Contractor's Representative:** George Wallace is the Contractor's authorized Representative, hereunder. He shall act as point of contact between Brookhaven and the Contractor in all matters. He can be reached at 631 369-4900.

V. **Contract Close-Out Requirements:** In accordance with this Contract, and in order to comply fully with all applicable cost articles as contained in Attachment A, the Contractor shall complete and submit the following: Contractor's Release.

Note: The Equipment Acquired Report Form - Accountability and Disposition submittal is required to be submitted to Brookhaven within thirty (30) days of the expiration date of this Contract.

VI. **Additional Terms:**

The provisions of Brookhaven Science Associates, LLC General Terms and Conditions for Non-Commercial Services, Rev. 7 (Oct. 2010) are incorporated herein and made a part hereof.

The provisions of Brookhaven Science Associates, LLC Supplemental Terms and Conditions for Work by Contractors on Site at Brookhaven National Laboratory (Apr. 2010) are incorporated herein a made a part hereof.

This Contract is issued pursuant to Brookhaven Science Associates General and/or Supplemental terms and conditions listed above which are incorporated herein by reference. The complete text of these terms and conditions can be viewed via the internet at: http://www.bnl.gov/ppm/T-Cs/t-c.asp. Should the Contractor have any questions and/or not have access to these terms and conditions, contact the buyer or contracts specialist immediately.

This Contract does not bind nor purport to bind the Government of the United States.

ACCEPTED:

MILLER ENVIRONMENTGAL GROUP	**BROOKHAVEN SCIENCE ASSOCIATES, LLC.**
By: JAMES H DAVEY	**By:** Carol Kuler
Title: SR V.P.	**Title:** Contract Specialist I
Date: 4-20-11	**Date:** April 18, 2011

Two copies of this Contract, executed by Brookhaven have been provided. Should you accept this Contract without exception or alteration, one copy of the Contract executed by both parties shall be returned to Brookhaven's Contractual Representative. Should you take **any** exceptions or attempt to alter the Contract in **any** manner, Brookhaven's execution thereof shall be null and void. Should you wish to take exception(s)/alteration(s), you shall notify Brookhaven's Contractual Representative. Brookhaven will consider the requested exception(s)/alteration(s) and notify you accordingly. No Contract shall exist unless and until such differences are resolved.

U.S. Department of Homeland Security
United States Coast Guard

Commander
National Strike Force Coordination Ctr.

1461 North Road Street
Elizabeth City, NC 27909
Staff Symbol:
Phone: 252-331-6000
FAX: 252-331-6012

16465

Miller Environmental Group
Attn: Jim Davey
538 Edwards Ave
Calverton, NY 11933

APR 3 2007

Dear Mr. Davey,

During the Coast Guard's transition to Sector organizations you have gained classifications in Sector Southern New England's COTP zone. You have received the following classifications listed in enclosure (1).

Our files have been updated to reflect your current status; please inform your clients of the same. Your classifications will also be listed on the OSRO Classification Matrix available on the Internet at:

http://www.uscg.mil/hq/nsfweb/nsfcc/ops/ResponseSupport/RRAB/OSRODoc/OSRO%20Listing%20By%20COTP%20Zone.pdf

The Coast Guard is transitioning to a Sector organization which consolidates field operational and marine safety functions; enclosure (2) is a consolidated table that explains the changes affected by this transition.

Thank you for your participation in the OSRO program; your efforts to strengthen our national response capabilities are greatly appreciated.

Sincerely,

R.T. GORE
Chief, Response Support Division
U.S. Coast Guard
By direction

2 Enclosures

Copy: Commandant, U. S. Coast Guard (G-3RPP-2) w/o enclosure (2)
Commandant, U. S. Coast Guard (G-3PCV-2) w/o enclosure (2)
Commander, First Coast Guard District (dr) w/o enclosure (2)
Commander, Coast Guard Sector Southern New England
EPA Region 1 w/o enclosure (2)
Pipeline and Hazardous Materials Safety Administration (PHMSA)

MILLER ENVIRONMENTAL GROUP INC.

Individual OSRO Classification Report

0020 Miller Environmental Group

COTP		Facilities MM	Facilities W1	Facilities W2	Facilities W3	Vessels MM	Vessels W1	Vessels W2	Vessels W3
COTP: BALTIMORE									
☐ High Volume Port	River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
	Inland	✓	✓	✓	✓	✓	✓	✓	✓
Alternate City:	Open Ocean								
	Offshore								
	Nearshore								
	Great Lakes								
COTP: BOSTON									
☑ High Volume Port	River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
	Inland	✓	✓	✓	✓	✓	✓	✓	✓
Alternate City:	Open Ocean								
	Offshore								
	Nearshore								
	Great Lakes								
COTP: BUFFALO									
☐ High Volume Port	River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
	Inland	✓	✓	✓	✓	✓	✓	✓	✓
Alternate City:	Open Ocean								
	Offshore								
	Nearshore								
	Great Lakes		✓	✓	✓	✓	✓	✓	✓
COTP: BUFFALO(OSWEGO, NY)									
☐ High Volume Port	River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
	Inland	✓	✓	✓	✓	✓	✓	✓	✓
Alternate City:	Open Ocean								
	Offshore								
	Nearshore								
	Great Lakes		✓	✓	✓	✓	✓	✓	✓
COTP: DELAWARE BAY(Formerly PHILADELPHIA)									
☑ High Volume Port	River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
	Inland	✓	✓	✓	✓	✓	✓	✓	✓
Alternate City:	Open Ocean								
	Offshore								
	Nearshore								
	Great Lakes								
COTP: LONG ISLAND SOUND									
☐ High Volume Port	River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
	Inland	✓	✓	✓	✓	✓	✓	✓	✓
Alternate City:	Open Ocean								
	Offshore								
	Nearshore								
	Great Lakes								
COTP: NEW YORK									
☑ High Volume Port	River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
	Inland	✓	✓	✓	✓	✓	✓	✓	✓
Alternate City:	Open Ocean								
	Offshore								
	Nearshore								
	Great Lakes								

ENCL (1)

MILLER ENVIRONMENTAL GROUP INC.

Individual OSRO Classification Report

COTP: SOUTHERN NEW ENGLAND(Formerly PROVIDENCE)

☐ *High Volume Port*

Alternate City:

	Facilities				*Vessels*			
	MM	*W1*	*W2*	*W3*	*MM*	*W1*	*W2*	*W3*
River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
Inland	✓	✓	✓	✓	✓	✓	✓	✓
Open Ocean	☐	☐	☐	☐	☐	☐	☐	☐
Offshore	☐	☐	☐	☐	☐	☐	☐	☐
Nearshore	☐	☐	☐	☐	☐	☐	☐	☐
Great Lakes	☐	☐	☐	☐	☐	☐	☐	☐

Check marks indicate that your company has received classifications in the following areas. Please refer to the OSRO Guidelines for a complete discussion of the 4 classification levels that require different minimum amounts for each Environmental operating area.
MMPD(MM) = Maximum Most Probable Discharge
WCD1(W1) = Worse Case Discharge Tier 1
WCD2(W2) = Worse Case Discharge Tier 2
WCD3(W3) = Worse Case Discharge Tier 3

If an asterisk(*) is displayed after a COTP name, it denotes cities that formerly had COTP authority, but loss that authority and are being considered for designation as an Alternate Classification City(ACC).

EQUIPMENT CATALOGUE

Miller Environmental Group
(800) 394-8606 www.millerenv.com

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1.0 Capabilities Overview

EMERGENCY RESPONSE SERVICES

Miller Environmental Group's (MEG's) Emergency Response Service offers a rapid and effective response to spills of Oil and Hazardous Materials. For over 35 years, MEG has assured its clients receive a comprehensive response to each emergency situation. Our clients include petroleum companies, chemical manufacturers and processors, utilities, aviation-related companies, rail industry, regulatory agencies, and various Fortune 500 companies.

Our land based and marine based Emergency Response equipment and trained personnel are available twenty-four hours a day, seven days a week. MEG has the necessary HAZMAT/HAZWOPER trained employees and specialized cleaning and transportation equipment to efficiently get the job done. MEG's workforce consists of environmental managers, compliance experts, and emergency responders and is complimented by our Remediation Division consisting of environmental engineers, geologists, hydro geologists, equipment operators, and environmental scientists. Our complete line of Emergency Response service includes:

EMERGENCY RESPONSE SERVICES

- Marine Oil Spill Response
- Land Based Oil Spill Response
- Tanker Truck Rollover Response & Transfer
- PCB Spill Response
- Hazardous Waste Spill Response
- High-Rail Guzzler Service
- Railcar Product Transfers
- Bulk Transport (Liquid & Solid)
- Aviation Emergency Response
- Medical Facility Emergency Response

HAZARDOUS MATERIAL EMERGENCY RESPONSE SERVICES
HAMER TEAM - (pronounced "Hammer")

Miller Environmental Group's (MEG's) Hazardous Materials Emergency Response Team personnel are experts in assisting our customers in Identifying, Evaluating, and Controlling HAZMAT Situations. MEG has the ability to decontaminate personnel, equipment and facilities where Hazardous Materials have been released. Our mobile HAMER Equipment and Trained Responders can handle a wide spectrum of jobs, ranging from a Level A Response for an Unknown Substance to a known Hazardous Materials release requiring Level C Personal Protective Equipment. This HAMER Equipment is state of the art and dedicated for Emergency Response. MEG also maintains a modern fleet of Vacuum, Guzzler, and Tanker Trucks, high capacity centrifugal and diaphragm pumps, hydraulic submersible pumps, hoses, and a variety of ancillary equipment to move virtually any pumpable material from one point to another. Specialized pumps for transferring chemicals and high viscosity fluids are also available.

Our Emergency Response equipment and trained personnel are available twenty-four hours a day, seven days a week. MEG has over 100 HAZMAT/HAZWOPER trained employees and over 150 pieces of specialized cleaning, decontamination, and transportation equipment between 5 Operation Centers. MEG's workforce consists of environmental managers, compliance experts, and emergency responders with the HAMER Experience to meet the challenges of the 21st Century. Our complete line of Emergency Response service includes:

HAZARDOUS MATERIAL EMERGENCY RESPONSE SERVICES

- Hazard Evaluation and Characterization
- Remediation/Decontamination of Affected Areas
- Decontamination of Contaminated Materials, Surfaces and Personnel
- Disposal of Contaminated Waste
- Sampling for Final Laboratory Analysis

DECONTAMINATION SERVICES

Miller Environmental Group's (MEG's) Hazardous Materials Emergency Response (HAMER) Team personnel are proficient in assessing the needs of an incident through Identifying, Evaluating, and Controlling the situation. MEG has the ability to decontaminate personnel, equipment and facilities where Hazardous Materials have been released. Our mobile HAMER Equipment and Trained Responders can handle a wide spectrum of projects, ranging from a Level A Response for an Unknown Substance to a known Hazardous Materials release requiring Level C Personal Protective Equipment. This HAMER Equipment is state of the art and dedicated for Emergency Response. MEG maintains a specific HAZMAT Response & Decontamination capability in each of our areas of operation. MEG has project experience responding to threats of Anthrax, Botulism, Bloodborne Pathogens, and Pesticides.

Our Emergency Response equipment and trained personnel are available twenty-four hours a day, seven days a week. MEG has HAZMAT/HAZWOPER trained employees that operate the specialized cleaning, decontamination, and transportation equipment distributed between our Northeastern US Operation Centers. MEG's workforce consists of environmental managers, compliance experts, and emergency responders with the HAMER Experience to meet the challenges of the 21st Century.

Miller Environmental Group offers the following Decontamination Services:

DECONTAMINATION SERVICES

- Personnel Decontamination
- Facility Decontamination
- Sampling and Laboratory Analysis
- HAZMAT Decontamination
- Military Equipment Decontamination
- Disposal of Regulated and Non Regulated Waste

SITE INVESTIGATION AND REMEDIATION

Miller Environmental Group's Remediation Division is experienced in assisting our clients in complying with a wide range of federal, state and local regulations including RCRA, CERCLA, ECRA, SARA, and OPA 90. This includes the handling, storage, and disposal of hazardous and other waste materials as well as the protection of groundwater quality. Many of these projects require the assessment of groundwater contamination and development of methodologies for containment and cleanup of contaminated soil and groundwater. MEG continues to pursue innovative technologies such as Advanced Oxidation Processes (AOP), Butane/Propane Injection, Hollow Fiber Membranes, Liquid Phase Biological Treatment Systems, etc.

Our innovative techniques and expanding expertise has enabled MEG to serve the diverse needs of our clients as well as to implement the newest technologies in all areas of environmental response and remediation. This Division prides itself on designing the most cost effective recovery systems available. Our Remediation Division is currently engaged in various stages of the remediation process at approximately 100 private sector and 135 public sector sites throughout the Miller Environmental Group area of operations. Our Remediation Services include the following:

SITE INVESTIGATION AND REMEDIATION

- Site Investigation and Characterization
- Containment Recovery
- Treatment Systems for Aquifers and Soils
- Environmental Restoration
- Observation & Recovery Well Installations
- Dewatering Pump Installations and Repairs
- Monitoring of Wells and Recovery Systems
- Geoprobe Investigations
- Air Stripping Towers
- Soil Venting Systems
- Field Sampling
- Soil Excavation
- MGP Site Remediation
- Tank Water Treatment

AIR QUALITY MANAGEMENT & REMEDIATION SERVICES

Miller Environmental Group's Remediation Division is experienced in assisting our clients with a wide range of Air Quality Issues. Molds and Fungi, in particular, pose a significant threat if not remediated appropriately.

Water infiltration and the presence of moisture is directly linked to the development of Molds and Fungi. An immediate response to water infiltration - within 24 to 48 hours - and a thorough clean up, drying, and/or removal of water-damaged materials is essential to prevent or limit mold and fungi growth. If the source of water is due to elevated humidity, relative humidity should be maintained at levels below 60% to inhibit mold and fungi growth. Emphasis should be placed on ensuring the proper repairs to the building infrastructure, so that water damage and moisture buildup do not recur.

Moisture problems in buildings can be caused by a variety of conditions, including condensation, excess humidity, roof, foundation, and plumbing leaks. Some moisture problems have been linked to changes in building construction practices during the past twenty to thirty years. These current practices have resulted in more tightly sealed buildings that may not allow moisture to escape easily. Miller Environmental Group has the trained personnel and resources to mitigate damage caused by Molds and Fungi in Indoor Environments. A thorough Site Specific Mold Remedial Action Plan is followed to ensure a proper cleanup in accordance with accepted Department of Health requirements for Indoor Air Quality. Our Remediation Services include the following:

AIR QUALITY MANAGEMENT & REMEDIATION SERVICES

- Site Inspection, Sampling, and Laboratory Analysis
- Identification and Mitigation of Water Source
- Remediation of Contaminated Materials and Surfaces
- Disposal of Contaminated Debris
- Confirmatory Sampling and Final Laboratory Analysis

INDUSTRIAL SERVICES

Miller Environmental Group's (MEG's) Industrial Services personnel are experts in assisting our customers in decontaminating equipment and facilities of regulated and non-regulated materials on a quick turnaround. Our mobile equipment and trained personnel can handle any job, ranging from a Boiler Cleaning to a Corrosive Tank and Sump Cleaning to a Pipeline Cleaning, Decontamination, and Video Inspection.

Water Blasting 10K to 40K

MEG offers expertise in both conventional and technologically advanced hydro blasting (high pressure washing) applications. Our systems use various pressures and flow rates to cost-effectively clean surfaces, process equipment, heat exchangers and other industrial vessels. MEG utilizes high pressure water blasters 10k P.S.I to 40K P.S.I. and up to 500hp. We have the capability of performing offline and online hydro-blasting. Using the most advanced equipment, technologies and best trained work force in the industry we will finish the toughest job, safely and productively. We can apply hydro blasting to virtually every process configuration to efficiently remove built-up materials. In fact, hydro blasting is the most common industrial cleaning application. MEG's experienced team matches the right equipment for the right applications, specialty systems, and personnel. We can even develop specialty tooling for applications where access is difficult minimizing operator exposure. Ask about our automated nozzle systems for boilers, tanks and pipelines. These systems virtually remove the need to place workers in challenging safety environments. Please contact us to discuss your upcoming projects or to get more information.

Tank Cleaning

MEG provides both the equipment and the technical and supervisory personnel needed for a variety of tank cleaning operations. MEG has experience with both marine and land-based tanks containing petroleum and other regulated materials. MEG has cleaned tank barges, highway tankers, rail tank cars, above ground and underground storage tanks, separator tanks, waste oil tanks, and process tanks. We are especially skilled at identifying the cleaning method best suited for the job. Cleaning options include hydro blasting, chipping, solids and sludge removal, chemical extraction, heating and re-circulation.

INDUSTRIAL SERVICES

- Tank Cleaning and Transfer Pumping
- Oil/Water Separator Cleaning
- Industrial Vacuum Service
- Fly Ash Removal
- PCB Decontamination and Disposal
- Tank Removal and Abandonment
- Water Blasting 10K to 40K psi
- Pipeline Cleaning and Video Inspection

TANK & PIPELINE CLOSURE AND ABANDONMENT SERVICES

Miller Environmental Group, Inc. (MEG) has developed an environmentally friendly, legally compliant and passive alternative to traditional means of tank removal and closure. MEG is working with commercial and residential clients, local fuel oil companies, Natural Gas Companies, and Insurance companies to reduce the risk of underground fuel oil storage tank leakage and in the case of Natural Gas Pipelines meeting the EPA MEGARULE standard for abandonment of Natural Gas Pipelines. MEG is effectively closing underground fuel oil storage tanks and Natural Gas Pipelines via our Foam Abandonment Service Team (FAST) program.

Our procedure for tank abandonment is as follows: Removal of any remaining fuel in the buried tank, high pressure wash the tank interior with a spinning nozzle, evacuate the oil water mixture and then utilizing the latest technology, pump a two-part urethane expansion foam into the tank. After a few moments, the foam will completely fill the tank and harden in place. The foam filled tank is left in place, and a Certificate of Abandonment will be issued to you. The procedure for Natural Gas Pipeline abandonment is slightly different and will be presented when a proposal is requested. This foaming in place (FIP) procedure causes the least disruption to the landscape and surrounding property while ensuring full compliance with environmental regulations.

TANK & PIPELINE CLOSURE AND ABANDONMENT SERVICES

- Tank Closure via Foaming

- Pipeline Abandonment via Foaming
- Tank Removal and Abandonment
- Remediation of Contaminated Soils
- Liquids Removal via Vacuum Truck

MARINE SERVICES

Miller Environmental Group's Marine capability includes the provision of services for national and international shipping lines, tug and barge operators, and various geophysical and hydrographic survey companies. They also include locally based businesses both large and small, inclusive of underwater diving contractors and construction companies.

Our marine equipment and trained personnel are available twenty-four hours a day, seven days a week. Our captains are all USCG licensed masters and/or mates. Our vessels are USCG inspected and certified. All deckhands are trained and versed in the different types of operation we perform throughout the year. Personnel are 40 hour HAZWOPER trained and certified in oil spill response operations, including boom deployment and skimming operations.

At Miller Environmental Group, we provide a versatile, quality service with experienced, trained personnel. We have a well-maintained workboat fleet with resources ranging from a 21' center console outboard up to a 220' anchor-handling vessel.

MARINE SERVICES

- AMPD Standby Booming Services
- Research and Survey Support Vessels
- Underwater Cable and Pipe Support Vessels
- Construction Support Vessels
- Dive Support Vessels
- Potable Water Transport and Discharge Capabilities
- Linehandling
- Dredge Tenders
- Salvage and Towing Services
- Launch Services
- Ships Spares and Stores Delivery
- Certified NAUI Divers

ENVIRONMENTAL TRAINING AND COMPLIANCE SERVICES

The Miller Environmental Group Training Institute combines certified training professionals, with years of teaching experience and seasoned “hands-on” instructors bringing practical, real world approaches to training. A balance of classroom work and field exercises provides a full learning experience for the student. The MEG Training Institute utilizes performance based training methods, whereby the skills taught are derived from expected job (task) performance.

The MEG Training Institute operates in accordance with OSHA’s non-mandatory guidelines for training. Regulations, procedures, standards, accepted practices and basic fundamentals are presented clearly and accurately. Our syllabus is reviewed and updated regularly, to comply with Federal, State and Local regulations.

The MEG Training Institute is a 27,000 square foot educational facility fully equipped with state-of-the-art training equipment including; SVGA projectors & laptop computers for clear and concise presentation of training material, 27” Television and VCR combination. The training facility is also equipped with an SCBA Maze and a Real Life Confined Space for a truly hands on training experience.

The MEG Training Institute Staff looks forward to meeting your training needs. The following are some of the programs offered:

TRAINING & COMPLIANCE SERVICES

- OSHA HAZWOPER Training
- HAZCOM Training
- Confined Space Entry and Rescue Training
- DOT Hazardous Materials Employee Training
- OSHA General Safety Courses
- RCRA Hazardous Waste Training
- Incident Command System Training
- Boat Handling and Boom Deployment Training
- Qualified Individual Training
- Contingency Plan Development and Revision

Equipment and Materials

LONG ISLAND OPERATIONS CENTER --COMPANY HEADQUARTERS

(3) Project Managers
(15) Hazmat Technicians
(6) 5,460- Gallon Vacuum Trucks
(2) Vacuum Units
(7) Pumping Systems & Hose
(3) Guzzler Air Vacuum Trucks
(20) Roll-Off Containers 20-yard
(6) Response Trucks – Fully Loaded
(3) 24' Workboats
(2) LCM 34' & 74'
(6) Sets of Level A & B PPE
(1) Complete Set of Air Monitoring Equipment
(8) All Terrain Vehicles
(2) Frac Tanks –20,000 gal/each
(4) Light towers with generators
(20) 3,500 psi Pressure Washers
(6) Portable Generators 5Kv-20Kv
(2) Backhoes
(3) Mercury Spill Kits

(3) Supervisors
(50) Temp Labor Workers
(2) 2,000- Gallon Vacuum Trucks
(3) Skimming Systems
(1) Storage Bladder
(2) Roll-Off Trucks
(2) Sets of Confined Space Entry Equipment
(12) High-Pressure, Hot-Water Washing Units
(14) 12' – 18' Aluminum Outboard Workboats
20,000 feet Containment Boom
(2) Mobile Decontamination Trailers
(1) Magnetic Patch Kit
(1) Boom Truck
(8) Oil Skimmers
(2) 20-yard Vacuum Boxes
(15) HEPA Vacs – portable
(1) D/D Chemical diaphragm pump - 2"
(1) 50 ton Lowboy
(1) Mercury Vacuum

NEW YORK METRO OPERATIONS CENTER

(2) Project Managers
(10) Hazmat Technicians
(2) 5,460- Gallon Vacuum Trucks
(2) Guzzler Air Vacuum Trucks
(4) 20-yard Roll-Off Containers
(1) Set of Confined Space Entry Equipment
(6) Sets of Level A & B PPE
(1) Complete Set of Air Monitoring Equipment
(2) High-Pressure, Hot-Water Washing Units
(2) Frac Tanks –20,000 gal/each
(2) Mercury Spill Kits

(2) Supervisors
(20) Temp Labor Workers
(1) 2,000- Gallon Vacuum Trucks
(1) Roll-Off Truck
(1) 20,000-Gallon Frac Tanks
(2) Response Trucks – Fully Loaded
(2) Mobile Decontamination Trailers
(1) Magnetic Patch Kit
5,000 feet Containment Boom
(1) Oil Skimmer
(1) Mercury Vacuum

PORT JEFFERSON OPERATIONS CENTER

(2) Project Managers
(20) Marine Personnel
(2) Skimming Systems
(17) Pumping Systems & Hose
(3) High-Pressure, Hot-Water Washing Units
(2) All Terrain Vehicles

(2) Supervisors
(50) Temp Labor Workers
(8) Utility Work Boats—(14 ft - 96 ft)
(1) Storage Bladder
3,000 feet Containment Boom
(2) Light towers with Generator

HUDSON VALLEY OPERATIONS CENTER

(2) Project Managers
(15) Hazmat Technicians
(1) 5,460- Gallon Vacuum Trucks
(1) Vacuum Units
(5) Pumping Systems & Hose
(1) Guzzler Air Vacuum Trucks
(6) 20-yard Roll-Off Containers
(2) Sets of Confined Space Entry Equipment
(3) High-Pressure, Hot-Water Washing Units
(2) 12' – 18' Aluminum Outboard Workboats
(6) Sets of Level A & B PPE
(2) All Terrain Vehicles
(1) 20 yard Vacuum Box
(1) Complete Set of Air Monitoring Equipment
(2) Backhoes
(2) Mercury Spill Kits
(2) Supervisors
(20) Temp Labor Workers
(2) 2,000- Gallon Vacuum Trucks
(1) Skimming Systems
(1) Storage Bladder
(1) Roll-Off Truck
(1) 20,000-Gallon Frac Tanks
(2) Response Trucks – Fully Loaded
(2) 24' Workboats
10,000 feet Containment Boom
(1) Mobile Decontamination Trailer
(1) Frac Tank –20,000 gal/each
(2) Light towers with Generator
(1) Magnetic Patch Kit
(5) HEPA Vacs – portable
(1) Mercury Vacuum

NEW HAVEN OPERATIONS CENTER

(1) Project Manager
(5) Marine Personnel
(2) Utility Work Boats—(30 ft & 65 ft)
(2) Pumping Systems & Hose
(1) Supervisor
(20) Temp Labor Workers
2,000 feet Containment Boom
(1) Storage Bladder

PHILADELPHIA METRO OPERATIONS CENTER

(2) Project Managers
(8) Hazmat Technicians
(1) 5,460- Gallon Vacuum Trucks
(1) HAZMAT Response Unit
(1) Guzzler Air Vacuum Trucks
(6) 20-yard Roll-Off Containers
(2) Sets of Confined Space Entry Equipment
(2) High-Pressure, Hot-Water Washing Units
(5) 12' – 18' Aluminum Outboard Workboats
(1) Complete Set of Air Monitoring Equipment
(6) Sets of Level A & B PPE
(2) Oil Skimming Systems
(3) Supervisors
(20) Temp Labor Workers
(2) 2,000- Gallon Vacuum Trucks
(1) Spill Response Trailer
(1) Roll-Off Truck
(1) 20,000-Gallon Frac Tanks
(2) Response Trucks – Fully Loaded
(4) 24' - 34' Workboats
10,000 feet Containment Boom
(1) Magnetic Patch Kit
(1) Boom Truck
(2) All Terrain Vehicles

DELMARVA OPERATIONS CENTER

(1) Supervisor
(20) Temp Labor Workers
(1) HAZMAT Response Unit
(2) 20-yard Roll-Off Containers
(1) Set of Confined Space Entry Equipment
(2) High-Pressure, Hot-Water Washing Units
(2) 12' – 18' Outboard Workboats
(1) Complete Set of Air Monitoring Equipment
(5) Hazmat Technicians
(1) 2200 Gallon Vacuum Truck
(1) Spill Response Trailer
(1) 20,000-Gallon Frac Tank
(2) Response Trucks – Fully Loaded
(1) 24' - 34' Workboats
1,500 feet Containment Boom
(6) Sets of Level A & B PPE

BALTIMORE/WASH DC METRO OPERATIONS CENTER

(1) Project Manager
(8) Hazmat Technicians
(1) 5,460- Gallon Vacuum Trucks
(1) HAZMAT Response Unit
(1) Guzzler Air Vacuum Trucks
(2) 20-yard Roll-Off Containers
(1) Set of Confined Space Entry Equipment
(3) High-Pressure, Hot-Water Washing Units
(2) 12' – 18' Outboard Workboats
(1) Complete Set of Air Monitoring Equipment
(2) Oil Skimming Systems
(2) Supervisors
(20) Temp Labor Workers
(2) 3,000- Gallon Vacuum Trucks
(1) Spill Response Trailer
(1) Roll-Off Truck
(2) 20,000-Gallon Frac Tanks
(2) Response Trucks – Fully Loaded
(2) 24' - 34' Workboats
3,000 feet Containment Boom
(6) Sets of Level A & B PPE
(2) All Terrain Vehicles

ALBANY OPERATIONS CENTER

(3) Project Managers
(6) Hazmat Technicians
(2) Vacuum Trucks
(2) Guzzler Air Vacuum Trucks
(5) 20-yard Roll-Off Containers
(2) Response Trucks – Fully Loaded
(2) High-Pressure, Hot-Water Washing Units
(6) Sets of Level A & B PPE
(2) All Terrain Vehicles
(1) 5 ton Grove Crane 4WD
(1) Light tower with Generator
(1) 150 feet of S/S Chemical Hose
(2) D/D Chemical diaphragm pump - 2"
(4) D/D Air Transfer Pumps – 3"
(1) Complete Set of Air Monitoring Equipment
(1) 50 ton Lowboy
(3) Supervisors
(20) Temp Labor Workers
(1) Roll-Off Trailer
(2) 20,000-Gallon Frac Tanks
(2) Sets of Confined Space Entry Equipment
(2) Utility Work Boats-- Boston Whaler
2,000 feet Containment Boom
(2) Mobile Decontamination Trailers
(1) Pump Trailer w/ Hose
(1) 200 gpm Transfer Pump-Food Grade
(3) Portable 2000kw Generators
(2) HEPA Vacs - portable
(1) Backhoe
(1) HAZMAT Hammock
(1) Magnetic Patch Kit
(1) 20 yard Vacuum Box

STATEN ISLAND OPERATIONS CENTER

(2) Project Managers
(33) Marine Personnel
(2) Vacuum Units
(17) Pumping Systems & Hose
(2) Response Trucks – Fully Loaded
(3) High-Pressure, Hot-Water Washing Units
(2) All Terrain Vehicles
(2) Light towers with Generator
(3) Supervisors
(50) Temp Labor Workers
(3) Skimming Systems
(1) Storage Bladder
(25) Utility Work Boats—(14 ft - 100 ft)
12,000 feet Containment Boom
(1) Boom Truck
(2) Portable 5000kw Generators

2.0 Land Based Equipment

Liquid Vacuum Truck CLIN#003DD1
2,200 – 6,200 Gallon Capacity
27" HG, 350 CFM

USES:

- Water Pump Out
- Liquid Waste Removal
- Liquid Transportation

Guzzler/Vactor CLIN#0003CC2
15 Cubic Yard Capacity
Rear Dump Capable
6,500 CFM Blower, 21" HG
Wet/Dry Mode, Side-loading Capable

USES:

- Small Diameter Solids Recovery
- Storm Drain Clearing
- Septic and Oil Sludge Removal
- Silt/Mud Removal
- Water Intake Clearing

Response Truck CLIN#0006FD1
1,000 Cubic Foot Capacity
Electric Hydraulic Lift Gate

USES:

- Small Response Unit
- Suitable for HAZMAT Lab Packs
- Movement of material/equipment
- Deliveries/Pickup of supplies

Hazardous Materials Emergency Response (HAMER) Trailer CLIN# 0006FD1

Equipment includes level A, B & C response, Air monitoring, decontamination shower, lab pack ready, sampling equipment.

USES:

- Rapid Response for HAZMAT needs
- Suitable for HAZMAT Lab Packs
- Air Monitoring for CO, H2S, LEL, Volatiles

Equipment Supply Trailer w/ Awning CLIN#0006FD9

Fully stocked with Personal Protective Equipment, Lights, Generators, Tools, Life Jackets, Plastic, Absorbents, Decontamination Equipment, Radios, Tables and Chairs, Boat Motors, Monitoring Equipment, Fuel.

USES:

- Materials Supply Depot Control Point
- Meeting Area for Safety Briefing and issuance of Personal Protective Equipment
- Logistics Field Unit

Response Trailer CLIN#006FD1

Contains personal protective equipment, materials, and an assortment of cleanup tools.

USES:

- Meeting Area for Safety Briefing and issuance of Personal Protective Equipment.
- Secure storage for field equipment and materials.

Rack Truck CLIN#0006FD4
Electric Hydraulic Lift Gate

USES:

- Small Response Unit
- Movement of material/equipment
- Deliveries/Pickup of supplies

Crane Truck CLIN#0004BC
15 Ton & 12 Ton Lifting Capacities
90' of Boom

USES:

- Lifting objects point to point
- Recovery of displaced items

Ten Wheel Dump Truck CLIN#0005EC
12 Cubic Yard Capacity
Rear Dump

USES:

- Earth/Debris/Material Movement

Roll-Off Truck CLIN#0004DB
60,000 lb. Hoist,
80,000 lb. GVW

USES:

- Earth/Debris/Material Movement
- Sludge Container Movement
- 10K Gallon Frac Tank Movement

Interceptor Box CLIN#0003ED
4,000 Gallons/20 Cubic Yards
Totally Sealed and Contained
Rear Dump

USES

- Earth/Debris/Material Movement
- Liquid Mixed Waste Storage
- Storm Drain Waste Storage
- Septic and Oil Sludge Storage

Roll Off Containers CLIN#0005FC1
20 Cubic Yard Covered Containers

USES

- Earth/Debris/Material Movement
- Storm Drain Waste Storage
- Debris Storage

Frac Tanks CLIN#0003EE1
10,000 & 20,000 Gallon
Liquid Mobile Storage Tanks

USES

- Waste Liquid Storage
- Water storage for cleaning operations
- Temporary Storage of Diesel Fuel

Double Wall Storage Tanks CLIN#0003EE1
2,000 to 10,000 Gallon
Liquid Mobile Storage Tanks

USES

- Waste Liquid Storage
- Water storage for cleaning operations
- Temporary Storage of Diesel Fuel

Decontamination Trailer CLIN#0006FD11
Mobile Three-Phase
Decontamination Shower Unit, Hot Water

USES

- Personnel Decontamination
- Personnel Hygiene
- HAZMAT Decontamination

24' Restroom Trailer CLIN#0008LN6
Mobile Restroom Unit

USES

- (4) Female Stalls
- (4) Male Stalls
- A/C
- Service Additional

8' Restroom Trailer CLIN#0008LN
Mobile Restroom Unit

USES

- Male/Female separate
- A/C
- Service Additional

Decontamination/Shower Trailer NON BOA
Mobile Decontamination Shower Unit

USES

- Personnel Decontamination
- Personnel Hygiene
- HAZMAT Decontamination

Gamma Goat CLIN#0008AE1
Amphibious 6 x 6
Six Wheel Articulating w/ Trailer
2,500 lb Load Capacity

USES

- Earth/Debris/Material Movement
- Garbage Pick & Removal
- Movement of material/equipment
- Deliveries/Pickup of supplies

4 x 4 ATV's Transportation
CLIN#0008AD

USES

- Movement of material/equipment
- Deliveries/Pickup of supplies

Morooka Track Dump CLIN#0005ED
Low Ground Pressure
9,500 lb Load Capacity

USES

- Earth/Debris/Material Movement
- Garbage Pick & Removal
- Movement of material/equipment
- Remote Access

Yanmar Mini Track Dump CLIN#005AD2
Low Ground Pressure
2,500 lb Payload Capacity

USES

- Earth/Debris/Material Movement
- Movement of material/equipment
- Deliveries/Pickup of supplies
- Remote Access

4 x 4 Crew Cab Truck CLIN#006FD1
Four Wheel Drive Truck
¾ Ton Capacity

USES

- Movement of material/equipment
- Deliveries/Pickup of supplies

Bulldozer CLIN#0005AB1
Four-In-One Bucket
Track Machine

USES

- Earth/Debris/Material Movement
- Remote Access

Backhoe CLIN#0005CD1
Rubber Tired, 4 x 4
Backhoe is an extend-a-hoe.

USES

- Earth/Debris/Material Movement
- Remote Access

Mini Excavator CLIN#0005CD1
Low Ground Pressure
Rubber Track.

USES

- Earth/Debris/Material Movement
- Remote Access

Bobcat CLIN#005AD2
Low Ground Pressure
Rubber Track.

USES

- Earth/Debris/Material Movement
- Remote Access

Electric Generators

- 5KW CLIN#006BB2
- 11KW CLIN#006BA1
- 20 KW CLIN#006BA2
- 300 KW NO CLIN

Pressure Washer CLIN#0005GD1
Mobile Unit, 3,000 PSI
Gasoline Engine

USES

- Pressure Washing of Storm Drains
- Clearing of Walkways
- Cleaning of Surfaces

Air Compressor CLIN#0006GA1
Mobile Unit
185 Cubic Feet Per Minute

Miller Environmental Group
(800) 394-8606 www.millerenv.com

HOTSY SYSTEMS

HOTSY CLIN#0005G
High Pressure Hot Water Washing Units
1 Wand, 50 feet of hose,

Water Transfer Pumps CLIN#0006DC6
Fully transportable pumps for feeding water to the HOTSY units.

Hose CLIN#006EC
Suction and Discharge Hose for transfer operations.

HOTSYS

HOTSY Wands

Water Transfer Pumps

Water Pump Manifolds

HOTSY Hose

Miller Environmental Group
(800) 394-8606 www.millerenv.com

High Capacity Water Pump CLIN#006DB
Skid Mounted Mobile Unit
250 GPM

Mobile Command Unit CLIN#006FB1
Field Command Post set up with (3) Computer workstations with wireless Internet connection, Refrigerator, Meeting space for 4 persons, Generator, 2-way Radios, AC/Heat.

Light Tower CLIN#0006BA
Four 1,000-Watt Light, Mobile Unit
6,000KW Generator, Diesel Engine

Wash Stations Multiple CLIN#'s
Fully transportable hand washing stations holds liquid hand soap and paper towels.

Wash Stations Multiple CLIN#'s
Fully transportable hand washing stations holds liquid hand soap and paper towels.

3.0 Marine Based Equipment

14' Work Boats & Motors CLIN#0002ED1A
Aluminum Work Boat, 48" Beam
Shallow Work Environment

21' Work Boat CLIN#0002ED4A
Aluminum Work Boat
225HP Outboard

24' Work Boat CLIN#0002ED4A
Aluminum Work Boat
225HP Outboard

27' Work Boat CLIN#0002ED
Aluminum Work Boat
225HP Outboard

32' Work Boat CLIN#0002ED
Aluminum Work Boat
250 Cummins, 250 HP
Water Jet Propelled

35' Work Boat CLIN#0002ED6A
Aluminum Work Boat,
V671 GM Engine
5KW Generator w/ 110 & 220 Volt Service.

50' Crew Boat CLIN#0002EC1
Steel Crew Boat
Two 671 Detroit Diesels 550HP
USCG Certified for 32 Passengers

74' Landing Craft CLIN#0002JA2
Aluminum Boat
Two 800HP Detroit Diesels,
7 ½ Ton Crane
Cargo Well Capacity 100,000 lbs

100' Utility Boat CLIN#0002J
Steel Crew Boat
Two 12V71 Detroit Diesels 680HP
USCG Certified for 36 Passengers
45 Long Ton Deck Crane, Fire/Deluge Cannon
1,000 GPM

MEG 5000 Weir Disk Skimmer CLIN#0003BD1
3,000 GPH Skimming Rate
1,000 Gallon Holding Capacity
18 GPM Hydraulic Power Pack

Containment Boom CLIN#0003A
40,000 feet 18” Boom
10,000 feet 36” Boom

Floating Work Platforms CLIN#0002BD1
Towable Portable Units
(3) 8’ x 50’ Sections

Location: 538 Edwards Avenue
Calverton NY 11933

Contact: Jerry Coogan
Business Phone: 1-631-369-4900
Fax: 1-631-369-4909

Lat. 40-55.692 N
Long. 72-45.528 W

Type	Sub-Type	Description:	Quantity
Beach Cleaner	Mechanical Cleaner		8
		Total Beach Cleaner:	8
Boom	18	Ht: 18	900
Boom	18	Ht: 18	20000
		Total Boom:	20900
Portable Storage	Dracone/Bladder	(Tank Trucks) TSC: 52	3
Portable Storage	Portable Tank	(Modular Storage Container) TSC: 476	5
		Total Portable Storage:	8
Skimmer	Floating Suction	(Weir/Suction) TEDRC: 583	1
Skimmer	Floating Suction	(Weir/Suction) TEDRC: 583	2
Skimmer	Floating Suction	(Wier) TEDRC: 0	3
Skimmer	Floating Suction	(Weir/Suction) TEDRC: 9600	1
Skimmer	Floating Suction	(Weir/Suction) TEDRC: 583	1
Skimmer	Floating Suction	(Weir/Suction) TEDRC: 6857	2
Skimmer	Inclined Plane	(Belt/Adhesion) TEDRC: 2057	1
Skimmer	Oleophilic Disk	(Disc/Adhesion) TEDRC: 1714	1
		Total Skimmer:	12
Staff	Supervisor	(Supervisor) - Full Time	6
Staff	Support/General Labor	(Laborer) - Full Time	65
		Total Staff:	71
Support Equipment	Crane Truck	(Crane Truck) Cap: Cap Uts:	1
Support Equipment	Crane Truck	(Crane Truck) Cap: Cap Uts:	1
Support Equipment	Dump Truck/Trailer	(Dump Truck) Cap: Cap Uts:	8
Support Equipment	Dump Truck/Trailer	(Dump Truck) Cap: Cap Uts:	20
Support Equipment	Earth Moving Equipment	(Earth Moving Equipment) Cap: Cap Uts:	1
Support Equipment	Earth Moving Equipment	(Earth Moving Equipment) Cap: Cap Uts:	1
Support Equipment	Earth Moving Equipment	(Earth Moving Equipment) Cap: Cap Uts:	1

Support Equipment	Earth Moving Equipment	(Earth Moving Equipment) Cap: Cap Uts:		1
Support Equipment	Earth Moving Equipment	(Earth Moving Equipment) Cap: Cap Uts:		0
Support Equipment	Earth Moving Equipment	(Earth Moving Equipment) Cap: Cap Uts:		1
Support Equipment	Earth Moving Equipment	(Earth Moving Equipment) Cap: Cap Uts:		1
Support Equipment	Pick-Up Truck	(Pickup Truck) Cap: Cap Uts:		15
Support Equipment	Roll-Off Container	(Roll Off Container) Cap: Cap Uts:		4
Support Equipment	Roll-Off Container	(Roll Off Container) Cap: Cap Uts:		15
Support Equipment	Truck - Semi	(Semi Truck) Cap: Cap Uts:		1
Support Equipment	Truck - Semi	(Semi Truck) Cap: Cap Uts:		15
Support Equipment	Van Trailer	(Van Trailer) Cap: Cap Uts:		3
Support Equipment	Van Trailer	(Van Trailer) Cap: Cap Uts:		8
			Total Support Equipment:	97
Transfer Pump	Centifugal			5
			Total Transfer Pump:	5
Vacuum System	Vacuum Transfer Unit	(Loader) TEDRC: 685 TSC: 24		2
Vacuum System	Vacuum Truck	(Truck) TEDRC: 1248 TSC: 48		2
Vacuum System	Vacuum Truck	(Truck) TEDRC: 4118 TSC: 130		6
			Total Vacuum System:	10
Vessel	Deployment Craft (< 25 foot)	Len: 24 Bm: 10 Dft: 0 HP: 90		3
Vessel	Deployment Craft (< 25 foot)	Len: 18 Bm: 6.5 Dft: 0 HP: 15		14
Vessel	Landing Craft (36-66 foot)	Len: 34 Bm: 0 Dft: 0 HP: 0		1
Vessel	Landing Craft (36-56 foot)	Len: 74 Bm: 0 Dft: 0 HP: 0		1
			Total Vessel:	19

Galveston

Subtotal EDRC = 57,991 b/d
Subtotal TSC = 3,460 bbls

20-Feb-04

Contractor Name: Miller Environmental Group

Location: 287 Maspeth Avenue
Brooklyn NY 11256

Contact: Ken Heyman
Business Phone: 1-718-486-9109
Fax: 1-718-486-9108

Lat. 40-43.632 N
Long. 73-56.736 W

Type	Sub-Type	Description:		Quantity
Boom	18	Ht: 18		5000
			Total Boom:	5000
Portable Storage	Portable Tank	(Modular Storage Container) TSC: 476		3
			Total Portable Storage:	3
Skimmer	Floating Suction	(Weir/Suction) TEDRC: 583		1
			Total Skimmer:	1
Staff	Supervisor	(Supervisor) - Full Time		4
Staff	Technical/Operator	(Technician/Operator) - Full Time		10
			Total Staff:	14
Support Equipment	Roll-Off Container	(Roll Off Container) Cap: Cap Uts:		4
			Total Support Equipment:	4
Vacuum System	Vacuum Truck	(Truck) TEDRC: 2404 TSC: 47		3
Vacuum System	Vacuum Truck	(Truck) TEDRC: 6000 TSC: 130		2
			Total Vacuum System:	5

Brooklyn

Subtotal EDRC = 19,795 b/d
Subtotal TSC = 1,829 bbls

Location: 146 Beach Street
Port Jefferson NY 11777

Contact: Jimmy Miller
Business Phone: 1-631-331-5336
Fax: 1-631-331-5708

Lat. 40-57.018 N
Long. 73-03.702 W

Type	Sub-Type	Description:		Quantity
Boom	18	Ht: 18		3000
			Total Boom:	3000
Portable Storage	Dracone/Bladder	(Inflatable Barges) TSC: 100		1
			Total Portable Storage:	1
Skimmer	Floating Suction	(Weir/Suction) TEDRC: 1028		1
Skimmer	Oleophilic Disk	(Disc/Adhesion) TEDRC: 240		1
			Total Skimmer:	2
Staff	Supervisor	(Supervisor) - Full Time		2
Staff	Supervisor	(Supervisor) - Full Time		2
Staff	Support/General Labor	(Laborer) - Full Time		50
Staff	Technical/Operator	(Technician/Operator) - Full Time		20
			Total Staff:	74
Vessel	Deployment Craft (< 25 foot)	Len: 18 Bm: 6 Dft: 0 HP: 0		3
Vessel	Deployment Craft (< 25 foot)	Len: 24 Bm: 7 Dft: 2 HP: 150		1
Vessel	Deployment Craft (> 25 foot)	Len: 74 Bm: 0 Dft: 0 HP: 680		1
Vessel	Deployment Craft (> 25 foot)	Len: 50 Bm: 15 Dft: 0 HP: 440		1
Vessel	Deployment Craft (> 25 foot)	Len: 65 Bm: 17.5 Dft: 0 HP: 1060		1
Vessel	Deployment Craft (> 25 foot)	Len: 65 Bm: 18 Dft: 0 HP: 660		1
			Total Vessel:	8

Port Jefferson
Subtotal EDRC = 1,268 b/d
Subtotal TSC = 100 bbl/s

20-Feb-04

Contractor Name: Millers Launch

Location: Pier 7 1/2
Staten Island NY 10314

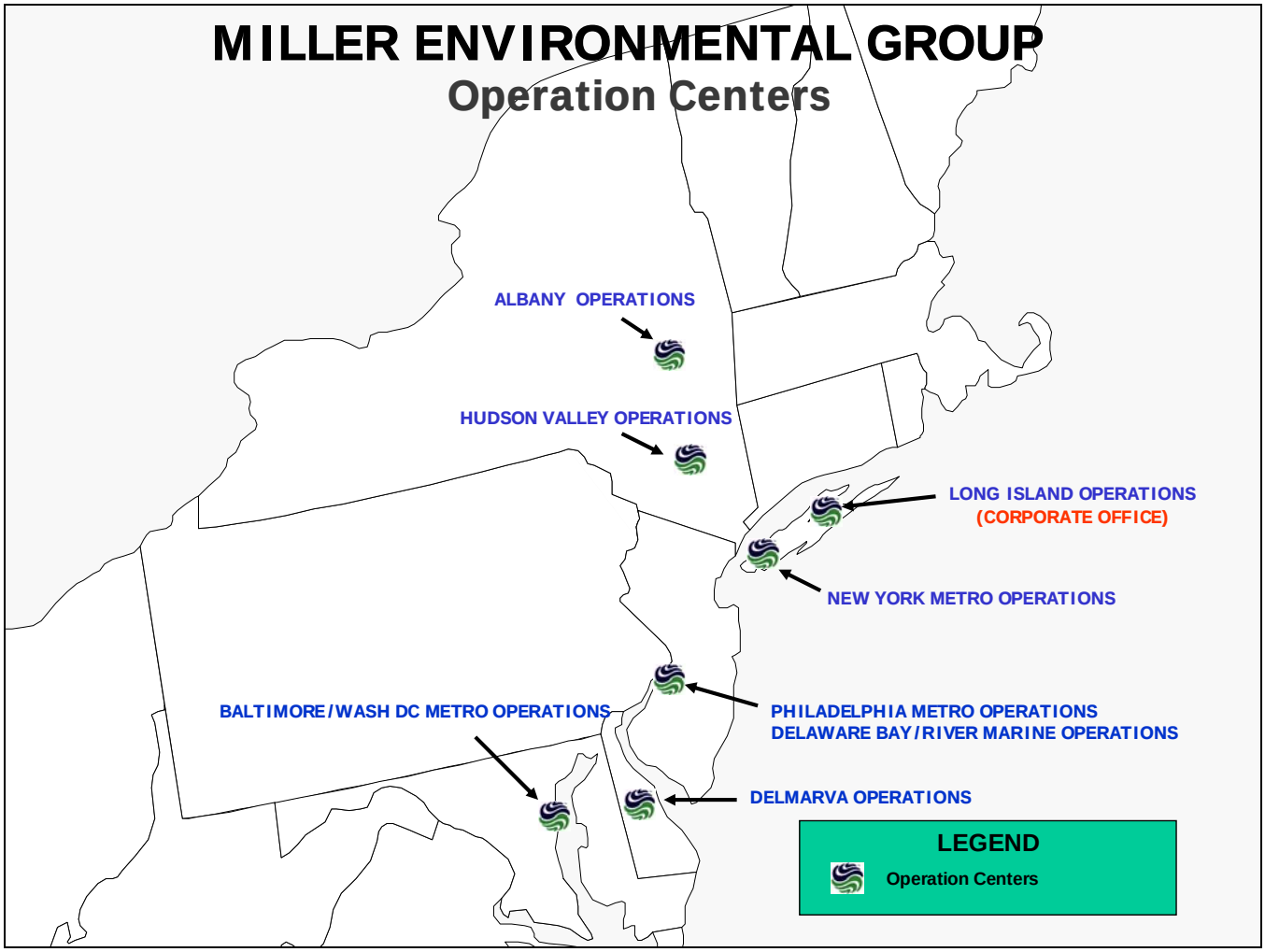
Contact: Glenn Miller
Business Phone: 1-718-727-7303
Fax: 1-718-448-6326

Lat. 40-37.884 N
Long. 74-08.214 W

Type	Sub-Type	Description:		Quantity
Boom	18	Ht: 18		12000
			Total Boom:	12000
Portable Storage	Portable Tank	(Modular Storage Container) TSC: 18		1
			Total Portable Storage:	1
Skimmer	Oleophilic Disk	(Wier) TEDRC: 1371		3
			Total Skimmer:	3
Staff	Supervisor	(Supervisor) - Full Time		5
Staff	Support/General Labor	(Laborer) - Full Time		50
Staff	Technical/Operator	(Technician/Operator) - Full Time		33
			Total Staff:	88
Vacuum System	Vacuum Transfer Unit	(Loader) TEDRC: 685 TSC: 24		2
			Total Vacuum System:	2
Vessel	Deployment Craft (< 25 foot)	Len: 18 Bm: 6.5 Dft: 0 HP: 15		12
Vessel	Deployment Craft (< 25 foot)	Len: 22 Bm: 9 Dft: 0 HP: 150		3
Vessel	Deployment Craft (> 25 foot)	Len: 100 Bm: 26 Dft: 0 HP: 0		1
Vessel	Deployment Craft (> 25 foot)	Len: 42 Bm: 14 Dft: 0 HP: 456		3
Vessel	Deployment Craft (> 25 foot)	Len: 40 Bm: 12 Dft: 0 HP: 0		1
Vessel	Deployment Craft (> 25 foot)	Len: 57 Bm: 16 Dft: 0 HP: 0		1
Vessel	Deployment Craft (> 25 foot)	Len: 65 Bm: 26 Dft: 0 HP: 0		1
Vessel	Deployment Craft (> 25 foot)	Len: 65 Bm: 18.5 Dft: 0 HP: 456		2
Vessel	Tug - Ocean	Len: 45 Bm: 0 Dft: 0 HP: 0		1
			Total Vessel:	25

Staten Island
Subtotal EDRC = 5483 b/d
Subtotal TSC = 66 bbl's

Locations and Points of Contact



Long Island Operations
538 Edwards Ave.
Calverton, NY 11933
POC: Jerry Coogan
631-369-4900
631-369-4909 Fax
jcoogan@millerenv.com

New York Metro Operations
1300 Shames Drive
Westbury, NY 11590
POC: Adam Libuser
516-876-7940
516-876-7946 Fax
alibuser@millerenv.com

Hudson Valley Operations
169 Stone Castle Road
Rock Tavern, NY 12575
POC: Noel Russ
845-569-1200
845-569-1288 Fax
nruss@millerenv.com

Albany Operations
105 South Albany Road
Selkirk, NY 12158
POC: Noel Russ
518-767-0285
518-767-0289 Fax
nruss@millerenv.com

Philadelphia Metro Operations
105 Riverview Drive – PO Box 365
Paulsboro, NJ 08066
POC: Gary Humphreys
856-224-1100
856-224-1113 Fax
ghumphreys@millerenv.com

DELMARVA Operations
40 Artisan Drive
Smyrna, DE 19977
POC: Gary Humphreys
302-653-0333
302-653-0334 Fax
ghumphreys@millerenv.com

Baltimore/Wash DC Metro Operations
4616 Newgate Ave.
Baltimore, MD 21224
POC: Gary Humphreys
410-631-9193
410-631-9197 Fax
ghumphreys@millerenv.com

24 HOUR EMERGENCY RESPONSE

MILLER ENVIRONMENTAL GROUP
(800) 394-8606 (631) 369-4900
www.millerenv.com

EXHIBIT H

Standard Operating Procedures
(Major Petroleum Facility Operations)

DRAINING SECONDARY CONTAINMENTS

1.0 PURPOSE

To provide a standard procedure for authorization, method, and documentation of draining bermed areas.

2.0 SCOPE

2.1 Applies to Energy & Utilities Central Steam Facility engineers responsible for operation and surveillance of the Central Steam Facility Tank Farm.

Applies to Site Resources Division personnel responsible for the site fuel oil tank farm, remote fuel tank storage areas, and outdoor oil filled transformer yard secondary containment berms.

2.2 Any BNL craftsman or outside contractor required to work inside the bermed areas will notify the responsible authority of the water condition within the bermed area prior to the commencement of work.

3.0 POLICY

3.1 This procedure will be followed at all times when a bermed area requires draining into the sanitary system. (Bermed areas require draining whenever enough water has accumulated in the containment that compromises its ability to contain the full amount of product in the tank.)

3.2 The Authorization Form/Discharge Documentation (Attachment EU-ESH-009A) or other similar form as supplied by the EPD Representative, will be filled out and filed whenever a bermed area is drained to the sanitary system.

3.2.1 The upper portion of the form (the authorization) will be filled out completely and signed before draining the bermed area.

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3.2.2 The lower portion of the form (the discharge documentation), will be filled out by the cognizant supervisor upon completion of the task.

3.3 Central Steam Facility Additional Policy - The responsible authority will store the key for the bermed area drain valves.

3.4 Drainage of precipitation from within the diked area will be controlled in a manner that will prevent any toxic or hazardous material from entering the ground, groundwaters, or surface waters.

4.0 REFERENCES

4.1 6NYCRR Part 613 Handling and Storage of Petroleum - 613.3(c) (6) Secondary Containment System for Above Ground Tanks

4.2 Suffolk County Sanitary Code - Article 12 "Toxic and Hazardous Materials Storage and Handling Controls" (latest version), Section 1211, "Outdoor Above Ground Storage Facilities"

4.3 Standards for the Administration of Article 12 "Toxic and Hazardous Materials Storage and Handling Controls" of the Suffolk County Sanitary Code, Section 3 (latest version), Secondary Containment System for Above Ground Tanks

5.0 DEFINITIONS

5.1 **CSF:** Central Steam Facility

5.2 **ECR:** Environmental Compliance Representative

5.3 **EPD:** Environmental Protection Division

5.4 **FSR:** Facility Support Representative

5.5 **PIV:** Post Indicator Valve

5.6 **RA:** Responsible Authority - First line supervisor or his designee, General Supervisor, F&O SR Manager or Facility Project Manager (FPM), Complex Facility Manager (CFM) Manager, F&O E&U Manager, in that order.

6.0 PROCEDURE

6.1 Prerequisites

None

6.2 Precautions

None

6.3 Berm Inspection (All Locations)

- The determination of need to discharge rainwater from a tank berm is made by the RA. (Based upon remaining available volume in containment.) Use formula:

  Volume (empty) – Volume (rainwater) = Remaining Capacity

  Volume (empty) = $3.14r^2h$ (where h = height of containment in feet)

  Volume (rainwater) = $3.14r^2h$ (where h = height of rainwater in feet)

  Remaining Capacity (cubic feet) x 7.48 = Remaining Capacity (gallons)

  Gallons of Remaining Capacity must be 125% of Tank Capacity

- The RA contacts the EPD representative to perform the inspection of the berm area.
- The RA or his designee accompanies the EPD representative (ECR, FSR, or other designated EPD representative) on the inspection of the berm area.
- The EPD representative performs the inspection or sample and signs the discharge permit if the water does not have a visible sheen. If a sheen is present the ECR will provide direction to the responsible personnel for rectification.

6.4 Draining the Berm at the CSF

The RA assigns the responsible engineer, writes his name on the form, and gives him the key to the PIV.

- The engineer notes the time/date the valve is opened on the form, opens the valve, and monitors the draining operation.
- When the draining operation is complete, the responsible engineer closes and locks the valve.
- The RA will sign the time/date that the key was returned and that the discharge has been completed.
- The RA will file the form in the dedicated binder.
- The RA will keep a copy of each discharge form in a dedicated binder and submit a copy of the discharge form to EPD for all locations.

6.5 Draining Fuel Oil Tank/Chip Storage Berms at Locations other than the CSF

- Discharge water into the sanitary system in a controlled manner, via a submersible pump, in accordance with Suffolk County Department of Health Services Standards and in accordance with NYS Department of Environmental Conservation Requirements.
- The RA will keep a copy of each discharge form in a dedicated binder and submit a copy of the discharge form to EPD for all locations.

6.6 Draining the Berm for Outdoor Oil Filled Transformer

- The RA assigns the responsible tower line person (TLP), writes his name on the form, and gives him the key to the PIV (if required).
- The TLP notes the time/date the valve is opened on the form, opens the valve, and monitors the draining operation.
- When the draining operation is complete, the responsible engineer closes the valve and locks it.
- The RA will sign the time/date that the key was returned and that the discharge has been completed.
- The RA will file the form in the dedicated binder.
- The RA will keep a copy of each discharge form in a dedicated binder and submit a copy of the discharge form to EPD for all locations.

7.0 ATTACHMENTS

7.1 DF-ESH-009A, Authorization Form - Discharge of Rainwater from Bermed Areas

AUTHORIZATION FORM

DISCHARGE OF RAINWATER FROM BERMED AREAS AT BROOKHAVEN NATIONAL LABORATORY

Berm Inspection:			
Requested By:		Date:	
Inspected By:		Date:	
Berm Location / Tank #			

STATEMENT OF INSPECTION: Based on an inspection of the above tank berm, I certify that there is no visible oil sheen on the surface of the water collected within this berm. Authorization is hereby given to discharge this water to the sanitary sewer system, in accordance with the provision of our SPDES permit.

Signature:		Date:	

NOTE: The discharge must be performed within 24 hours of approval and inspection.

DISCHARGE DOCUMENTATION			
Responsible Worker:		Date:	
Supervisor:			
Time Valve Open:		Closed:	
Time Key Returned:			

Original: Shop File
Copy: R. Lee, Building 120

Receiving Fuel Oil at the Central Steam Facility

1.0 PURPOSE

To provide a procedure for receiving fuel oil at the Central Steam Facility.

This procedure must be followed as written.

2.0 SCOPE

This procedure is to be followed by the stationary engineers at the Central Steam Facility when receiving fuel oil by tank truck.

3.0 POLICY

The stationary engineers will be responsible for the implementation of this procedure. Any changes or deviations from this procedure must first be approved by the responsible authority of the Central Steam Facility.

4.0 REFERENCES

4.1 Oil & Chemical Spill Prevention and Countermeasure Plan

4.2 SBMS Spill Response Subject Area

4.3 Oil Pollution Response Plan

4.4 EP-ES&H-105, Personal Protective Equipment

4.5 F&O Personal Protective Equipment (PPE) Webpage

5.0 DEFINITIONS

5.1 **Responsible authority**: First line supervisor, general supervising engineer, superintendent, deputy manager (E&U), and manager (E&U), in that order.

5.2 **Responsible engineer**: Senior stationary engineer whose assignment is to receive fuel oil.

6.0 PROCEDURE

6.1 Prerequisites

6.1.1 None.

6.2 Precautions

6.2.1 Use appropriate personal protective equipment (PPE) per F&O Personal Protective Equipment (PPE) Webpage.

6.3 Immediately upon arrival of the fuel truck, the responsible engineer will:

- Consult the Driver's Orientation Sheet (located in the Fuel Transfer Building Pump Room to determine whether the driver has completed the Central Steam Facility – Major Storage Facility Orientation (Attachment 7.2)). For those drivers that have not completed the orientation, instruct them in the BNL spill prevention requirements and have them read, complete the required form, and sign it. Place the completed form in the file and add their names to the Driver's Orientation Sheet.
- Obtain from the driver any and all documentation applicable to the product being delivered, including, but not limited to: weight receipts, bill of lading, or terminal invoices.
    - If a driver does not have a BNL weight slip, direct him to the scale, and instruct him in proper use of the scale.
- Consult with the responsible authority for the Central Steam Facility to determine which tank the load is to be delivered to.
- Obtain, with the aid of the truck driver, a representative sample of the product (by use of a suitable indicator) and determine if water is present.
- If water is present, consult with the responsible authority for further action, as the presence of water can result in rejection of the load.

6.4 Evaluation of the sample by Stationary Engineer: Take the representative sample, perform the following evaluation, and record the information on the Fuel Oil Receiving Report.

- Use the standard hydrometers to observe the API number and temperature of the product of every delivery. Convert to standard temperature and specific gravity.
- Note any unusual characteristics (for example, suspended solids, color, smell).
- If the evaluation is satisfactory, proceed to commence unloading. If not satisfactory, consult with the responsible authority.

6.5 Preparing to off-load: Prior to actual discharge, the responsible engineer will:

- Direct the fuel truck driver to the desired unloading station.
- Inspect tank truck and all drains and outlets for leakage. Instruct driver to tighten, adjust, and replace all leaking fittings so as to prevent leakage during transit. Note any/all deficiencies on the receiving report.
- Instruct driver to lock brakes, turn off engine, chock wheels, and attach bonding cable prior to connecting the discharge hose.
- Supervise connection of tank truck to BNL unloading station.
- Walk the fuel fill line and check valve lineup to correct tank.
- Obtain actual sounding of tank before discharge to determine amount of fuel in tank. Do not use previously written soundings.
- Check duplex strainer or filter assembly to ensure that clean, correctly sized strainers, or filters are installed and the strainer is ready to receive oil (for example, tops secure, vents closed, drains closed, gage connections open).
- Commence discharge of the product.

6.6 During the discharge operation, the responsible engineer will:

- Standby in the immediate vicinity and monitor the operation to ensure compliance with all safety requirements.
- Monitor cleanliness of strainer by watching pressure differential across strainer. If differential is greater than 25 psid, change flow over to standby strainer and clean the dirty one. Three strainers will be considered a maximum for a normal delivery.
- Be alert for leaky hoses, fittings, strainer housings, and truck pump glands. Be prepared to take necessary corrective action.

- Supervise clearing of fuel lines, securing pump, and disconnecting hoses as required at completion of discharge.
- Inspect tank truck and all drains and outlets for leakage. Instruct driver to tighten, adjust, and replace any/all leaking fittings so as to prevent leakage during transit. Note any/all deficiencies on the receiving report.

6.7 After discharge is complete, the responsible engineer will:

- Instruct truck driver to weigh out and return with weight slip to Central Steam Facility for paper work processing.
- Walk the fill line and secure the fill station.
- Take final sounding of tank.
- Record all information on the Fuel Oil Receiving Report (Attachment 7.1), fuel oil logs books, delivery receipts, and weekly log sheet as required.
- Sign and date the trucker's weight slip and fill in any supporting data that is required.
- On BNL weight slips record corrected API, gallons received, and what tank the fuel went into.

6.8 Non-operational status/un-manned operation. When active operations cease and receiving or transferring operations are complete, the responsible engineer must:

- Ensure all valves are secured (closed).
- Ensure all pumps are secured (off).
- Ensure that the Pump control room is closed and locked.
- Inspect all fuel oil tank drain valves, water draw off valves, and any other valve that may permit direct outward flow of the tanks contents. All such valves must be:
    - Securely closed,
    - Locked, and
    - Fitted with a blank flange, cap, or plug as appropriate.

7.0 ATTACHMENTS

7.1 EU-CSF-009A, Fuel Oil Receiving Report.

7.2 EU-CSF-009B, Central Steam Facility - Major Oil Storage Facility Orientation

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Central Steam Facility - Fuel Oil Receiving Report

Date:	Vendor:	Vendor Ticket #:
	Trucker:	Trucker Manifest #:
	Place of Origin:	
	Product: ☐ #6 Oil ☐ Other (Specify):	
	1 Pint Sample Taken: ☐ Yes ☐ No	
	Oil Received To: ☐ Burn Tank ☐ Other (Specify):	
	API as Received _____@ _____°F	
	API _____ @ 60°F = _____ lbs/gal	API By: ☐ Vendor ☐ Test

AMOUNT RECEIVED	
By Weight	**By Meter** (From Vendor)
Weight In:	Start:
Weight Out:	Stop:
Weight of Oil Received:	Gallons @ _____ °F = _____
API: lbs/gal	Gallons @ 60°F = _____
Gallons Received:	
By Tank Sounding	
Tank Number:	
Start:	
Stop:	
Gallons Received:	

_____
Engineer

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Transferring Fuel Oil at the Central Steam Facility

1.0 PURPOSE

To provide guidelines for transferring fuel oil at the Energy & Utilities Division, Central Steam Facility.

This procedure must be followed as written.

2.0 SCOPE

This guideline will be followed by the Stationary Engineers when required to transfer fuel oil in the Central Steam Facility Tank Farm (Major Oil Storage Facility).

3.0 POLICY

The Stationary Engineers are responsible for the implementation of this procedure. Any changes or deviations from this procedure must first be approved by the responsible authority of the facility.

4.0 REFERENCES

4.1 Spill Prevention Control and Counter Measures (SPCC Plan)

4.2 SBMS Subject Area Spill Response

4.3 DF-ESH-105, Personal Protective Equipment Issuance

4.4 F&O ESHT&Q Personal Protective Equipment Web Page

5.0 DEFINITIONS

5.1 **Engineer:** The Senior Stationary Engineer assigned to transfer oil.

5.2 Responsible Authority: First line supervisor, general supervisor, superintendent, Manager (EU) in that order.

6.0 PROCEDURE

6.1 Prerequisites

None

6.2 Precautions

6.2.1 Use appropriate personal protective equipment as indicated in DF-ESH-105, Personal Protective Equipment Issuance and the F&O ESHT&Q Personal Protective Equipment Web Page.

6.3 After receiving orders to transfer oil from the responsible authority, the engineer performing the transfer will:

- Ascertain the quantity of oil to be transferred, the origin and destination of the oil, and any specific instructions concerning pumps and piping to be used.
- The engineer will inspect the pipelines involved, checking to see that the necessary transfer valves are open to the proper tanks and closed to any other tanks.
- Inspect all fuel oil tank drain valves, water draw off valves, and any other valve that may permit direct outward flow of the tank's contents. All such valves will be:
    - Securely closed,
    - Locked, and
    - Fitted with a blank flange, cap, or plug as appropriate
- The engineer will sound all tanks involved in the transfer to ensure that the proper amount of oil is in each tank and that there is sufficient room in the tank to be filled. In the event that the soundings are incorrect by five percent, or that there is not sufficient room available in the receiving tank, notify the responsible authority.

- The engineers will use strainers of the type and mesh designated by the responsible authority.

6.4 During the transfer of oil, the engineer will perform frequent inspections of the process to ensure the integrity of the transfer system, these inspections will include:

- The engineer being alert for any leaks in the transfer system and being prepared to take the necessary corrective action in accordance with the SBMS Subject Area Spill Response.

- The engineer closely monitoring the pump operation. Excessive heat, vibration, or noise will be noted and corrective action taken.

- The engineer will observe the pressure differential across the strainer, if it exceeds 25 psi, they will change flow over to the strainer and clean the dirty one.

6.5 After completion of the transfer, the engineer will:

- Secure all pumps and valves used for the transfer and realign any processes secured due to the transfer.

- Take soundings of all tanks involved and determine gallons transferred.

- Enter the information in the appropriate tank log books, the engineer's log, and the fuel oil transfer slip.

- If the respective tank soundings reveal a difference of more than 5 percent oil transferred, notify the responsible authority.

6.6 Continuation of the transfer to the next shift:

- The relieving shift engineers will be notified as to the transfer quantity, the tanks, pumps, and the piping being used. In addition, the relieving shift will take soundings and inspect the transfer system immediately upon assuming the watch.
- The relieving shift engineers will complete the transfer operation in accordance with the previous described procedure.

6.7 Non-operational status/un-manned operation: When active operations cease, and receiving or transferring operations are complete, the responsible engineer will:

- Assure all valves in Transfer Facility Building 639 are secured (closed)
- Assure all pumps are secured (off)
- Pump control room is closed and locked
- Inspect all fuel oil tank drain valves, water draw off valves, and any other valve that may permit direct outward flow of the tank's contents. All such valves will be:
    - Securely closed
    - Locked, and
    - Fitted with a blank flange, cap , or plug as appropriate

7.0 ATTACHMENTS

None

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DAILY FUEL TANK STORAGE FACILITY INSPECTION

1.0 PURPOSE

To provide guidelines for inspection of the Central Steam Facility fuel storage tanks and ancillary equipment.

This procedure must be followed as written.

2.0 SCOPE

The Senior Stationary Engineers (SSEs) are responsible for the implementation of this procedure.

3.0 POLICY

The Senior Stationary Engineers will follow this procedure when required to inspect the fuel storage area and ancillary equipment.

4.0 REFERENCES

4.1 Oil & Chemical Spill Prevention Control and Countermeasure (SPCC) Plan

4.2 SBMS Spill Response Subject Area

4.3 EP-ES&H-105, Personal Protective Equipment

4.4 F&O Personal Protective Equipment (PPE) Webpage

5.0 DEFINITIONS

5.1 **Responsible authority**: First line supervisor, deputy manager EU, and manager EU, in that order.

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5.2 Responsible engineer: Senior stationary engineer assigned to perform the inspection.

6.0 PROCEDURE

6.1 Prerequisites:

None.

6.2 Precautions:

Use appropriate personal protective equipment (PPE) per the F&O Personal Protective Equipment (PPE) Webpage.

6.3 Visual Inspections

- Perform visual inspection four times per shift (every two hours).
- At start of shift, record fuel tank levels in the logbook.
- Walk through all fuel storage, receiving, and transferring areas.
- Be alert for unusual conditions, leaks, drips, etc.
- Report leaks or oil spills to the Fire Rescue Group (x2222) immediately.
- Report any suspicious persons to Security (x2238).

6.4 Written Inspections

- Complete the Daily Tank Storage and Ancillary Equipment Inspection Sheet (Attachment 7.1).
- Perform inspection as directed by Central Steam Facility supervisor or his designee (usually at 1600 hours).
- Sign and date inspection sheet.
- Perform inspection and note exceptions, observations, and comments as per the inspection sheet.
- Be alert for any conditions that may comprise the integrity of the fuel tanks, piping system, or containment.
- Are all manholes secure, all bolts in and tight?

- Are all fuel oil tank drain valves, water draw off valves, or any other valves that may permit the outflow of the tank's contents closed, locked, and blanked or capped?
- Are piping and supports secure and in good repair?
- Are all PIVs closed and locked?
- If any spills or leaks are observed, immediately notify the Fire Rescue Group (x2222).
- Report any suspicious persons to Security (x2238).

6.5 Supervisory Review

- The Central Steam Facility lead man or supervisor will review all daily reports.
- Lead man or supervisor will initiate appropriate work orders to correct deficiencies.
- Central Steam Facility supervisor will periodically review selected reports.

6.6 Record Keeping

- Completed reports will be retained at the Central Steam Facility as part of the SPCC Plan.
- Completed reports will be retained for a period of three years.

7.0 ATTACHMENTS

7.1 EU-CSF-0016A, Central Steam Facility Daily Tank Storage and Ancillary Equipment Inspection Sheet

CENTRAL STEAM FACILITY DAILY TANK STORAGE AND ANCILLARY EQUIPMENT INSPECTION SHEET

Signature _____ Date and Time of Inspection _____

Area	Potential Problems	Area Status		Observations and Comments
		OK	UNSAT	
TANK 3 (611C) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
HEATERS	LEAKS			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			
TANK 4 (611D) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
HEATERS	LEAKS			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			
TANK 9 (611G) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
HEATERS	LEAKS			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			
TANK 10 (611H) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
HEATERS	LEAKS			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			

Area	Potential Problems	Area Status		Observations and Comments
		OK	UNSAT	
TANK 5 (611E) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			
TANK 6 (611F) BERM	EROSION/OIL WATER			
PIPES, VALVES, TANK	LEAKS, CORROSION			
FITTINGS AND GAGES	LEAKS / DAMAGED			
LIGHTING	BURNED OUT BULBS			
LEVEL INDICATION	STICKING, BROKEN			
SIGNAGE	FADED, TORN, ILLEGIBLE			

FUEL TRANSFER FACILITY BUILDING 639				
PUMPS	LEAKS, DRIPS			
STRAINERS	LEAKS, DRIPS			
VALVES	LEAKS, DRIPS			
OUTSIDE LIGHTING	CONDITION			
INSIDE LIGHTING	CONDITION			
DOORS	CONDITION			
WINDOWS	CONDITION			
UNLOADING AREA	CLEAN, NO OIL			
BOOM	CONDITION			
TELEPHONES	OPERATION RINGERS			
LEVEL CONTROL AUTOMATION	NOTE ANY ANOMALIES			
LIGHTING EXTERIOR OF BUILDING 610	LIGHTS NOT WORKING			

NOTE: THIS REPORTS CONSTITUTES A DAILY REVIEW OF THE GENERAL TANK FARM INTEGRITY. ANY COMMENTS WHICH AFFECT THE TANK FARM INTEGRITY SHOULD BE NOTED BELOW.

Leadman Signature _____ Supervisor _____

(Daily Signature) (Spot Check)

EXHIBIT I

January 2006 – December 2010
Record of Spills

Table 3-7. Summary of Chemical and Oil Spill Reports.

Spill No. and Date	Material and Quantity	ORPS Report	Source/Cause and Corrective Actions
05-01 Jan 26	Solvent Mixture 1 gallon	Yes SC-CH-BH-BNL-BNL-2005-0001	The 490 Building Manager requested that plumbing work be performed in Room 907. For access to the work area, a researcher was asked to move a full, 1-gallon glass bottle of a solvent mixture containing Acetone (40%), Hexane (38%), Methylene Chloride (20%), Ethyl Acetate (1%), Ethanol (1%), and Porphyrin. The manager placed the container on a cart and during transport the cart hit a bump (possibly a door sill). The container fell to the floor and broke. The incident was reported to the fire and police groups and a cleanup response began. More than 90 percent of the mixture evaporated prior to the response team arrival. The small amount of liquid remaining was removed with absorbent pads. The pads, personal protective equipment, and broken glass container were placed in a plastic bucket and were properly disposed. The spill was reported to regulatory agencies, as > 1 pound of hexane was released to the air.
05-03 Feb 8	Hydraulic Fluid < 1 gallon	No	During repairs to the railroad siding, a hose failed on a backhoe and released hydraulic fluid to the railroad tracks, ballast, and ties. All visually impacted soils and ballast were removed for disposal. Waste was disposed at an approved disposal facility.
05-04 Mar 14	Hydraulic Fluid 1 pint	No	While working on the Peconic River cleanup, an Envirocon worker noticed a hydraulic leak from a Bobcat working on the temporary plastic mat road. Approximately 1 pint of hydraulic oil leaked from the plastic mat onto surrounding soil. The spill was immediately contained and cleaned up.
05-08 Mar 31	Human Excrement < 1 gal	No	Numerous 5-gallon plastic buckets in garbage bags were found on BNL property along a road adjacent to the BNL east boundary. The Emergency Services Division HAZMAT Team packaged the waste into DOT-approved containers (three 55-gal drums) and then transferred it to the Waste Management area. The containers were opened on April 7 by a BNL vendor (Onyx) and human excrement was found. The waste was re-packaged and disposed of as Regulated Medical Waste through the Medical Department.
05-10 April 12	Compressor Oil 2 ounces	No	A dewatering pump on the Peconic River remediation project blew compressor oil out of the discharge hose, to the plastic containment below and adjacent soil. The discharge was apparently due to failure of the compressor rings. The oil released to the containment pad and the affected soil was removed for proper disposal.
05-13 May 18	Diesel Fuel ½ gallon	No	Oil-stained grass was discovered in an area where a portable emergency generator had been parked, behind Bldg. 610. The stained area was approximately 2 ft in diameter. Diesel fuel is believed to have leaked from the fill cap of the generator fuel storage tank as a result of thermal expansion of the fuel. Buildings and Grounds personnel removed all visibly contaminated grass and underlying soil for off-site disposal.
05-17 Jun 20	Slaked Lime 15 pounds	No	BNL personnel discovered a white-chalky, alkaline solid material on soil along a concrete headwall near an on-site drinking water wellhouse and reported it to the Emergency Services Division as an unknown material spill. The material was collected and put in a plastic 15-gallon waste container. During this cleanup, samples were collected for chemical identification/ fingerprinting. Samples of similar material on site, including Quick Lime and ice melt, were compared with the unknown substance using field fingerprinting methods: reaction with acids, precipitation of solids, and pH. Based on these tests (high pH and calcium content), the unknown material was identified as slaked lime (calcium hydroxide). It was characterized and sent off-site for disposal.
05-20 Aug 15	Motor Oil ½ cup	No	A locomotive owned and operated by New York & Atlantic Railway leaked motor oil on the tracks along Power Line Road, just before the Laboratory exit. The locomotive had recently dropped off a load of empty rail cars for BNL to use for transporting remediation waste. The leak was not discovered until after the locomotive left the site. Most of the leaked motor oil was on top of a railroad tie, although some spilled over onto the soil on either side. Spill absorbent was used to remediate the spill, and the impacted spoil and contaminated absorbent were removed and containerized for off-site disposal.
05-22 Aug 17	Ethylene Glycol 7 gallons	No	A radiator hose ruptured on the "Trackmobile" being used to transport rail cars in support of the Former Hazardous Waste Management Facility cleanup. The operator realized there was a problem and immediately stopped the vehicle and workers placed drip pans and absorbent material under the radiator. Impacted soils, gravel, and debris were removed and placed in a 55-gallon drum for off-site disposal.

Spill No. and Date	Material and Quantity	ORPS Report	Source/Cause and Corrective Actions
05-23 Oct 8	Hydraulic Fluid 5 gallons	No	As concrete blocks were being moved from Bldg. 912 to Bldg. 933 along E. Fifth Avenue, a hydraulic line burst, resulting in a spill of approximately 5 gallons of hydraulic oil along a 1-mile stretch of road. It was raining heavily throughout the day and there was evidence of discharge of the oil into two of the storm sewer drains near Bldg. 912. Fire and Rescue personnel were notified as soon as the spill was discovered. It was contained to the asphalt road and did not come into contact with the soil. Absorbents were placed along the spill areas and along the storm drains. Booms were also placed at the weir (SPDES Outfall #002) to prevent discharge into the recharge basins located near the RHIC Ring. Visual inspection of the weir leading to the recharge basins showed no evidence of discharge of oil into the environment. All contaminated absorbents were collected and disposed off site.
05-27 Nov 4	Gasoline < 1 gallon	No	During routine surveillance of BNL property along North Street, a BNL employee noticed a closed 10-gallon carboy on the east side of North Street approximately 250 yards north of the east gate. The carboy was about 2/3 full and contained what appeared to be waste enginé oil. Another 250 yards north, he found an open 5-gallon pail filled with rainwater that had overflowed onto the ground below. The rain water in the pail had a visible sheen and a noticeable gasoline odor. Fire Rescue was notified and placed the 5-gallon pail in an overpak container with contaminated soil they recovered from below the container. The abandoned containers were transported to a waste storage area for characterization and disposal.
05-28 Nov 5	Floor Stripper 1 gallon	Yes SC-BHSO-BNL-PE-2005-0002	Weekend custodial staff dumped floor stripper into the courtyard of Bldg. 911. Stripper, which is highly caustic, was dumped on the bricks and migrated to the side gravel. A field pH reading on litmus paper showed a very high pH. Custodial staff and grounds crew cleaned up the spill and collected all waste for proper disposal.
05-32 Dec 12	Hydraulic Fluid < 1 gallon	No	During the planned decommissioning of an outdoor lift behind Bldg. 480, it was discovered that one of the hydraulic lines had rusted and leaked within the pit of the lift. The piping was removed and the line was capped. The accumulated debris at the bottom of the pit (leaves and sand) was discolored from the oil. The pit had a concrete floor and a drain to prevent water accumulation. All impacted material was removed and containerized for off-site disposal.
05-33 Dec 17	No. 6 Fuel Oil 20 gallons	Yes SC-BHSO-BNL-PE-2005-0003	At approximately 2:30 a.m., a Metro fuel oil tanker came on site to deliver a load of #6 fuel oil, but did not deliver the fuel. In the process, the tanker leaked oil in a trail that was discovered on the northbound William Floyd Parkway, through its route on BNL property and off site as it traveled southbound on William Floyd Parkway. On the parkway, as well as for most of its route on site, the tanker left one to two thin lines of #6 fuel along its route. Where the tanker slowed or stopped, it left a heavier deposit. This was particularly true at the entrance gate, weigh station, fuel transfer bay, and where the truck took corners. Most significantly, the truck leaked 20 to 25 gallons on the ground and in a catch basin shortly after it pulled out of the transfer bay. The roads, transfer bay, impacted soils, and drywell were cleaned and all spill residue was disposed of off site.

*Release is reportable to DOE under the requirements of DOE Order 231.1A, Occurrence Reporting and Processing.

DOT = Department of Transportation

Table 3-7. Summary of Chemical and Oil Spill Reports.

Spill No. and Date	Material and Quantity	ORPS Report	Source/Cause and Corrective Actions
06-09 07/18/06	Ethylene Glycol/Water 1 gallon	No	A Laboratory visitor was at the main gate trailer when the radiator in his vehicle failed, spilling approximately 1 gallon of antifreeze to the asphalt parking lot. Roads and Grounds personnel responded and cleaned up the release with speedy dry, and containerized the waste for off-site disposal.
06-10 07/19/06	Hydraulic Fluid 1 gallon	No	A front-end loader was being used to move a fallen tree off the north gate access road. As it was pushing the tree off the road, a branch ripped the hydraulic hose, releasing approximately 1 gallon of hydraulic fluid to the ground. The majority of the fluid leaked onto the road, but approximately 1 quart reached soil. Emergency Services applied speedy dry, Security closed off the road (at William Floyd Parkway), and Roads and Grounds staff cleaned up and containerized the spill debris for off-site disposal.
06-15 09/06/06	Ethylene Glycol/Water 2 gallons	No	During grading and application of recycled concrete aggregate on a dirt road (east of Buildings 610 and 528), a hose clamp broke on the dump truck radiator causing the hose to come loose and spill approximately 2 gallons of antifreeze to the ground. Roads and Ground personnel excavated and containerized the impacted soil for off-site disposal.
06-17 09/22/06	Diesel Fuel ½ gallon	No	A fuel line leak from BNL's Fire Brush truck occurred while Emergency Services personnel were practicing the use of equipment (the Brush Truck). Release was to sand. Emergency Services personnel removed most of affected sand and Roads and Grounds cleaned up residual material that was stained. The contaminated soil was placed into a plastic drum (10-gal) for off-site disposal.
06-21 09/27/06	Ethylene Glycol/Water 1 gallon	No	Upon exiting the vehicle, the driver of a BNL step van noticed it was leaking antifreeze and notified appropriate staff. Fire Rescue responded and applied speedy dry. The vehicle was towed away, and the material was containerized for off-site disposal.
06-24 10/26/06	Hydraulic Fluid ½ gallon	No	A tractor trailer being used to transport excavated soils for off-site disposal experienced a small leak of hydraulic fluid while dumping some of its payload on the ground. The prime contractor for the excavation project had spill equipment handy (i.e., absorbent pads) and was able to capture most of the leak. Some of the hydraulic fluid was released to the soil on the dirt road. The contractor's front-end loader was used to immediately clean up the impacted area and the material was placed on plastic for ultimate disposal. The impacted soil and absorbent pads (approximately 1/2 drum) were containerized and disposed of off-site.
06-25 11/20/06	Ethylene Glycol/Water 2 gallons	No	An unknown vehicle developed a leak of ethylene glycol after entering the site. The vehicle started leaking at the traffic light at Upton Road and Princeton Avenue, traveled to the Vehicle Monitoring Station turnaround area, turned around, and then left the site. BNL Fire Rescue personnel applied speedy dry to the spill and Roads and Grounds containerized the material for off-site disposal.

Notes:

* Release is reportable to DOE under the requirements of DOE Order 231.1A, Occurrence Reporting and Processing.

Table 3-7. Summary of Chemical and Oil Spill Reports.

Spill No. and Date	Material and Quantity	ORPS Report	Source/Cause and Corrective Actions
07-02 02/07/07	Ethylene Glycol/Water 1/2 gallon	No	A Laboratory vehicle leaked antifreeze onto the parking lot of Building 50. Speedy dry was used to absorb the fluid and the car was sent to the vehicle maintenance shop for repair. All wastes were containerized for off-site disposal.
07-03 04/20/07	Hydraulic Fluid 1 quart	No	While using a front-end loader to clear brush, a stump became wedged between the bucket and the ground, resulting in damage to a hydraulic hose. The loader was immediately secured and shut down. Impacted soils were removed and containerized for off-site disposal.
07-04 05/03/07	Hydraulic Fluid 1/2 cup	No	During retrieval of a roll-off trailer, a Town of Brookhaven vehicle spilled approximately 1/2 cup of hydraulic fluid to the ground. The spill was caused by an overfilled reservoir. The reservoir was drained to remove excess fluid, and the impacted soil was removed for off-site disposal.
07-05 05/17/07	Hydraulic Fluid 2 gallons	No	While mowing the lawn outside of Building 750, the lawn mower developed a leak from the valve spool. Examination of the valve spool showed that one of the hose fittings loosened due to vibration. The hose connection was repaired, and the impacted soils were excavated and containerized for off-site disposal.
07-06 05/18/07	Biobased Hydraulic Fluid 25 gallons	No	During examination of the vehicle lifts in Building 423, vehicle lift 2 was noted as not operating properly. Further examination by the repair contractor revealed a leak in the buried piping, and the piping was then repaired. The hydraulic fluid was vegetable oil-based; therefore, the New York State Department of Environmental Conservation did not require the remediation of the impacted soils.
07-07 06/03/07	Ethylene Glycol/Water 1 gallon	No	A privately operated limousine developed an antifreeze leak due to a failed water pump. The vehicle was towed from the BNL site for repair, and the spilled fluid was absorbed with speedy dry and containerized for off-site disposal.
07-08 06/06/07	Waste Engine Oil 3 gallons	No	A BNL employee brought a container of waste oil from home to dispose of at the local service station. The container was transferred from his personal vehicle to a laboratory pick-up truck. The container was not secured in the back of the truck, and it fell over and split open. The oil spilled into the back of the truck, out of the rear door, and onto pavement and soil. Speedy dry and sand were used to absorb the spilled oil. All contaminated media was collected and containerized for off-site disposal.
07-11 08/07/07	Ethylene Glycol/Water 1/2 gallon	No	The water pump in a BNL-operated vehicle failed, resulting in a release of antifreeze to the parking lot of Building 423. The vehicle was awaiting repair at the time of release. Speedy dry was used to remediate the release, which was later collected and containerized for off-site disposal.
07-13 08/29/07	Ethylene Glycol/Water 1/2 gallon	No	The lower radiator hose of a Laboratory vehicle failed, resulting in a release of antifreeze to the parking lot at Building 599. Speedy dry was used to absorb the spilled fluid, which was later collected for off-site disposal. The vehicle was sent to the vehicle maintenance shop for repair.
07-15 09/19/07	Hydraulic Fluid 30 gallons	No	During replacement of the elevator hydraulic system in Building 1005, a release of hydraulic fluid was discovered. The fluid was found in the interstitial space of the hydraulic cylinder and the exterior casing. The elevator casing was partially submerged in groundwater and the oil was found floating on the surface of the water. All oil was contained between the outside casing and the water. The oil was removed by pumping and by flooding the casing with water, causing the oil to spill out the top where it was collected. All oil and contaminated water was containerized for off-site disposal. The new hydraulic system includes a secondary containment sock to prevent future releases in the event of a casing leak.
07-17 10/22/07	Hydraulic Fluid 5 gallons	No	A new front-end loader leaked oil on the ground during its initial use. Examination of the unit showed that the hose connections at the control box were loose, probably due to vibration during shipping. The contaminated soils were containerized for off-site disposal.
07-19 12/10/07	Hydraulic Fluid 1 gallon	No	A hydraulic hose on the garbage truck failed resulting in a release of hydraulic oil to parking areas near Buildings 488 and 902. Due to wet weather, the oil flowed into a storm water catch basin and was discharged to a low-lying area near Building 904. The spill was remediated by using spill absorbents. All contaminated media was collected and containerized for off-site disposal.

Notes:

* Release is reportable to DOE under the requirements of DOE Order 231.1A, Occurrence Reporting and Processing.

Table 3-7. Summary of Chemical and Oil Spill Reports.

Spill No. and Date	Material and Quantity	ORPS Report	Source/Cause and Corrective Actions
08-01 01/16/08	Gasoline 1 quart	No	An abandoned pump inside a plastic tray was found in a remote area of the site. There was evidence of spillage to the soil around the tray. Approximately 50 pounds of soil was removed from the area and containerized for disposal.
08-02 01/28/08	Heat Transfer Oil 70 gallons	No	A helium compressor failed in Bldg. 902C resulting in spillage of heat exchange fluid to the containment area under the compressor and building floor. All spilled oil was contained within the building. Free liquids were recovered using pumps and absorbents. The remaining was recovered using speedy dry. All waste materials were containerized for off-site disposal.
08-04 04/28/08	Power Steering Fluid 1 quart	No	While performing work at the composting area, the power steering unit in a backhoe started to leak. A containment tray was placed beneath the unit immediately upon discovery, however some fluid was spilled to the soil. The impacted soil was removed for off-site disposal.
08-06 06/11/08	Hydraulic Fluid 13 gallons	Yes	The street sweeper developed a hydraulic leak while sweeping Upton Road. Upon discovery the unit was secured to prevent further leakage. The release impacted approximately 200 foot of road surface. Speedy dry was used to absorb the oil. The sweeper was transferred to the repair shop and impacted soils and speedy dry were collected and containerized for off-site disposal.
08-13 09/12/08	Motor Oil 5 gallons	No	A BNL vehicle was being pushed to the gasoline refueling station after running out of gas. While turning to enter the driveway to the station an unsecured 5 gallon container of motor oil fell out of the vehicle from behind the driver's seat. The container ruptured upon impact with the road. The container belonged to a BNL employee who was transporting it to the onsite service station for disposal. Impacted soils were cleaned up and speedy dry was used to absorb residual oil from the pavement.
08-14 10/06/08	Motor Oil/Hydraulic Oil Mixture 10 gallons	Yes	While mowing the lawn near Bldg. 703 the lawn mower tipped on its side due to the angle of the hill being mowed. Motor oil and hydraulic oil leaked from the vehicle as it lied on its side. All oil was contained on asphalt, but was reportable due to the volume released. Spilled ouil was absorbed on speedy dry and containerized for off-site disposal. There were no injuries resulting from this event.
08-15 10/13/08	Ethylene Glycol 1 gallon	No	The radiator hose on a dump truck failed resulting in the release of 1 gallon of coolant to soil and asphalt. Spill absorbents were used to remove residual liquid. All impacted soils and spill absorbents were collected and containerized for off-site disposal.
08-16 10/13/08	Sodium Hydroxide 1 - 2 gallons	Yes	During the late evening of October 13, 2008, a propane explosion occurred resulting in the demolition of Bldg. 637, potable well house 12. The falling debris caused extensive damage to the sodium hydroxide storage tank. Initial inspection of the tank revealed that the site gauge which was constructed of Tygon tubing, broke away from the tank and complete loss of all product was suspected. Once the debris field was cleared, inspection of the tank showed that the site gauge pinched back on itself therefore restricting loss of hydroxide to a couple of gallons or less. All spilled product was contained by the tank's secondary containment and there was no environmental release.
08-21 12/09/08	Hydraulic Oil 15 gallons	No	Hydraulic oil leaked from the elevator casing at Bldg 750. Upon inspection, the rubber hydraulic seal and fiber gasket were found to be faulty and were replaced. Approximately 15 gallons of oil was recovered from the elevator pit. Residual oil was cleaned using absorbents. All oil and absorbents were containerized for off-site disposal.

Notes:

* Release is reportable to DOE under the requirements of DOE Order 231.1A, Occurrence Reporting and Processing.

Table 3-7. Summary of Chemical and Oil Spill Reports.

Spill No. and Date	Material and Quantity	ORPS Report	Source/Cause and Corrective Actions
09-01 01/05/09	Hydraulic (vegetable) oil 70 gallons	No	One of the pistons associated with a vehicle lift at Bldg. 423 failed, resulting in the release of 70 gallons of oil to the containment beneath the lift. All oil was recovered and sent for disposal as "used oil." The oil is vegetable based and therefore not considered a hazardous material. The lift was replaced.
09-12 05/06/09	20% Ethylene Glycol Solution 1 gallon	No	During site preparation for the NSLS-II project, land graders unearthed an abandoned solar heat experiment that used ethylene glycol solutions as a heat transfer fluid. Polyethylene tubing was encountered by the graders and cut during the grading process, releasing approximately 1 gallon of glycol solution to the ground. An investigation ensued which revealed a complex arrangement of piping and tanks for storing solutions and studying the effects of the ground as a heat storage media. The piping systems were uncovered and the glycol solutions recovered. In total ~ 240 gallons of glycol was removed from the systems.
09-15 05/13/09	Hydraulic Oil 0.5 gallons	No	While mowing the lawn by Apartment #22, the driver noticed the mower was leaking hydraulic fluid. He stopped mowing and parked the vehicle on the pavement. Speedi-dri was used to absorb the oil from the pavement and visibly impacted soil was removed and containerized for off-site disposal.
09-16 05/19/09	Water/Diesel Fuel > 10 gallons	Yes	During site preparation of the NSLS-II project site, land graders unearthed a previously unidentified fuel storage tank. While the tank was mostly empty, residual diesel fuel and water was released to the soil due to the impact of the grader on the tank. The tank was removed from the ground and contaminated soils were excavated and containerized for offsite disposal. Examination of the tank showed several corrosion holes indicating that the contaminated soils were likely the result of past leakage.
09-18 05/29/09	Gasoline 4 gallons	No	After refueling, the gasoline tank on a BNL pick-up truck began to leak. The tank was pumped out and the gasoline reused in another vehicle. Approximately 4 gallons of gasoline leaked from the vehicle and onto the parking lot and adjacent soil before being discovered. Spill absorbents were used to recover the gasoline and impacted soils were removed for off-site disposal.
09-22 06/22/09	Transmission Fluid 2 gallons	No	A rubber transmission fluid line on a large lawnmower dislodged from its fitting, resulting in a release of 2 gallons of fluid to pavement and a small area of grass. Spill absorbents were used to recover the fluid from the asphalt and impacted soils were removed for off-site disposal.
09-24 07/22/09	Hydraulic Fluid 1 gallon	No	While clearing brush, a hydraulic line on a backhoe failed, resulting in the release of hydraulic oil to the ground. Spill absorbent pads were used to remove oil from the machine and impacted soils were excavated and containerized for off-site disposal. The backhoe was repaired prior to returning to service.
09-26 08/14/09	Hydraulic Fluid 1 gallon	No	While moving rail cars, a hydraulic fitting on a Track Mobil loosened, resulting in the release of ~1 gallon of hydraulic oil to the railroad tracks and rock ballast. Impacted rocks were removed and containerized for off-site disposal and the Track Mobil was repaired and returned to service.
09-28 09/17/09	Hydraulic Fluid 1 gallon	No	A hydraulic hose on a payloader failed, resulting in the release of 1 gallon of oil to soil. Impacted soil was excavated and containerized for off-site disposal. The payloader was returned to the heavy equipment shop for repairs.
09-29 10/19/09	Ethylene Glycol 1 gallon	No	A radiator hose on a BNL pickup truck failed, resulting in the release of 1 gallon of ethylene glycol solution to the ground. All spillage was contained on asphalt. Spill absorbent was used to clean up the release. All contaminated spill absorbent was collected and disposed of off site.
09-32 11/16/09	Diesel Fuel 5 – 6 gallons	No	A bulldozer had been parked at the compost area for a period of time. When inspected, diesel fuel was noticed leaking from the vehicle. The bulldozer was trailered and transported to the heavy equipment shop for repairs. Examination of the soi beneath the vehicle showed extensive contamination with diesel fuel. Approximately 3–4 cubic yards of contaminated soil were excavated and containerized for off-site disposal.
09-33 11/19/09	Hydraulic Fluid 60 gallons	No	During a retrofit of the elevator in Bldg. 725, oil was discovered in the casing enclosing the elevator ram. Miller Environmental Group, an EPA recognized Oil Spill Response Organization, was retained to clean the oil and any contaminated water from the elevator casing. Approximately 60 gallons of oil and 35 gallons of water were recovered. Once the casing was cleaned out, the elevator contractor completed installation of the new cylinder and ram. A small-diameter PVC monitoring device was installed to monitor for the presence of additional leakage.

Note:
* Release is reportable to DOE under the requirements of DOE Order 231.1A, Occurrence Reporting and Processing.

EXHIBIT J

BNL PREP Exercise Templates
Example Table Top Exercise Report
Example Routine Spill Report

BROOKHAVEN NATIONAL LABORATORY

NATIONAL PREPAREDNESS

FOR

RESPONSE EXERCISE PROGRAM

(PREP)

Brookhaven National Laboratory's PREP Program Summary

INTRODUCTION

Brookhaven National Laboratory (BNL) will utilize the National Preparedness for Response Exercise Program (PREP) to satisfy the requirements of Section 4202(a) of the Oil Pollution Act of 1990 (OPA 90). PREP was developed to provide a mechanism for compliance with the exercise requirements of OPA 90, while being economically feasible for the government and industry to adopt and sustain. As such, BNL will ensure compliance with PREP in accordance with the standard set forth in this program. While the PREP program is a voluntary program, BNL recognizes the importance of response preparedness and will adhere to the guidelines to continually improve its response capabilities. This document provides an overview of BNL's required PREP exercises and how they are implemented and documented.

BNL REQUIRED PREP EXERCISES

Qualified Individual Notification Exercise

The purpose of this exercise is to ensure that the Qualified Individual (QI), or designee as indicated in the Facility Response Plan (FRP) can be reached in a spill response emergency. At least once a year, the QI notification exercise will be conducted during non-business hours. The QI notification exercise will follow the following format:

Frequency:	Quarterly
Participants:	Facility Personnel, QI (or designee)
Scope:	Exercise communications between facility personnel and QI
Objectives:	Contact must be made with the QI or designee as designated in the response plan
Records:	Stored at the facility for a minimum of five years. An example of BNL's QI notification exercise documentation is included in Attachment 1.

Equipment Deployment Exercises

EPA's Facility Response Plan (FRP) rule (40 CFR Part 112) requires that plan holders conduct semi-annual equipment deployment exercises. The purpose of this exercise is to validate that spill response equipment (e.g., hard containment boom, pumps) is appropriate for the operating environment in which it is intended to be used and that operating personnel are trained and capable of its deployment and operation.

Note: As stated in BNL's Facility Response Plan, all emergency response equipment is used for routine facility operations; consequently, it is always in-service and fully deployable. Heavy equipment is used for construction and routine earth-moving activities. Similarly, all pumps and other transfer equipment are routinely deployed during facility operations. In addition, all equipment is inspected and maintained at least annually by maintenance staff to ensure its reliability. Heavy equipment and emergency response vehicles (e.g., Fire Rescue) are routinely maintained by a staff of heavy equipment and automotive mechanics. Copies of representative preventative and routine maintenance tickets for emergency response vehicles, heavy equipment, and other equipment (e.g., pumps) are kept on file and can be made available upon request.

Based on this information, documented semi-annual equipment deployment exercises performed as part of BNL's PREP compliance program will only include deployment of hard containment boom and non-routinely used pumps and other transfer equipment.

Frequency: Semiannually

Participants: Facility Personnel

Scope: Successfully demonstrate the ability to deploy and operate applicable facility equipment

Records: Stored at the facility for a minimum of five years. An example of BNL's Equipment Deployment Exercise documentation is included in Attachment 1.

Spill Management Team Tabletop Exercise

The purpose of this exercise is to ensure that BNL's Spill Management Team (SMT) is familiar with the facility response plan and is able to use it effectively to conduct a spill response. At least one SMT Tabletop Exercise in a triennial cycle shall involve a worst-case discharge (WCD) scenario (Please see specific WCD requirements below). BNL has a contract in place with Miller Environmental Group (MEG), which is BNL's Oil Spill Response Organization (OSRO), to assist in facilitating the annual SMT Tabletop Exercise. This exercise will follow the following format:

Frequency: Annually

Participants: Spill Management Team identified in Facility Response Plan, including BNL's Oil Spill Response Organization, MEG

Scope: Exercise the SMT's organization, communication, and decision-making in managing a spill response

Objectives: Exercise the SMT in a review of:

- Knowledge of the facility response plan
- Proper notifications
- Communication systems
- Ability to access an OSRO
- Coordination of the internal organizational personnel with responsibility under the plan
- Ability to effectively coordinate spill response activity with the National Response System
- Ability to access information on the location of sensitive areas, resources available within the area, unique conditions of area, etc.

Records: Stored at the facility for a minimum of five years. An example of BNL's Spill Management Team Tabletop Exercise documentation is included in Attachment 1.

Brookhaven National Laboratory's PREP Program Summary

WORST-CASE DISCHARGE REQUIREMENTS

During each triennial cycle, all core components of BNL's FRP must be exercised at least once. The purpose of this is to ensure that all plan components function adequately for response to an oil spill. The fifteen (15) core components listed below are the types of components that must be exercised:

1. Notifications
2. Staff Mobilization
3. Ability to operate with the Response Management System described in the plan
4. Discharge control
5. Assessment
6. Containment
7. Recovery
8. Protection
9. Disposal
10. Communications
11. Transportation
12. Personnel support
13. Equipment maintenance and support
14. Procurement
15. Documentation

Facility Emergency Procedures Exercise

BNL will perform this exercise unannounced to fulfill the internal unannounced exercise requirement.

Frequency:	Annually as the Internal Unannounced Exercise
Participants:	Facility Personnel, QI or designee
Scope:	Exercise the Emergency Procedures for the facility to mitigate or prevent any discharge or a substantial threat of a discharge of oil resulting from facility operational activities associated with oil transfers.
Objectives:	Conduct an exercise of the facility's emergency procedures to ensure personnel knowledge of actions to be taken to mitigate a spill. This exercise should involve one or more of the sections of the emergency procedures for spill mitigation. As an example, the exercise may involve a simulation of a response to an oil spill.
Records:	Stored at the facility for a minimum of five years. An example of BNL's Facility Emergency Procedures Exercise documentation is included in Attachment 1.

ATTACHMENT 1

EXAMPLE OF TEMPLATE MEMOS DOCUMENTING:

- **Qualified Individual Notification Exercises**
- **Equipment Deployment Exercises**
- **Spill Management Team Tabletop Exercise**
- **Facility Emergency Procedures Exercise**

Environmental Protection Division

BROOKHAVEN NATIONAL LABORATORY

81 Cornell Avenue, Bldg. 120
P. O. Box 5000
Upton, NY 11973-5000
Phone 631 344-3477
Fax 631 344-6079
remien@bnl.gov

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

Memo

Date:

To: *PREP File*

From: *Jason D. Remien*

Subject: ***Qualified Individual (QI) Notification Exercise***

On [ ] BNL conducted a QI Notification exercise in accordance with the PREP guidelines. Specific details of the exercise are as follows:

Name of Person Notified*:	
Time Notification Initiated:	
Time QI Responded:	
Method Used to Contact:	Pager Notification/Telephone
Core components exercised:	Notification
Changes to be Implemented:	
Timetable for Implementation:	
Lessons Learned:	
Certifying Signature:	_____ Jason D. Remien

***** Crisis Managers include both FRP recognized QI and on duty alternate QIs

Distribution:

File: EC81ER.XX

TEMPLATE

NSF Registered to ISO 14001

Environmental Protection Division

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Phone 631 344-3477
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Managed by Brookhaven Science Associates
for the U.S. Department of Energy

Memo

Date:

To: *PREP File*

From: *Jason D. Remien*

Subject: ***Equipment Deployment Exercise***

On [ ] BNL conducted an announced Equipment Deployment exercise in accordance with the PREP guidelines. Specific details of the exercise are as follows:

Location of Exercise:	
Time Exercise Initiated:	
Time Exercise Completed:	
Response Plan Scenario:	
Exercise Objectives:	Knowledge of spill response plan, proper notification, communication systems, proper deployment techniques
Components Exercised:	Notifications, Communications, Equipment Deployment, Documentation
Equipment Deployed:	
Operating Environment:	
List of Participants:	See Attached
Lessons Learned:	
Certifying Signature:	_____ Jason D. Remien

Distribution:

File: EC81ER.XX

TEMPLATE

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Environmental Protection Division

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for the U.S. Department of Energy

Memo

Date:

To: *PREP File*

From: *Jason D. Remien*

Subject: ***Spill Management Team Tabletop Exercise***

On [ ] BNL conducted an announced Spill Management Team Tabletop exercise in accordance with the PREP guidelines. Specific details of the exercise are as follows:

Location of Exercise:	
Time Exercise Initiated:	
Time Exercise Completed:	
Response Plan Scenario:	
Exercise Objectives:	Knowledge of spill response plan, proper notification, communication systems, ability to access OSRO, coordination with on-site personnel and applicable regulatory agencies, ability to access information on the location of sensitive areas, resources available within the area, unique conditions of area, etc.
Components Exercised:	Notifications, personnel support, response management system, staff mobilization, communications, documentation
List of Participants:	See actual exercise file for further documentation
Changes to be implemented:	
Timetable for Implementation:	
Lessons Learned:	
Certifying Signature:	_____

Distribution:

File: EC81ER.XX

TEMPLATE

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for the U.S. Department of Energy

Memo

Date:

To: *PREP File*

From: *Jason D. Remien*

Subject: ***Facility Emergency Procedures Exercise***

On [ ] BNL conducted an unannounced Facility Emergency Procedures exercise in accordance with the PREP guidelines. Specific details of the exercise are as follows:

Emergency Procedure Exercised:	
Name of Person Notified:	
Time Notification Initiated:	
Time QI Responded:	
Method Used to Contact Personnel:	
Core Components Exercised:	Notification, Emergency Procedures, Spill Mitigation Measures
Changes to be implemented:	
Timetable for Implementation:	
Lessons Learned:	
Certifying Signature:	_____

Distribution:

File: EC81ER.XX

TEMPLATE

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Environmental Protection Division

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for the U.S. Department of Energy

Memo

Date: *May 22, 2009*

To: *PREP File*

From: *Jason D. Remien*

Subject: ***Facility Emergency Procedures Exercise***

On **May 19, 2009** BNL conducted an unannounced Facility Emergency Procedures exercise in accordance with the PREP guidelines. Specific details of the exercise are as follows:

Emergency Procedure Exercised:	Spill notifications and response.
Name of Person Notified:	Emergency Management, Spill Response, NYSDEC, SCDHS, DOE, and Crisis Manager
Time Notification Initiated:	1330 hours
Time QI Responded:	Not applicable for this spill response scenario
Method Used to Contact Personnel:	x2222, web-based pager system, radio
Core Components Exercised:	Notification, Emergency Procedures, Spill Mitigation Measures
Changes to be Implemented:	The F&O Steam Shop Mechanics did not have the proper generator when initially responding to the release. The generator could not operate the pump to drain the tank. A more powerful generator was obtained in a timely manner. A recommendation was made by ERO personnel to ensure the generator brought to the site is rated for the pump being used.
Timetable for Implementation:	Next spill response.
Lessons Learned:	See “Changes to be Implemented” section above for information
Certifying Signature:	

File: EC81ER.09

NSF
Registered to ISO 14001

09-16

Environmental Protection Division
CHEMICAL AND OIL SPILL REPORTING FORM

INITIAL NOTIFICATION	Date: 05/19/09		Time:	1330
By (Name, Affiliation):	Steve Hoey, National Synchrotron Light Source II			
Personnel Responding at Scene:	R. Lee, J. Remien (ES); S. Hoey, M. Bromfeld, S. Sawch (LT); R. Giordano, G. Hanlon, Other F&O staff			
SPILL INFORMATION	Date:	5/19/08	Time:	1325
Material Spilled:	diesel fuel Mixed w/water			
Source of spill:	underground storage tank (tank was unknown)			
Quantity:	> 10 Gallons	Location:	Former location of ware houses	
Resp. Dept:	Light Source II	P.O.C.	S. Hoey	
Fire & Rescue Incident Response #:	NA		ORPS Reportable:	No
DETAILS AND REMEDIAL ACTION				

During site excavation, Torcon heavy equipment (a grader/scraper struck an under ground 550 gallon (estimate) storage tank. The tank was partially filled with what appeared to be a kerosene or diesel fuel/water mix. The impact of the scraper gouged the tank skin resulting in some spillage to soil. The spilled liquid appeared to be water, but with a strong petroleum odor. The spill was intially estimated at ~ 2 gallons of fuel/water mix.

The steam fitters shop pumped the liquid from the tank and the tank was removed by the HEMO. Soil contaminated was greater than expected and was excavated and staged for off-site disposal. Approximately 20 yards of contaminated soil was removed. Examination of the tank showed that there were several corrosion penetrations through the tank which were the likely cause for the extent of contamination. Due to the large volume of contaminated soil encountered, on 5/20 the significance of the spill was upgraded to > 10 gallons and made reportable under ORPs.

POSSIBLE HEALTH OR FIRE HAZARDS:		**No**	
POTENTIAL FOR GROUND WATER CONTAMINATION:		**No**	
Sampled:	**No**		
Type of samples:		Number of Samples:	0
Location:			

GOVERNMENT NOTIFICATION REQUIRED	NYSDEC	**Yes**	Person Notified	Time Notified
	EPA	**No**		
	SCDHS	**Yes**		
NYSDEC, Albany, 24-hr No.: 518-457-7362	NYDEC Spill #:	0902015	Sherman	1552
EPA National Response Center: 1-800-424-8802	EPA NRC Ref. #:			
SCDHS: 631-854-2537	SCDHS Spill No.:	NA	Otto Reneberg	1555
NOTIFICATION OF DOE OFFICE REQUIRED	**No**		Person Notified	Time Notified

Brookhaven Group, G. Granzen - Ext. 4089 or R. Desmarais - Ext 5434		Gerry Granzen	1550
NOTIFICATION OF DIRECTORS OFFICE REQUIRED	**No**	Person Notified	Time Notified
Carol Parnell - Ext. 8370		Carol Parnell	1545
ADDITIONAL COMMENTS	The tank is not on any BNL tank inventory records. Inspection of the tank UL plate indicates the tank is likely of 50's or 60's vintage.		
Report Filed By: Robert Lee		Date: 5/21/09	

Cc:	J. Adams	R. Howe	P. Pohlot
	D. Bauer	T. Lambertson	K. Ratel
	A. Bou	R. Lee	J. Remien
	W. Dorsch	S. Moss	J. Selva
	S. Ferrone	E. Murphy	M. Van Essendelft
	G. Goode	G. Olsen	J. Williams
	G. Granzen	C. Parnell	
	B. Hooda	D. Paquette	
Add'l CCs:	N. Acampora	E. Governale	

EC100ER.09

Photo Documentation of Former Building T-89 UST Removal
May 19 & 20, 2009

5/19/09 - Underground Storage Tank (UST) was discovered on May 19th, 2009. The UST was hit and severely damaged by a ground scraper within the footprint of the future NSLS-II Facility. The residual fuel remaining in the tank was pumped out, spill notifications were made, and investigation initiated.

Draining residual fuel/water mixture out of tank

Removing Tank

Hole was discovered on bottom of tank indicating that fuel oil was released to the ground prior to this incident

Cleanup of contaminated soil initiated

Cleanup of contaminated soil continued

Excavation on Day #1 completed. Representative from NYSDEC scheduled to inspect the excavation next morning.

Photo Documentation of Former Building T-89 UST Removal
May 19 & 20, 2009

5/20/09 - Representative from NYSDEC inspected the excavation and requested that additional soil be removed and endpoint samples collected.

Initial excavation on Day #2 with NYSDEC present to determine extent of contamination and excavation

Clearing the side walls prior to removing the remainder of impacted soil

Snow stakes indicate the extent of excavation based on NYSDEC observations made in the morning.

Excavation completed. Samples were collected at the bottom of the excavation on the north and south sides (Left and right side in photograph above)

Sample collection activities

Petroleum contaminated soil covered and waiting for disposal

Brookhaven National Laboratory

Spill Management Team
Table Top Exercise
Worst Case Discharge

After Action Report

MILLER ENVIRONMENTAL GROUP INC.

Table of Contents:

1. Players Manual
2. Timeline of Exercise
3. Recommendations/Lessons Learned/Feedback from Participants
4. Sign in Sheet
5. Emergency Notification Phone List
6. Press Release
7. Spill Notification Form
8. PREP Forms
9. 15 Core Components Exercised

1. Players Manual

Brookhaven National Laboratory

Spill Management Team
Table Top Exercise
Worst Case Discharge

Player's Manual

Designed and Presented by:

Spill Management Team Tabletop

Exercise Description

This tabletop exercise is a simulation of a Worst Case Discharge from the Brookhaven National Laboratory Facility.

Upon notification of the simulated incident, we will expect that immediate actions will be taken to mitigate the discharge at the source or other points in the system. From that point the exercise will progress to proper notifications in accordance with the Facility Response Plan, and cause facility-owned equipment to be deployed for initial containment. The Spill Management Team and other participants will be assembled in their exercise roles. Oil Spill Removal Organization (OSRO) equipment will be real time with SMTTX accelerations where appropriate with OSRO representatives playing in the exercise as well.

The regulatory personnel attending the exercise will act in their normal capacity as if the drill were a real event.

During the exercise, the Spill Management Team will be required to exercise the 15 Core Components of the Facility Response Plan (FRP) and exclusively:

- Form a Unified Command utilizing an Incident Command System
- Complete the required notifications both internal and external
- Access the facility OSRO
- Coordination of the Internal Organization
- Access the Area Contingency Plan
- Effectively respond to issues presented during the exercise
- Demonstrate Facility Security and Access Control
- Conduct an Operations Briefing and Press Conference at the conclusion of the exercise

THIS IS A DRILL

Spill Management Team Tabletop Exercise
Worst Case Discharge Scenario

Time: 1100 am
Date: Friday, July 24, 2009

Worst Case Discharge of No. 2 Fuel Oil tank – total amount 300,006 gallons.

The Secondary Containment has a significant amount of water; due to the heavy rains the area has had.

Weather conditions: Overcast with a potential for rain.

THIS IS A DRILL

All communication during the exercise will be prefaced with "THIS IS A DRILL"

2. Timeline of Exercise

Memo To: JASON REMIEN, BROOKHAVEN NATIONAL LABORATORY

From: P. Solomon, S. Gilson, MEG

Subject: Spill Management Team Tabletop Exercise – July 24, 2009

On July 24, 2009, MEG directed a Spill Management Team Tabletop Exercise (SMTTX), Worst Case Discharge (WCD) Scenario at Brookhaven National Laboratory, Upton, New York. The attached Players Manual provides the scenario exercised and an attendance sheet lists the participants who were present for the following events. **See Attachment 1 for the list of participants.

Spill Scenario: This scenario sought to exercise all of the necessary components required in the PREP guidelines. A total failure of No 2 fuel oil tank occurred. Oil is discovered in containment area on top of large amounts of rainwater, due to heavy rains over the past few days. Total amount discharged 300,006 gallons. Weather forecast is overcast with chance of rain.

Time line of events was as follows (NOTE-Time indicated is "Drill Time"):
1100 – BNL maintenance employee discovers oil in containment while going to drain rainwater from the containment. Employee secures the drain valve and makes the proper procedural notification of product release through x 2222.
Through x2222 notification the following events took place:

- Fire rescue and police are notified of release
    - Fire rescue & police will simultaneously respond
    - Use Car 1 as the command post, which would be stationed on Seventh Street between Buildings 636 and 639.
    - Tim Kelly will be in incident commander role & emergency director; until EOC is up and running and a CM (crisis manager) contacts him to transfer command.
        - Tim will be conferring with Bill Chaloupka for action plan
        - Declaring this an "OE" (operational emergency)
        - Reviewing resources available on site & off site if necessary
- Calling x2222 will make all page notifications including:
    - ERO (Emergency Response Organization),
        - Due to the amount discharged, EOC (Emergency Operations Center) would be activated through EM (Emergency Management),
        - Due to the spill occurring during operating hours EOC would be up and running with staff quickly,

    - Spill Management Team personnel,
    - Sewage Treatment Plant (Outfall 001) to notify of release and divert the flow from sewage to the retaining ponds.
- Steam Plant Operators begin their task of ensuring life safety and stop source of leak
    - Donning proper PPE stop source of leak if could complete safely
    - Stationary Engineers would operate pumps and pump product from containment into the loading rack and transfer to another tank.
    - It is estimated that 8000 gallons can be pumped an hour
- List of equipment that would be deployed immediately:
    - Pumps
    - Hoses
    - Trucks
    - Riverboom
- **For this scenario the pumps and the hoses were deployed and operated at the Central Steam Facility/Tank Farm); and additionally BNL's OSRO – MEG responded with a vac truck and vac truck operator (Tank Farm); and BNL's Fire Department deployed river boom at STP Outfall (Peconic River)**

- There have been no injuries reported in the incident

- There has been no oil / product outside the containment/berm area

- Approximately 1125am; EOC is up and running CM, Lenny Butera will take the IC role from Tim Kelly at Car 1.
    - Tim Kelly will move to an operations roles in the ICS
    - Lenny Butera, CM will:
        - Work with Jason Remien on meeting the regulatory requirements of BNL's Facility Response Plan (FRP)
        - Receive briefing from IC, Tim Kelly on response actions up to this point,
        - Review action plan for this shift, next shift
        - Receive update on weather conditions
- 1128am UPDATE:
    - 300,000 gallon of oil contained in berm
    - Valves secured
    - Sewage flow has been diverted
    - Stationary Engineers have begun to pump oil from containment/berm into loading rack to transfer to another tank.

CM, Lenny Butera reviews actions in place and contingency actions for "what can happen". Specifically – weather conditions, if heavy rains occur there could be a chance to have product reach the navigable waters of the Peconic River; continue to pump the oil from the containment/berm; and contact additional resources to assist with the transfer of the oil as necessary to expedite the transfer of oil, in the event of any equipment (pumps) failure or berm failure should happen.

- 1135am:
    - CM, Lenny Butera confirms with Jason Remien all necessary notifications are made.

    - CM, Lenny Butera, OSRO, MEG notified. What assets can the OSRO provided initially and then later as necessary to assist Bill Chaloupka with the response, and transfer of product. Initially, pumps are requested.
- 1145am – Stopped Play
    - Participants broke up into incident command(IC)/emergency operations center (EOC) roles and prepare goals and action plans.
    - The spill management team made all necessary notification calls. **See Attachment 2 for notification form.
- 12noon
    - Update from Qualified Individual (QI)/Emergency Management (EM) and briefing provided from media relations department. **See Attachment 3.
    - QI/CM – Lenny Butera:
        - Action Plan is prepared; notifications have been completed.
        - EOC Manager – recommends they consider having a recovery manager notified and put into place.
        - Pumping product out from a stable environment.
        - Briefing provided/What happened?
            - Leak of #2 fuel oil into berm/containment area; 100% of the berm/containment area is full,
            - There is a potential for rain,
            - There is no respiratory hazard, but there is an odor,
            - Outer perimeter is contained,
            - Notifications per FRP made and onsite notifications,
            - Spill Notification Form completed, **See Attachment 4
            - Action plan prepared for "what if" scenarios of situations that could happen (rain, compromising of berm/containment, protection of the storm drains)
        - OSRO called, MEG coming with vac truck and operator, skimmers. Supervisor will arrive to the scene to "size up" the scene and assess the needs. Providing assistance with the pumping of product if necessary and be on standby if a request of additional resources is needed. (vac trucks/trained personnel).
        - MEG will arrive onsite within 2 hours,
        - Review of additional resources on site at BNL available:
            - Tom Lambertson – sand/5 large pay loaders; which can create temporary berms if needed.
            - Storm drains – have heavy equipment at Outfall 010 for protection; insert pipe plugs as necessary.
- 1230-130pm – Lunch Break
- 130pm – participants met at Central Steam Plant/tank farm area
    - Bill Chaloupka's personnel deployed pumps and hoses; operated these hoses to transfer product from the berm to the loading rack to transfer the product back into tanks. ***For this exercise, there was rain water in the berm/containment area and to get the "real play" the pumps were operating moving water out of the berm/containment area.
    - A walk through and verbal review of the actions to take place for the response was provided from Bill Chaloupka.
    - MEG vac truck operator arrived with vac truck and skimmers. MEG employee Steve Migneco provided a review of the equipment and capabilities to the group.

    - After this equipment demonstration - participants drove to the Outfall 010 area, when it was explained that a pipe plug ("balloon") could be placed in this pipe as a contingency to prevent any product from leaking into this environmentally sensitive area.
- ~200pm - Participants met at the STP Outfall (Peconic River)
    - BNL Fire Department deployed Riverboom as part of the exercise of equipment deployment for this spill scenario.
    - FD employees properly deployed the boom, discussed booming strategies downstream if necessary; and proper boom placement for this type of river area.
    - FD employees demonstrated safety precautions and safety was of the utmost priority.
    - A review of where boom was located/stored for all participants.
- 245pm
    - Participants regrouped in Building 735 for the review/critique of the drill.
    - Recommendations/Lessons Learned provided next page.

3. Recommendations/Lessons Learned/Feedback from Participants

Exercise Debriefing, below is feedback from the participants in the exercise:

List of events that went well during the exercise:

- Consideration of designating a recovery manager
- The incorporation of responder and spill team for one scenario and discussion
- Ability to refresh spill response requirements
- It was a good review of basic NIMS and ICS
- Participation was encouraged
- The class was well engaged during the exercise
- Hands on demo
- Good review of OPA 90 regulations

List areas that may need improvement/ recommendations:

- Focus a little more on safety aspects of the scenario
- Focus on rest for responder rest/medical/ambulance on standby; fire suppression equipment/ personnel decon/portapotties/food
- If response went into nighttime operations – either have more pumps to transfer product to be finished before darkness; or plan for nighttime operations
- Have the instructor a little more familiar with our operations
- Did not like format
- This SMTTX was not thought out; site knowledge was not included with the development
- Better explanation of ICS, mixed terminology
- Provide a list of different pumps that are available with the advantages & disadvantages
- Laboratory protection division is well versed and trained in the ICS; ICS is used for every call and additionally are instructors for ICS. Sitting through the ICS for 3 hours was of no value. Next drill, break it up into separate groups or just have this division in for the table top
- Label storm drains and manholes to indicate where they go around fuel transfer facility
- Inflating pipe plugs next year
- Emergency management has checklists/plans, didn't have access to them today; make available for next spill drill
- Facility Response Plan updates need to be completed
- Notification numbers in Facility Response Plan need to be updated
- If contractors or vendors responding to the spill need BNL training if they will be there over 24 hours, or just escorted during response
- Verify maps that contractors or vendors have to respond to spill location

Highlighted bullets identify issues that need a corrective action.

4. Sign in Sheet

MILLER ENVIRONMENTAL GROUP, Inc.

COURSE: SMTTX WCD | **COURSE #: 20090258**

DATE: July 24, 2009 | **LOCATION: BNL**

INSTRUCTOR: Phil Solomon

	First & Last Name [PRINT CLEARLY]	Employee ID #	Signature	Company Location	Responsibilities
1	John J. Amabile	23510		LP	Manager
2	Steve Perrone	22585		EPD	Spill Team
3	Benny Hooda	22326		EP	Spill Team
4	Christopher Varbanoff	17246		HP	ERO-IH
5	Jeff Williams	20113		ES	Spill Team
6	Robert Lee	20222		ES	Spill Response
7	Tom Lamberson	15337		SI	Manager
8	Richard Ohlsen	23940		LP-OEM	Emergency Mgmt
9	Joe Terranova	23539		LP-OEM	Emg. Mgmt.
10	Tim Kelly	23538		LP	Fire Training
11	Michael Pena	24119		LP	Emerg. Management
12	Charles LaSalle	18637		LP	Fire/Rescue
13	David Peter	18071		LP	Police Training
14	Rich Jones	17586		SI	General Supervisor Site
15	Carroll Smith	22813		EPD	Hazmat

I, _____ (Instructor Signature), hereby certify that training was given to the above SEE PG 2 (#) students, on _____ (Date).

ALL INFORMATION ON THIS SHEET IS THE SOLE PROPERTY OF MEG AND WILL BE KEPT CONFIDENTIAL.

PLEASE PRINT CLEARLY

MILLER ENVIRONMENTAL GROUP, Inc.

	First & Last Name [PRINT CLEARLY]	~~Last 4 Digits of Social Security #~~ Life #	Signature	Company Location	Responsibilities
16	Bauer, Deborah	0304		BNL	Spill Response
17	Coogan, Jerry	2382		MEG	OPS
18	Robert Selvey	7918		BNL	Representing SHSO Mgr.
19	Jerry Granzen	7879		DOE-BHSO	Env. Compl. Emergency mgmt.
20	Joy Adams	[redacted] 23690		BNL	Spill Response
21	Lenny Butera	[redacted] 18076		BNL	ERO-Crisis Mgr.
22	Anna Bou	[redacted] 20963		BNL	Spill response
23	Jason Remien	20500		BNL	ERO/Spill Response
24	Shawn Gilson			MEG	Training
25	Orena Rowe	14040		BNL	PIO
26	William L. Cerasuolo	14691		BNL	Asst. Mgr. OPS
27					
28					
29					
30					

26 OPY

I, _____ (Instructor Signature), hereby certify that training was given to the above 26 (#) students, on 7-24-09 (Date).

5. Emergency Notification Phone List

** THIS IS A DRILL **

Figure 1-1.1
EMERGENCY NOTIFICATION PHONE LIST
BROOKHAVEN NATIONAL LABORATORY

Last Update 2/10/06

Reporter's Name: Jason Remien | Date: 7/24/09

Facility Name: Brookhaven National Laboratory | Owner Name: U.S. Department of Energy

Facility Identification Number: New York State, Major Oil Storage Facility ID. No. 01-1700

Organization	Phone Number	Person Contacted	Time of Notification	Comments
BNL Police Group	631-344-2222	*		
BNL Fire Rescue	631-344-2222	*		
BNL Safety and Health Services	631-344-8211	*		
BNL Environmental Services	631-344-4549	*		
BNL Response Coordinator (Qualified Individual)	631-344-3434 or 631-495-4000 (cell)	*		
EPA National Response Center	1-800-424-8802		11:55 am	Requested to use internet due to high calling volume
New York State Department of Environmental Conservation (SERC)	518-457-7362 (24 hour)	Sherman	11:51 am	# ok
Suffolk County Department of Health Services	631-854-2537	Otto R. (SCDHS)	11:50 am	# ok
Local Emergency Planning Coordinator	631-852-4855 (Business Hours)	Terry - Emergency Response	11:50 am	# ok
BNL Directors Office	631-344-7774	*		
DOE/Brookhaven Group	631-344-3424	*		
BNL Clinic	631-344-3670 (Business Hours)			# ok
Stony Brook Hospital	631-444-1911	Transport Center - EMS office	11:52 am	# ok
Fire Marshall: Suffolk County Fire, Rescue, and Emergency Services	631-852-4855 (Business Hours) 631-852-4815 (24-hr. Service)		11:52 am	# ok
Miller Environmental Group (Response Contractor)	631-369-4900	Present @ Drill		# ok
New York State Police (Riverhead Barracks)	631-728-3000		11:54 am	# ok
TV/Radio: Notification by BNL Public Affairs	631-344-2345	*		
Weather Service: BNL Meteorology Group	631-344-2271	NO LONGER	EXISTS	Remove # from list
Local Water Supply System	~~631-514-1280~~	Should be on-site	Water Plant	#

* *BNL maintains fulltime, 24 hour, fire and security response capabilities. Emergency response is initiated by calling 344-2222 (x2222 via on-site phones); which simultaneously notifies both response organizations.*

* These organizations/contacts would have been notified simultaneously after dialing x2222 and respond accordingly.

Date of Latest Revision: 2/10/06

6. Press Release

NOTE: ALL TEXT IN BLUE GENERATED DURING TABLE TOP.
MR, 7/24/09

EOC PUBLIC INFORMATION OFFICER CHECKLIST

Instructions

Complete the following checklist of functions and activities to be performed during emergency response and recovery activities. Document significant actions taken using this Emergency Logbook Form.

EOC Public Information Officer was assumed by: __*Mona Rowe, relieving Peter Genzer after a briefing by Genzer*_____

From: _____*11 a.m.*_____ **To:** _____*7/24/09*_____
Date/Time *Date/Time*

Note:

When an Operational Emergency is declared, the PIO and Writer are to report to the Emergency Operations Center.

When a Site Area Emergency is declared, the Emergency Information Center will be opened.

Initial news release should be prepared and issued within one hour after the emergency is detected.

Immediate actions when notified:

Action Taken

____ Report to the EOC and upon arrival:

- Place name on EOC roster
- Obtain EOC position badge
- Obtain position logbook and make initial entry identifying date, time, name, and position title
- Inform the Crisis Manager of your availability

Done

Have checklists for PIO and writer

____ Obtain and review offsite notification form issued from the EOC.
Find out the status of emergency and determine if activation of the EIC or JIC is needed.

Background: Tank with 300K gallons of #2 oil has leaked contents. Noticed when berms were being drained. Oil seen going to sewage plant. Engineers would have initiated call to Fire and Rescue when they saw oil in berm. Contained within the berm. Emergency response to berm area. Divert flow to holding pond to eliminate possibility of flow to Peconic River.

Now see a small sheen of oil at sewage treatment plant, which can be managed.

Command structure and notifications: Incident command set up initially, EOC activated at declaration of operational emergency.

____ Initiate CEGPA Organization Emergency Phone Tree call down

Decided no need for writer or EIC activation.

____ Call the CEGPA Assistant Lab Director or designee and County and Town Public Information Officers to inform them what facility is to be activated and what the schedule is for its activation

CEGPA ALD and County and Town PIOs notified of incident and EOC activation.

Communications product #1: After discussion with Crisis Manager, sent out approved broadcast e-mail to alert on-site community about oil spill and to avoid area while emergency response personnel attend to it.

Communications product #2: After discussion with Crisis Manager, sent out approved press release to local reporter list and emergency list (using "stealth site") to inform public and elected officials and others about oil spill and Brookhaven's steps to mitigate any hazards to people or to the environment.

Broadcast e-mail:
Today at about 11 a.m., F&O personnel discovered a large oil leak from Tank #5 at the Central Steam Plant. The oil is contained in a berm surrounding the tank. Emergency response personnel are starting to address the leak in order to mitigate any hazards to people or the environment. The Lab has called Miller Environmental on site to aid in the investigation and cleanup. The area is closed off to vehicular and pedestrian traffic.

Press release:
Today at about 11 a.m., F&O personnel discovered a large oil leak from Tank #5 at the Central Steam Plant. The oil is contained in a berm surrounding the tank. Emergency response personnel are starting to address the leak in order to mitigate any hazards to people or the environment. The Lab has called Miller Environmental on site to aid in the investigation and cleanup. The area is closed off to vehicular and pedestrian traffic. County, state and federal regulatory agencies have been notified.

Identify spokesperson.

Operations (on-going):

- When EIC/JIC is declared operational, establish communication with the EIC Manager and provide status of emergency
- Advise the Crisis Manager regarding any concerns or issues to be considered before the initial information on the emergency is released to the public
- Direct the trained/qualified BNL Spokesperson to the EIC/JIC or Offsite JIC
- Direct public information activities throughout the emergency
- Counsel the Incident Commander or Crisis Manager on emergency communications concerns and issues
- Gather information in the EOC for the EOC Writer and the BNL Spokesperson
- Supervise the EOC writer by managing the information content and release timing of news releases, statements, and other emergency communications issued through the EIC or JIC, as follows:
    - Ensure the preparation of news releases and other statements using current EOC information
    - Review and comment upon the writer's draft news releases, statements and other emergency communications
    - Ensure review of draft emergency communications copy by an Authorized Derivative Classifier, if appropriate
    - Ensure all revisions are incorporated into drafts, and approve final copy
    - Obtain Crisis Manager approval of final news releases and DOE BHSO concurrence on approval
    - Ensure that the DOE BHSO Public Information Officer within the EOC receives a copy of each approved news release so that he/she may coordinate with the DOE HQ and EM Manager in Washington, D.C.
    - Ensure the dissemination of approved news releases via the EIC/JIC
- Arrange for technical briefers who are trained and subject matter experts to support the spokesperson during press briefings at EIC/JIC
- Inform the EIC/JIC Manager, BNL spokesperson and Technical Briefer of new or changing information, the response to control rumors or correct misinformation and the response to public concerns and issues
- Assist in publicizing termination of emergency event
- Coordinate activities with the DOE BHSO Public Information Officer in the EOC
- Maintain logs and records, as necessary

Shift changes:

- Arrive 30 minutes prior to shift for briefing
- Sign in at the facility entrance and get badge
- Participate in shift briefing prior to shift change
- Brief incoming shift member at end of shift
- Turn over log or other pertinent data
- Sign out at the facility entrance and turn in badge

Demobilization:

- At the conclusion of the emergency, give a copy of this checklist, your logs, records and other notes to the EOC Manager
- Turn in badge and sign out at the facility
- Be available for consultation on after-action report

Relieved by: _____

7. Spill Notification Form

** THIS IS A DRILL **

Figure 1-1.2

SPILL NOTIFICATION INFORMATION FORM
Brookhaven National Laboratory

p2230

Last Update 2/10/06
Page 1 of 2

Reporter's Last Name:	First:	Middle Initial:	Reporter's Company Position:
Remien	Jason	D.	Spill Response

BNL Phone Number(s):

Facility Name:	Owner Name:	Organization Type:
Brookhaven National Laboratory	**U.S. Department of Energy**	**Department of Energy Research Facility**

Street Address: **40 Brookhaven Avenue**	City: **Upton**	State: **NY**	Zip: **11973**

Were Materials Released: (Y/N)	Confidential: (Y/N)
Meeting Federal Obligations to Report: (Y/N)	Date Called: 7/24/09
Calling for Responsible Party: (Y/N)	Time Called: 11:00 a.m.

Incident Description

Source and/or Cause of Incident: Mechanical Failure / Complete loss of Tank #3

Date: 7/24/09	Time of Incident: 11:00 a.m.

Incident Address/Location: Central Steam Facility

Container Type: Steel Tank Tank Capacity: 300,000 Units: Gallons

Facility Capacity: 2.3 Million Units: Gallons.

Facility Latitude: N 40 Degrees 52 Minutes 03 Seconds

Facility Longitude: W 72 Degrees 52 Minutes 17 Seconds

4

Date of Latest Revision: 2/10/06

** THIS IS A DRILL **

Figure 1-1.2 (cont.)

SPILL NOTIFICATION INFORMATION FORM
Brookhaven National Laboratory

Last Update 2/10/06
Page 2of 2

Material Released

Name or CHRIS Code	Released Quantity	Unit of Measure	Material Released to Water? (Yes or No)	Quantity	Unit of Measure
#2 Fuel Oil	300,000	Gallons	No	—	—

Response Action

Actions taken to correct, control, or mitigate the incident: Closed valves, stopped leak, started to pump oil to good/empty tank, called OSRO

Impact

Number of Injuries: 0	Number of Deaths: 0
Were there Evacuations: (Y/N) Local	Number Evacuated: ≈20 in Buildings 526, 527, 528
Was there any Damage: (Y/N) Tank only	Damage in Dollars (approximate):

Medium Affected:

Description:

More Information about release medium:

Additional Information

Any information about the incident not recorded elsewhere in the report?

Caller Notifications

EPA/NRC: (Y/N)	NYSDEC: (Y/N)	SCDHS: (Y/N)
Name:	Name:	Name:
Date: 7/24/09 Time: 11:55 a.m.	Date: 7/24/09 Time: 11:51 am	Date: 7/24/09 Time: 11:50 a.m

CHRIS: Chemical Hazard Response Information System USCG: United States Coast Guard
EPA: United States Environmental Protection Agency

5

Date of Latest Revision: 2/10/06

8. PREP Forms

Brookhaven National Laboratory

INTEROFFICE
CORRESPONDENCE

DATE: **July 24, 2009**
TO: PREP File
FROM: Philip Solomon, Shawn Gilson, MEG
SUBJECT: Qualified Individual Notification Exercise
LOCATION: Brookhaven National Lab, Upton, NY

On **July 24, 2009** this facility conducted a QI Notification exercise in accordance with the PREP guidelines. Specific details follow:

Name of Person Notified:	x2222, would notify in the all page system to the spill management team, and CM/QI- Lenny Butera;
Time Notification Initiated:	11am
Time QI Responded:	Immediately
Method Used to Contact:	Telephone – beeper, pager, radio, x2222
Core components exercised:	Notification
Changes to be Implemented:	See page 10 of this report.
Timetable for Implementation:	ASAP
Lessons Learned:	See page 10 of this report

Certifying Signature: _____
Shawn Gilson, MEG

Brookhaven National Laboratory

INTEROFFICE CORRESPONDENCE

DATE: July 24, 2009
TO: PREP File
FROM: Philip Solomon, Shawn Gilson MEG
SUBJECT: Facility Emergency Procedures Exercise
Location: Brookhaven National Laboratory, Upton, NY

On July 24, 2009 this facility conducted a Facility Emergency Procedures Exercise in accordance with the PREP guidelines. Specific details follow:

Name of Person Notified:	Lenny Butera, CM/QI
Time Notification Initiated:	1100am
Time QI Responded:	Immediately
Method Used to Contact:	radio, beeper, pager, x2222
Core components exercised:	Notification Emergency Procedures Spill Mitigation measures
Changes to be Implemented:	See page 10 of this report
Timetable for Implementation:	ASAP
Lessons Learned:	See page 10 of this report

Certifying Signature: Shawn C Gilson

Shawn Gilson, MEG

Brookhaven National Laboratory

INTEROFFICE CORRESPONDENCE

DATE: July 24, 2009
TO: Compliance File
FROM: Philip Solomon, Shawn Gilson, MEG
SUBJECT: Spill Management Team Tabletop Exercise – Worst Case Discharge

On July 24, 2009 this facility conducted an announced Spill Management Team Tabletop exercise in accordance with the PREP guidelines. Specific details follow:

Location of Exercise: Tank Farm
Time Exercise Initiated: 1100am
Time Exercise Completed: 300pm

Response Plan Scenario: Worst Case Discharge of No. 2 Fuel Oil tank – total amount 300,006 gallons. The Secondary Containment has a significant amount of water; due to the heavy rains the area has had. Weather conditions: Overcast with a potential for rain.

Exercise Objectives:

- Knowledge oil-spill response plan ✓
- Proper Notification ✓
- Communications Systems ✓
- Ability to access contracted oil spill removal organizations ✓
- Coordination with OSC, State and applicable agencies ✓
- Ability to access information from the ACP ✓

Components Exercised:

- Notifications ✓
- Personnel Support ✓
- Response Management System ✓
- Staff Mobilization ✓
- Communications ✓
- Documentation ✓

List of Participants: See page 11 of this report

Changes to be Implemented: See page 10 of this report

Timetable for Implementation: ASAP

Lessons Learned: See page 10 of this report

Certifying Signature: Shawn C Gilson

Shawn Gilson, MEG

Brookhaven National Laboratory

INTEROFFICE CORRESPONDENCE

DATE: July 24, 2009
TO: Compliance File
FROM: Philip Solomon, Shawn Gilson MEG
SUBJECT: Equipment Deployment Exercise

On July 24, 2009 this facility conducted an announced Equipment Deployment exercise in accordance with the PREP guidelines. Specific details follow:

Location of Exercise: Tank Farm
Time Exercise Initiated: 1100am
Time Exercise Completed: 3pm

Response Plan Scenario: Worst Case Discharge of No. 2 Fuel Oil tank – total amount 300,006 gallons. The Secondary Containment has a significant amount of water; due to the heavy rains the area has had. Weather conditions: Overcast with a potential for rain.

Exercise Objectives:

- Knowledge oil-spill response plan ✓
- Proper Notification ✓
- Communications Systems ✓
- Equipment Deployment Procedures ✓
- Proper Deployment Techniques ✓

Components Exercised:

- Notifications ✓
- Communications ✓
- Equipment Deployment ✓
- Documentation ✓

Equipment Deployed: LeRoi pump, hoses @ Tank Farm
Vac Truck & Operator @ Tank Farm
River Boom, @ Peconic River

List of Participants: See page 11 of this report
Lessons Learned: See page 10 of this report

Certifying Signature: Shawn C Gilson

Shawn Gilson, MEG

9. 15 Core Components

Brookhaven National Laboratory

July 24, 2009

Spill Management Team Table Top

Worst Case Discharge –Exercise Objectives:

Per the National Preparedness for Response Exercise Program (PREP) Guidelines, at least one spill management team tabletop exercise in a triennial cycle shall include a worst case discharge scenario. Exercising the 15 core components of the plan must be exercised. These 15 core components are listed below followed by a summary of how the objectives were met:

1. **Notifications:**
   Test the notifications procedures identified in the Area Contingency Plan and the associated Responsible Party Response Plan.
   - *The following Notifications were made during this scenario:*
     - *1100am-verbal notifications made of the spill scenario to the participants of the exercise, simulated to the "2s".*
     - *1135am-phone notifications were made to all parties on the Facility Response Plan notification list*

2. **Staff Mobilization:**
   Demonstrate the ability to assemble the spill response organization identified in the Area Contingency Plan and associate with the Responsible Party Response Plan.
   - *Staff Mobilization:*
     - *The notification to the "2s" - will make an "all page" notification to the following:*
       - *ERO*
       - *EM*
       - *Spill Management Team*
       - *Crisis Managers/Qualified Individuals*
     - *The ERO, EM and Spill Management Team showed their knowledge of the facility emergency response procedures; facility response plan procedures and mobilization to effectively and efficiently respond to this spill scenario- set up command post at scene initially, open EOC, transfer of IC once EOC activated.*
     - *Through notifications, the Spill Management Team contacted the facility's Oil Spill Response Organization (OSRO) – Miller Environmental Group (MEG). This was completed verbally MEG was participating in the spill drill.*

3. **<u>Ability to operate within the response management system described in the plan:</u>**

3.1 Unified Command
- 3.1.1 Federal Representation
- 3.1.2 State Representation
- 3.1.3 Local Representation
- 3.1.4 Responsible Party Representation

3.2 Response Management System
- 3.2.1 Operations
- 3.2.2 Planning
- 3.2.3 Logistics
- 3.2.4 Finance
- 3.2.5 Public Affairs
- 3.2.6 Safety Affairs
- 3.2.7 Legal Affairs

- *<u>Response Management System:</u>*
  - *BNL participants were knowledgeable of the Unified Command system and parties within their organization who would be the incident commander; any local, state or federal agencies who would also be in the UC.*
  - *BNL has trained and qualified employees in the Incident Command System, Emergency Response; trained and designated employees to fill the roles in the Response Management System as outlined above.*

4. **<u>Discharge Control:</u>** Demonstrate the ability of the spill response organization to control and stop the discharge at the source.

Salvage
Firefighting
Lightering
Other salvage equipment and devices

- *<u>Discharge Control</u>: BNL Steam Plant employees, fire department, police department demonstrated their ability to control and stop the discharge at the source, their ability to have as needed fire fighting resources on standby, decontamination resources on standby and OSRO responding to the incident; this was discussed in great detail in the exercise. Additionally, the Steam plant employees demonstrated the operations of necessary pumps and hoses for transfer of product; the OSRO responded with a vac truck, skimmers and operator; and the fire department deployed boom at the Peconic River.*

5. **Assessment of Discharge:** Demonstrate the ability of the spill response organization to provide an initial assessment of the discharge and provide continuing assessments of the effectiveness of the tactical operations

- *Bill Chaloupka, Manager Energy and Utilities – was able to demonstrate the knowledge of the tanks, products and containment area and initially size up the spill and respond to the spill (transfer product to loading racks and to another tank). The CM, Lenny Butera, demonstrated the ability to utilize the EOC, to get updates on the spill response; what has been done, what needs to be done, and review the "what if" scenarios and ensure that the response is effective. Briefings were provided to the EOC of the actions completed and actions to be completed. Public relations prepared a press release for the media.*

6. **Containment of Discharge:** Demonstrate the ability of the spill response organization to provide an initial assessment of the discharge at the source or in various locations for recovery operations.

- *The Spill Management Team with the Manager of Energy and Utilities provided the initial size up/assessment of the discharge at the source; and for the potential impacts areas. The facility response plan provided the sensitive areas in and around the property and this information was utilized to protect any waterways (Peconic River), Outfalls, catch basin, etc.*

7. **Recovery of Spilled Material:** Demonstrate the ability of the spill response organization to recover, mitigate and remove the discharged product. Includes mitigation and removal activities, e.g. dispersant use, ISB use and bioremediation use.
On-Water Recovery
Shore-Based Recovery

- *BNL's Steam plant employees demonstrated the operations of necessary pumps and hoses for transfer of product; the OSRO responded with a vac truck, skimmers and operator; and the fire department deployed boom at the Peconic River. A review of where additional river boom and absorbents, speedy dry locations was provided to the participants, and spill response equipment locations and quantities is outlined in the FRP.*

8. **Protection of Sensitive Areas:** Demonstrate the ability of the spill response organization to protect the environmentally and economically sensitive areas identified in the Area Contingency Plan and the respective industry response plan.
Protective Booming
Water Intake Protection
Wildlife Recovery and Rehabilitation
Population Protection (Protect Public Health and Safety)

- *BNL's Steam plant employees demonstrated the operations of necessary pumps and hoses for transfer of product; the OSRO responded with a vac truck, skimmers and operator; and the fire department deployed boom at*

the Peconic River. A review of where additional river boom and absorbents, speedy dry locations was provided to the participants, and spill response equipment locations and quantities is outlined in the FRP.

- *The facilitator of the spill drill also provided information on booming strategies in the event product reached the Peconic River.*
- *Pipe plugs/balloons were reviewed as to their ability to plug pipes to prevent product from causing harm to the environment.*
- *The all page system would additionally provide information to all BNL employees of any road closures, incidents taking place so employees will know to avoid areas on the facility to keep them safe.*

9. **Disposal of Recovered Materials and Contaminated Debris:** Demonstrate the ability of the spill response organization to dispose of the recovered material and contaminated debris.

- *Disposal Plans were reviewed by the employees; the FRP outlines specific disposal plans for BNL, and the department responsible for coordinating disposal of cleanup residuals. All participants in the exercise were aware of this division and waste disposal facilities, and what waste can be sent to what facility.*

10. **Communications:** Demonstrate the ability to establish an effective communications system for the spill response organization

10.1 Internal Communications

10.2 External Communications

- *Communications: BNL internal communications: BNL has an "all page" system which (3n Mass Notification System), which enables one person to communicate with all members of the Emergency Response Organization (ERO) anytime, and via any communication method, including phone (landline, mobile and satellite), e-mail, instant messaging, fax, Blackberry, PDA and pager. This system is very effective at notifying all necessary personnel of an event or incident happening on the facility. BNL external communications would be via phone; cell phones were utilized to make the FRP notification list calls; radios, word of mouth. BNL has a very effective communications system for internal and external.*

11. **Transportation:** Demonstrate the ability to provide effective multi-mode transportation both for execution of the discharge and support functions.

11.1 Land Transportation

11.2 Waterborne Transportation

11.3 Airborne Transportation

- *BNL exercised their OSRO for necessary spill response support; the participants in the exercise reviewed the on site equipment which is available to be utilized in the event of an incident of this size (heavy equipment; pumps, hoses, fire department equipment, police department equipment). Additional equipment available from the OSRO was reviewed*

for transferring product, storing product; and additionally a review of the disposal facilities as outlined in the FRP were reviewed.

12. **Personnel Support:** Demonstrate the ability to provide the necessary support of all personnel associate with the response
12.1 Management
12.2 Berthing
12.3 Messing
12.4 Operational and Administrative Spaces
12.5 Emergency Procedures

- *Personnel Support: The activation of the EOC and review of the functions of the EOC demonstrated the support the response team at the incident site would receive. Additionally a review of the Emergency Management Department and there assistance was reviewed with the participants.*

13. **Equipment Maintenance and Support:** Demonstrate the ability to maintain and support all equipment associated with the response.
13.1-2 Response Equipment

- *BNL's Steam plant employees demonstrated the operations of necessary pumps and hoses for transfer of product; the OSRO responded with a vac truck, skimmers and operator; and the fire department deployed boom at the Peconic River. A review of where additional river boom and absorbents, speedy dry locations was provided to the participants, and spill response equipment locations and quantities is outlined in the FRP.*
- *The Steam Plant spill response equipment storage area was viewed by all participants, stock of absorbents; hoses, pumps. Full list of spill response equipment is found in the Facility Response Plan.*
- *The facilitator of the spill drill also provided information on booming strategies in the event product reached the Peconic River.*
- *Pipe plugs/balloons were reviewed as to their ability to plug pipes to prevent product from causing harm to the environment*
- *DOE, EM, Fire Department, Police Department, OSRO, reviewed additional equipment that is on site or off site (OSRO) that can be accessed if necessary to assist with responding to this incident.*

14. **Procurement:** Demonstrate the ability to establish an effective procurement system.
14.1 Personnel
14.2 Response Equipment
14.3 Support Equipment

- *BNL activation of the EOC demonstrated the ability to staff for this incident; the Qualified Individuals/Crisis Managers have the ability to procure spill response equipment and support equipment through contracts; through BNL's fire department, police department and emergency management*

department. The needs and funding for this incident were reviewed with the participants.

15. **<u>Documentation:</u>** Demonstrate the ability of the spill response organization to document all operational and support aspects of the response and provide detailed records of decisions and actions taken.

- *The Spill Management Team, Emergency Management, and EOC demonstrated the ability to document the response to the spill scenario; records of decisions and actions taken. The Spill management team documented the necessary information when the FRP notification calls were placed; and completed the spill notification report. The EOC would have a designated staff member to assist with documenting all necessary aspects of the response. The public relations/public information officer will be the designee to work with the unified command to prepare a press release for the media.*

MILLER ENVIRONMENTAL GROUP INC.

COURSE: SMTTX WCD | **COURSE #: 20090258**

DATE: July 24, 2009 | **LOCATION: BNL**

INSTRUCTOR: Phil Solomon

	First & Last Name [PRINT CLEARLY]	Employee ID #	Signature	Company Location	Responsibilities
1	John J. Amabile	23517		LP	Manager
2	Steve Ferrone	22585		EPD	Spill Team
3	BENNY HOODA	22326		EP	Spill Team
4	Christopher Verbandics	17246		HP	ERO-IH
5	Jeff Williams	20113		ES	Spill Team
6	Robert Lee	20222		ES	Spill Response
7	TOM LAMBERTSON	15337		SI	MANAGER
8	Richard Ohlsen	23940		LP-OEM	Emergency Mgmt
9	Joe Terranova	23539		LP-OEM	Emg. Mgmt.
10	TIM KELLY	23538		LP	FIRE TRAINING
11	MICHAEL PENA	24119		LP	EMRG. MANAGEMENT
12	Charles LaSalla	18637		LP	Fire/Rescue
13	David Peter	18071		LP	Police Training
14	RICH JONES	17586		SI	General Supervisor Site
15	Conrad Smith	22613		TBD	HZMO

I, _____, hereby certify that training was given to the above SEE PG 2 (#) students, on _____.
(Instructor Signature) (Date)

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MILLER ENVIRONMENTAL GROUP INC.

	First & Last Name [PRINT CLEARLY]	~~Last 4 Digits of Social Security #~~ Life #	Signature	Company Location	Responsibilities
16	Bauer, Deborah	0304	Deborah Bauer	BNL	Spill Response
~~17~~	COOGAN, JERRY	2382		MEG	OPS
18	Robert Selvey	7918		BNL	Representing SH&D Mgr.
19	Jerry Granzen	7879		DOE-BHSO	Env. Compl Emergency mgmt.
20	Joy Adams	[redacted] 23690	J Adams	BNL	Spill Response
21	Lenny Butera	[redacted] 18076	L. Butera	BNL	ERO-Crisis Mgr.
22	Anna Bou	[redacted] 20963	Anna Bou	BNL	Spill response
23	Jason Remien	20500		BNL	ERO/Spill Response
~~24~~	SHAWN GILSON			MEG	TRAINING
25	Susan S Lowe	14040	Susan S Lowe	BNL	PIO
26	WILLIAM L. CEFALOUPKA	14691		BNL	ASST. MGR. OPS
27					
28					
29					
30					

26 OPM

I, _____ (Instructor Signature), hereby certify that training was given to the above 26 (#) students, on 7-24-09 (Date).

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