After-Action Report on Wellfleet Harbor (CI-05) GRP Test

Testing Date: May 26, 2010

Developed by Nuka Research and Planning Group, LLC

July 2010

Project Background

MassDEP has initiated a three-year program to test GRPs at a variety of locations statewide. This long-term testing program will benefit ongoing and future GRP development throughout the state by documenting lessons learned for various oil spill response tactics under a range of conditions. The testing will also provide practical training opportunities for local responders and spill response organizations, and will improve the level of preparedness to respond to coastal oil spills statewide.

The overall purpose of the testing program is to evaluate the *tactics and strategies* and not to test or challenge the spill responders (local or professional). However, the testing process often yields important information about areas where additional training or standardization is needed to improve overall response capabilities.

For additional information on the MassDEP 3-Year GRP testing program, visit the project website at http://grp.nukaresearch.com/testing.htm

Testing Overview

The fourth GRP site tested as part of the 3-Year MassDEP program was CI-05 (Wellfleet Harbor). A half day of testing was conducted on May 26, 2010 to evaluate the draft tactics and strategies in GRP-CI-05.

Representatives from the MassDEP, Nuka Research (the contractor) and the town of Wellfleet met earlier in the preceding months to select the site and develop a testing plan (Appendix A). It was decided that the testing exercise would be run as a drill, simulating an actual oil spill. Members of the Barnstable Incident Management Team and representatives from the towns of Wellfleet, Eastham, Truro, the National Park Service, the Department of Natural Resources, and Nuka Research met a few days prior to the deployment test to establish objectives, assign positions, and develop a schedule.

The testing day began at 8:00 a.m., when participants gathered at the Wellfleet Harbor parking lot/boat ramp for Operations and Safety Briefings. Testing concluded at approximately 12:00 p.m. The Incident Action Plan (Appendix B) included a rough schedule, as well as a list of testing objectives and other logistical and operational information.

GRP Site

Wellfleet Harbor GRP site (CI-05) opens into Cape Cod Bay on the inside of the peninsula, as part of the lower Cape.

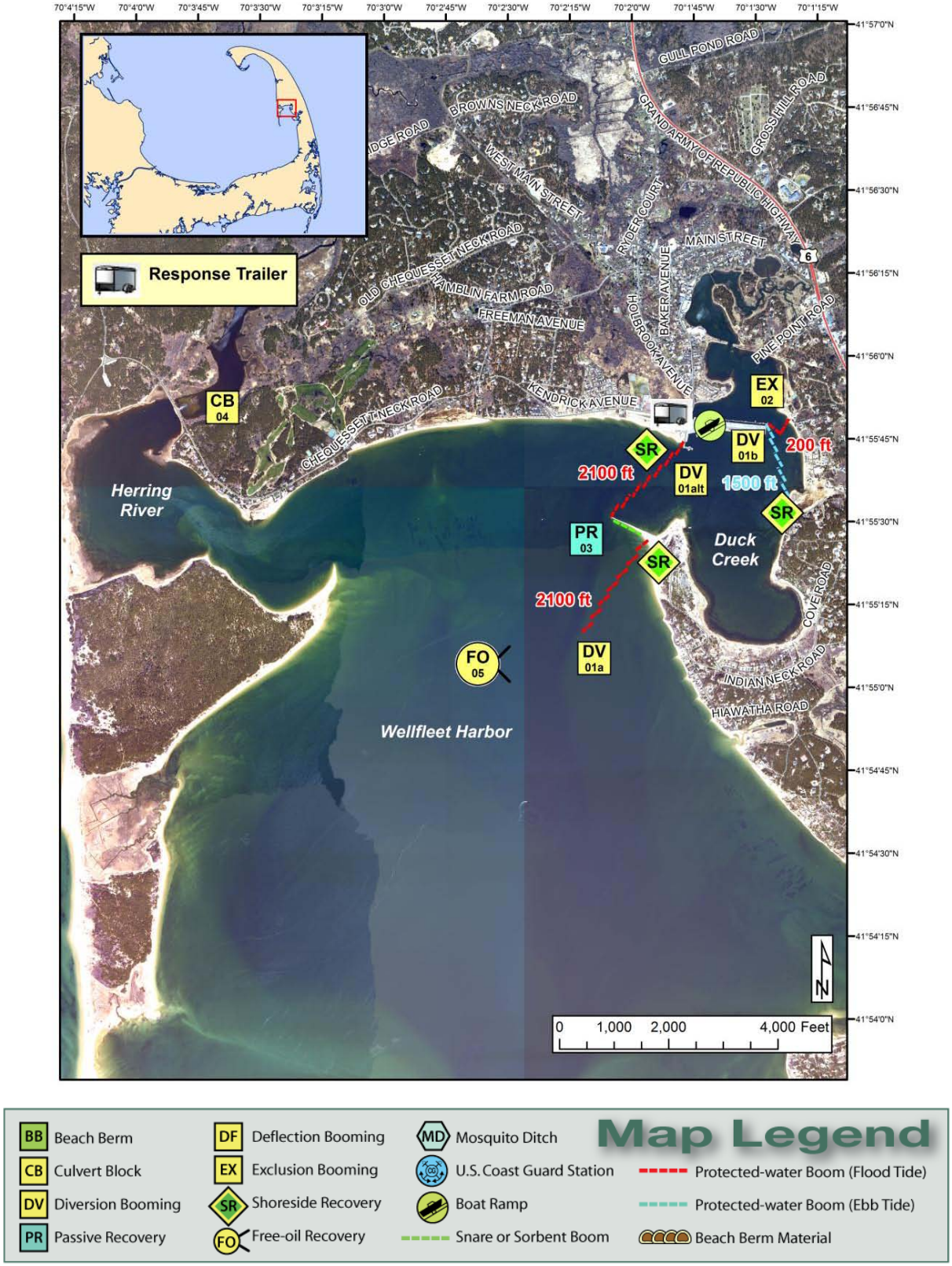
The focus of the GRP for Wellfleet Harbor is preventing a spill in Cape Cod Bay from migrating into the inner harbor and up Duck Creek and impacting sensitive aquaculture areas and other wildlife. Boom will be deployed to protect the entrance of Duck Creek and recover as much oil as possible from the adjacent shoreline. Figure 1 shows a map of GRP-CI-05. The tactic tested is identified on the GRP map as DV-01alt. Appendix C contains a copy of the full GRP for this site.

Goals and Objectives

The goal of this test was to conduct a field test of boom deployment as shown in the GRP for Wellfleet Harbor (CI-05, See Figure 1 and Appendix C). The following testing objectives were established:

- Simulate actual incident – Fire Chiefs take lead in assigning personnel, implementing tactics.
- Develop tactical and operational plans to assign personnel and resources for GRP deployment.
- Deploy equipment from Truro and Wellfleet response trailers.
- Provide opportunity for responders from BCIMT, Wellfleet, Eastham, Truro, USCG, MassDEP, and other agencies to work together in Task Force setting.
- Deploy DV-01alt using Wellfleet & Truro equipment.
- Deploy straight leg instead of cascaded boom array in order to avoid closing off the harbor.
- Evaluate GRP tactic as shown and identify any changes or modifications necessary to achieve goal of divert & collect.
- Document all activities.
- Conduct post-deployment “hot wash” to identify lessons learned.

Figure 1. Map of CI-05 (GRP for Wellfleet Harbor).



- Identify any training or planning gaps brought out by the boom deployment.
- Evaluate staging area and general logistics for deploying boom at this location.

The objectives were included in the Incident Action Plan (IAP) as well as a 214 (pay sheet), to determine what the actual cost of such an incident would be. Evaluation forms were developed to measure evaluators' assessment of whether the objectives were met.

Participation

Staff from the Wellfleet Fire Department, the Truro Fire Department, the Eastham Department of Natural Resources, the Wellfleet Harbormaster and Shellfish Departments, and Truro Harbormaster was the primary responders for this deployment test; they transported, deployed, demobilized, and stored the boom and anchors used in the test. Professional spill responders from the U.S. Coast Guard provided assistance and direction to the town responders. It was emphasized throughout the testing that these tests were designed to test the strategies and provide experience to the responders. (See Figure 2).

Figure 2. Participants Gather at the Briefing

Personnel from Nuka Research and MassDEP acted as facilitators, providing direction, answering questions, and keeping the process moving.

There was a group of observer/evaluators who observed part or all of the day's deployment and were asked to participate in the debrief and fill out evaluation forms online. The observers included representatives of the Eastham Fire Department, Wellfleet Fire Department, National Park Service, citizens from the town of Wellfleet, and the MassDEP.

The BCIMT managed site control, and all participants were required to sign in upon entering the site (Appendix D). A list of participants from the May 26, 2010 Wellfleet Harbor GRP Test is also included in the data forms in Appendix E. The column for observer/responder was left blank if their role was unknown to the data recorder.

Equipment

The equipment (boom, anchor system, lines, floats) deployed during this test came from the MassDEP oil spill response trailers from the Town of Wellfleet and the Town of Truro (See Figures 3 and 4). Vessels were provided by the Wellfleet Harbormaster Department, the Eastham DNR, and the Truro Harbormaster Department. The BCIMT was set up in the Wellfleet Harbormaster Building on the Pier.

Figure 3. Wellfleet and Truro Oil Spill Response Trailers

Figure 4: Equipment supplied in the trailer

Photo by David Crary, Jr., National Park Service

Summary of Testing Day

After meeting at the Wellfleet Harbor parking lot for a review of the day's objectives by Incident Commander Chief Dan Silverman, a group introduction by Elise DeCola, a safety briefing by Nick Morgan (USCG) and assignments for the incident by BCIMT member and Ret. Chief Roy Jones, the group deployed the boom for an altered version of DV-01alt, one leg of a cascaded boom array. The boom was towed into the harbor and since the tide was low, the first leg of boom had to be dragged up onto the shore and set (See Figures 5 and 6). As the tide flooded, the shoreside anchor had to be moved and secured.

The next leg of boom was connected without difficulty but as the boom stretched further into the channel the flooding tide made setting the mid-line anchors difficult. The responder vessels took turns setting the next two legs until the cascade array was in place.

Figure 5. Towing the first leg of boom

Figure 6. Setting the Shoreline Anchor

Although the weather was not a factor in this deployment test, the current and the flooding tide proved challenging in setting the first few anchors and handling the boom. The entire deployment was completed in two hours.

Documentation

Since on-site conditions have an impact on deployment, data was compiled on tide cycles, wind speed and direction, sea state, precipitation, and any other environmental conditions or on-scene factors. The completed site data collection form is included in Appendix E.

Standard evaluation forms were posted online for the day's testing, with standard evaluation criteria. To date, four written evaluations have been submitted (see Table 1); some participants provided verbal comments during the debrief. Photographs were also used as documentation. Appendix F contains a copy of Evaluation Forms.

Table 1: Participants' Evaluation Responses

Participants	General Comments/Suggestions	Staging Area	Anchors	Boom	Boats	ICS	Personnel
David W. Crary, Jr.	*dedicated weather observer should be assigned and current weather conditions transmitted over radio every 30 min. *standards should be in place and communicated re: PFD use based on ambient air and water temps, use by boat operations, dock and shore workers *suggest that trailer be equipped with a dehumidifier *overall, a very good drill during a very good weather window *deployment was effective and followed briefing guidelines. On-site observations showed boom drift, anchor effectiveness, buoy obstructions and challenges, and (public) boat traffic congestion.	Ideal staging area for boom for this tactic. Excellent training site; should be repeated at different shore location near the pier on an annual basis. State of MA should provide training dollars for premium time costs so actual first responders (fire, EMS, town employees) get hands-on training.	Rebar should be capped when/if used.	Cleaning and loading of boom post-exercise was not organized, was not led by an identified leader, and basically was not cleaned well.	Sufficient, given the wind, tide and amount of boom deployed per 'stick'.	The inclusion of the BCIMT and use of (IAP) enhanced the exercise. Emphasis on ICS/IAP is the only way to manage a spill in Wellfleet whether on town, state, or federal waters/property. This is a moot question (see eval) as ICS is mandated – if further understanding is needed, then ICS training should/must be given to agencies and organization who are not up to speed.	Yes [responders had sufficient equipment, training and knowledge to deploy the boom]. Again I stress annual training with a funding source to defray premium time costs for first responders.

Michael Flanagan		Ideal staging area for boom for this tactic. The launching facilities in Wellfleet are ideal for deploying and retrieving the boom.	Equipment was sufficient.	Making the splice when joining sections of boom is a critical time. Having the anchor vessel secured to the fixed facilitated making the connection.	Adequate.	Yes, BCIMT and IAP enhanced the exercise.	Responders were able to effectively deploy tactic in my opinion.
Daniel Silverman	*design of the exercise was good, but the value of the exercise to local responders was less than it could have been, because funding was not provided to cover overtime and backfill costs. As a result, the local fire departments who would be the first responders to an actual spill were not able to benefit from the training opportunity. This deficiency needs to be pointed out to the DEP in the strongest terms possible. The money being collected is used to buy equipment and pay vendors to design and facilitate training, but no funds are being made available to local jurisdictions for staff expenses to receive the training. Small departments and towns can't afford the extra overtime and backfill costs, and the DEP must recognize this and make funds available from the surcharge fund. The suggestion that the regional homeland security council be looked at as a funding source is well-intentioned, but there are other areas of emergency preparedness that need that funding that don't have another alternative revenue source. There is already a revenue source that is directly related to this oil spill response program, and it should be used. Without a commitment by the DEP to fund the necessary training, those who are likely to need to use the trailers and their equipment will not be as prepared as they should be.	Ideal staging area for boom for this tactic. Easily accessed boat ramp. Ample space on pier area for support operations. Might be more of a challenge in mid-summer, when pier and harbor traffic is heavier.	Sufficient.	Sufficient.	Minimally enough vessels. More vessels with greater HP might have been able to work in relay fashion to deploy the boom faster.	Inclusion of BCIMT and use of IAP did enhance the exercise.	Responders were able to effectively deploy tactic, but there were not enough local first responders. See general comments. Would feel somewhat comfortable setting a similar boom array during an actual incident.
Gene Tully		Sufficient as a staging area for boom for this tactic.	Short a few anchors.	Did not use all the boom available.	Sufficient	Inclusion of BCIMT and use of IAP did enhance the exercise.	Unfortunately the exercise did not include most of the responders who would have to deal with a real event and therefore had no training. Those there were able to effectively deploy tactic.

Communications

For the testing day, marine Channel 3 was assigned for Unified Command, Channel 5 for Operations and Channel 6 for Safety. Unified command was located in the Wellfleet Harbormaster Building on the town pier. The room on the second floor was used to view the deployment from the building. Incident briefings with the Unified Command were conducted in the room. Incident Commander Chief Silverman split his time between the building where Roy Jones (BCIMT) and Gene Tully (BCIMT, Documentation) were located and the beach (shoreline anchor/collection point), while Operations Commander (Mike Flanagan, Wellfleet HM) and Safety Officer (Nick Morgan, USCG) were on the water.

Safety

Throughout the deployment test, facilitators emphasized that safety was the highest priority. An initial safety briefing was given, and participants were also encouraged to abide by the safety policies of their agency or organization. All participants who were on vessels or docks were required to wear a personal flotation device at all times. Participants were instructed to dress in work clothes appropriate for the weather conditions, stay hydrated, and use sunscreen as needed.

The testing cycle was successfully completed with no safety incidents or injuries.

Observations

The GRP test yielded specific information about the tactic tested, the staging area, and the equipment at the site. The major observations and lessons learned are summarized here by theme/issue, and recommendations for how to address these issues are included where appropriate.

- Equipment was noted to be missing from all three town's trailers. Eastham had significant gaps in equipment, including all of their anchor floats. Wellfleet was also missing anchor floats. Suggestions were made for additional equipment that could supplement the trailers, such as line cutters and electrical tape.

- Current and flooding tide made deploying boom and setting anchors challenging. Because each leg of boom was towed by separate boats the connections had to be made on the water (See Figure 7). Also, the flooding tide made it necessary to reposition and adjust the shoreside anchor on the first leg (see Figure 8). It was advantageous to have the staging site in close proximity to the shoreline anchor point.

- The use of a dedicated anchor boat was positive.

Figure 7. Connecting the boom

- With the strong current, the first leg could have been towed up-current, then allowed to drift back to shore. After setting the anchor, the first leg would have been straighter.
- The flooding tide made setting the mid-line anchors challenging. Some of the boats may have been underpowered to tow boom in such a strong current. This resulted in the leg of the array not being as straight as it could have been (See Figure 9).

Figure 8. Moving the Shoreline Anchor to accommodate the tide

Figure 9. Boom Array

Recommendations

Several recommendations came out of this testing day, related both to the GRP itself and to the testing process:

- Tow leg of boom up-current and allow to drift back to anchor at shoreline.
- Make sure vessels involved have adequate power to set boom in strong current.
- Continue to look for opportunities to use field exercises to test and work with BCIMT.
- Look into stipends to provide training to personnel who will be first responders in the event of a spill

Appendices

- Appendix A: Testing Plan
- Appendix B: Incident Action Plan
- Appendix C: GRP CI-05 (as tested)
- Appendix D: ICS Sign in sheet
- Appendix E: Site Data Collection Form (completed)
- Appendix F: Evaluation Form (blank)

Appendix A

GRP TESTING PLAN

CI-05 Wellfleet Harbor GRP Test
05/26/10 8:00am to 12:00pm

Objectives

- Simulate actual incident – Fire Chiefs/Harbormasters take lead in assigning personnel, implementing tactics.
- Develop tactical and operational plans to assign personnel and resources for GRP deployment.
- Deploy equipment from Truro and Eastham response trailers.
- Provide opportunity for responders from Eastham, Provincetown, Truro, Wellfleet, USCG, MassDEP, and other agencies to work together in Task Force setting.
- Deploy DV-01alt using Truro & Eastham equipment.
    - Deploy a slightly modified version of DV-01alt. The array will **not** be cascaded and will **not** close off the harbor.
    - Practice cascade booming if time allows.
    - Evaluate staging area and site access considerations.
    - Evaluate GRP tactic as shown and identify any changes or modifications necessary to achieve goal of divert & collect.
- Document all activities.
- Conduct post-deployment "hot wash" to identify lessons learned.
- Identify any training or planning gaps brought out by the GRP deployment.

Participants

Based on initial planning, participants will include individuals from:

- Boston Line/Coastline Services (spill response contractor)
- Cape Cod National Seashore
- Eastham Harbormaster
- Eastham Fire Dept.
- Eastham Dept. of Natural Resources
- Provincetown Fire Dept.
- Provincetown Harbormaster
- Provincetown Shellfish Dept.
- Truro Town Administrator
- Truro Harbormaster
- Wellfleet Harbormaster
- Wellfleet Shellfish Dept.
- Wellfleet Fire Dept.
- Massachusetts Environmental Police
- Mass DEP
- U.S. Coast Guard
- Nuka Research and Planning Group (facilitator)

Schedule of Events

Time	Event	Location/Details
08:00	Meet for briefing & assignment of personnel to tactic	Meet near Boat Ramp in Wellfleet Harbor pier/parking lot
9:00	Deploy modified DV-01alt	Trailers in Wellfleet Harbor.
11:15	Demobilize all boom & load back into trailers	Remove boom and anchors, rinse & store boom in trailer.
11:45	Debrief	Wellfleet Harbor
12:00	Adjourn; lunch	Lunch will be provided to all participants. Those who need to return to work can take their lunch "to go."

Support Equipment

Vessels
Preliminary list of vessels:
- Eastham Harbormaster
- Truro Harbormaster
- Provincetown Harbormaster
- Wellfleet Harbormaster

Personnel
Response personnel TBA based on attendance.

Boom
1000 feet Truro Trailer (18")
1000 feet Eastham Trailer (18")

Other Information

Tides (Wellfleet)

High 1		Low 1		High 2		Low 2	
10:55	10.32 ft	4:56	-0.66 ft	23:06	11.80 ft	17:06	0.35 ft

Attachments
- CI-05 GRP (Wellfleet Harbor)

Appendix B

CI-05 GRP TEST INCIDENT BRIEFING
*****THIS IS A DRILL*****

INCIDENT BRIEFING	1. Incident Name CI-05 GRP Test	2. Date Prepared 5/26/10	3. Time Prepared 0800

4. Map Sketch

Page 1 of 2	5. Prepared by (Name and Position) Dan Silverman, Incident Commander

6. Summary of Current Actions
****THIS IS A DRILL.***** • An oil spill has occurred and the direction of flow threatens Wellfleet Harbor • The Unified Command has directed that the following components of the GRP for Welfleet Harbor (CI-05) be deployed: DV-01alt • For the purpose of this exercise, assign the resources and personnel available to deploy the GRP booming strategy at DV-01alt. • Use the Incident Action Plan (IAP) forms prepared by Barnstable County Emergency Services Refer to schedule in GRP Testing Plan for timing of deployments. Refer to GRP CI-05 for resource lists and deployment directions for the tactics.

Incident Objectives	1. Incident Name Wellfleet Harbor GRP Test	2. Date Prepared 5/24/10	3. Time Prepared 15:00

4. Operational Period (Date and Time)

5/26/10 08:00-12:00

5. General Control Objectives for the Incident (include Alternatives)

Provide for the safety of responders and the public

Set up boom for rapid deployment

Deploy 2,100' of 18" boom in a cascade formation to prevent oil from entering the inner harbor and Chipman's Cove

Establish a collection point for diverted oil on the west side of the 1st groin to the west of the L shaped pier

Evaluate resource needs for future deployments

6. Weather Forecast for Operational Period

Partly sunny, with a high near 73. North northwest wind between 10 and 13 mph.

7. General Safety Message

All personel to wear PFD's when working on the water.

8. Attachments (check if attached)

- [x] Organization List (ICS 203)
- [x] Assignment List (ICS 204)
- [x] Communications Plan (ICS 205)
- [x] Medical Plan (ICS 206)
- [ ] Incident Map
- [ ] Traffic Plan
- [ ] _____
- [ ] _____
- [ ] _____

ICS-202	9. Prepared by (PSC)	10. Approved by (IC) Silverman

ORGANIZATION ASSIGNMENT LIST

1. Incident Name	Wellfleet Harbor GRP Test		
2. Date	5/24/10	3. Time	15:00
4. Operational Period	5/26/10	08:00-12:00	

5. Incident Commander and Staff

Incident Commander	SILVERMAN
Deputy	
Safety Officer	FOLEY
Information Officer	O'BRIEN
Liaison Officer	

6. Agency Representative

Agency	Name
NUKA	DECOLA & SCHNEIDER
MASS DEP	PACKARD
CCNS	CRARY
BOSTON LINE SVCS	CORNELL
USCG	MORGAN & GUILLEMETTE

7. Planning Section

Chief	JONES
Deputy	
Resource Unit	NIGRO
Situation Unit	
Documentation Unit	TULLY
Demobilization Unit	
Human Resources	

Technical Specialists	(name / specialty)

8. Logistics Section

Chief	To Be named
Deputy	
Service Branch Dir.	
Support Branch Dir.	
Supply Unit	
Facilities Unit	
Ground Support Unit	
Communications Unit	To Be named
Medical Unit	Wellfleet Fire Officer/Paramedic
Security Unit	
Food Unit	

9. Operations Section

Chief	FLANAGAN
Deputy Safety	ASSIGNED TO BOAT ON WATER

a. Branch I - Division/Groups

Branch Director	
Deputy	
Division/Group	BOOM DEPLOYMENT
Division/Group	BOOM SETUP
Division/Group	BOOM STAGING
Division/Group	COLLECTION
Division/Group	PERIMETER CONTROL

b. Branch II - Division/Groups

Branch Director	
Deputy	
Division/Group	
Division/Group	
Division/Group	
Division/Group	
Division/Group	

C. Branch III - Division/Groups

Branch Director	
Deputy	
Division/Group	
Division/Group	
Division/Group	
Division/Group	
Division/Group	

d. Air Operations Branch

Air Operations Branch Director	
Air Support Supervisor	
Air Attack Supervisor	
Hilicopter Coordinator	
Air Tanker Coordinator	

10. Finance Section

Chief	JONES
Deputy	
Time Unit	
Procurement Unit	
Comp/Claims Unit	
Cost Unit	

Prepared by (Resource Unit Leader)

DIVISION ASSIGNMENT LIST	1. Branch	2. Division/Group BOOM SETUP
3. Incident Name Wellfleet Harbor GRP Test	4. Operational Period Date: 5/26/10	Time: 08:00-12:00

5. Operations Personnel

Operations Chief	FLANAGAN	Division/Group Supervisor	
Branch Director		Air Attack Supervisor No.	

6. Resources Assigned this Period

Strike Team/Task Force/Resource Designator	Leader	Number Persons	Trans. Needed	Drop Off PT./Time	Pick Up PT./Time
	To be named				

7. Control Operations

Set up boom in a timely manner for effective deployment within 1 hour

8. Special Instructions

9. Division/Group Communication Summary

Function	System	Grp/Channel	Frequency	Function	System	Grp/Channel	Frequency
Command	800 MHz			**Support**	VHF		

Prepared by (RESL)	Approved by (PSC)	Date	Time
		5/24/10	15:00

ICS-204

DIVISION ASSIGNMENT LIST	1. Branch	2. Division/Group BOOM STAGING
3. Incident Name Wellfleet Harbor GRP Test	4. Operational Period Date: 5/26/10 Time: 08:00-12:00	

5. Operations Personnel

Operations Chief	FLANAGAN	Division/Group Supervisor	
Branch Director		Air Attack Supervisor No.	

6. Resources Assigned this Period

Strike Team/Task Force/Resource Designator	Leader	Number Persons	Trans. Needed	Drop Off PT./Time	Pick Up PT./Time
	To be named				

7. Control Operations

Have set up boom ready for connection to watercraft to tow it into position, assist with connection

8. Special Instructions

9. Division/Group Communication Summary

Function	System	Grp/Channel	Frequency	Function	System	Grp/Channel	Frequency
Command	800 MHz			**Support**	VHF		

Prepared by (RESL)	Approved by (PSC)	Date	Time
		5/24/10	15:00

DIVISION ASSIGNMENT LIST	1. Branch	2. Division/Group COLLECTION
3. Incident Name Wellfleet Harbor GRP Test	4. Operational Period Date: 5/26/10 Time: 08:00-12:00	

5. Operations Personnel

Operations Chief	FLANAGAN	Division/Group Supervisor	
Branch Director		Air Attack Supervisor No.	

6. Resources Assigned this Period

Strike Team/Task Force/Resource Designator	Leader	Number Persons	Trans. Needed	Drop Off PT./Time	Pick Up PT./Time
	To be named				

7. Control Operations

Operate an effective collection of the oil deverted to the collection area, have capasity available to handle all the oil

8. Special Instructions

9. Division/Group Communication Summary

Function	System	Grp/Channel	Frequency	Function	System	Grp/Channel	Frequency
Command	800 MHz			**Support**	VHF		

Prepared by (RESL)	Approved by (PSC)	Date	Time
ICS-204		5/24/10	15:00

DIVISION ASSIGNMENT LIST	1. Branch	2. Division/Group BOOM DEPLOYMENT
3. Incident Name Wellfleet Harbor GRP Test	4. Operational Period Date: 5/26/10 Time: 08:00-12:00	

5. Operations Personnel

Operations Chief	FLANAGAN	Division/Group Supervisor	
Branch Director		Air Attack Supervisor No.	

6. Resources Assigned this Period

Strike Team/Task Force/Resource Designator	Leader	Number Persons	Trans. Needed	Drop Off PT./Time	Pick Up PT./Time
Boat Strike Team	To be named				

7. Control Operations

Effective and safe deployemnt of boom provided. Boom to be set up in a cascade formation to steer the oil to the collection area on the west side of the 1st groin to the west of the L shaped pier thus preventing the spill from entering the inner harbor and Chipmans Cove

8. Special Instructions

Use PFD'S and Gloves

9. Division/Group Communication Summary

Function	System	Grp/Channel	Frequency	Function	System	Grp/Channel	Frequency
Command	800 MHz			**Support**	VHF		

Prepared by (RESL)	Approved by (PSC)	Date	Time
		5/24/10	15:00

DIVISION ASSIGNMENT LIST	1. Branch	2. Division/Group PERIMETER CONTROL
3. Incident Name Wellfleet Harbor GRP Test	4. Operational Period Date: 5/26/10 Time: 08:00-12:00	

5. Operations Personnel

Operations Chief	FLANAGAN	Division/Group Supervisor	
Branch Director		Air Attack Supervisor No.	

6. Resources Assigned this Period

Strike Team/Task Force/Resource Designator	Leader	Number Persons	Trans. Needed	Drop Off PT./Time	Pick Up PT./Time
	Coast Guard				

7. Control Operations

Prevent watercraft from entering the operational area

8. Special Instructions

9. Division/Group Communication Summary

Function	System	Grp/Channel	Frequency	Function	System	Grp/Channel	Frequency
Command	800 MHz			**Support**	VHF		

Prepared by (RESL)	Approved by (PSC)	Date	Time
		5/24/10	15:00

INCIDENT RADIO COMMUNICATIONS PLAN	Incident Name Wellfleet Harbor GRP Test	Date/Time Prepared 5/24/10 15:00	Operational Period Date/Time 5/26/10 08:00-12:00

4. Basic Radio Channel Utilization

Function	Radio Type/Cache	Group/Channel	Frequency/Tone	Assignment	Remarks
Command	800 MHz				
Tactical	VHF				

5. Prepared by (Communications Unit)

Medical Plan	Incident Name	Date Prepared	Time Prepared	Operational Period
	Wellfleet Harbor GRP Test	5/24/10	15:00	5/26/10 08:00-12:00

5. Incident Medical Aid Stations

Medical Aid Stations	Location	Paramedics Yes	Paramedics No
HARBOR MASTER BLDG	WELLFLEET MARINA	X	

6. Transportation

A. Ambulance Services

Name	Address	Phone	Paramedics Yes	Paramedics No
WELLFLEET FIRE DEPT	10 LAWRENCE ROAD, WELLFLEET, MA	911	X	
EASTHAM FIRE DEPT.	ROUTE 6, EASTHAM, MA	BCC	X	

B. Incident Ambulances

Name	Location	Paramedics Yes	Paramedics No
WELLFLEET FIRE DEPT	HARBORMASTER'S BUILDING, WELLFLEET MARINA	X	

7. Hospitals

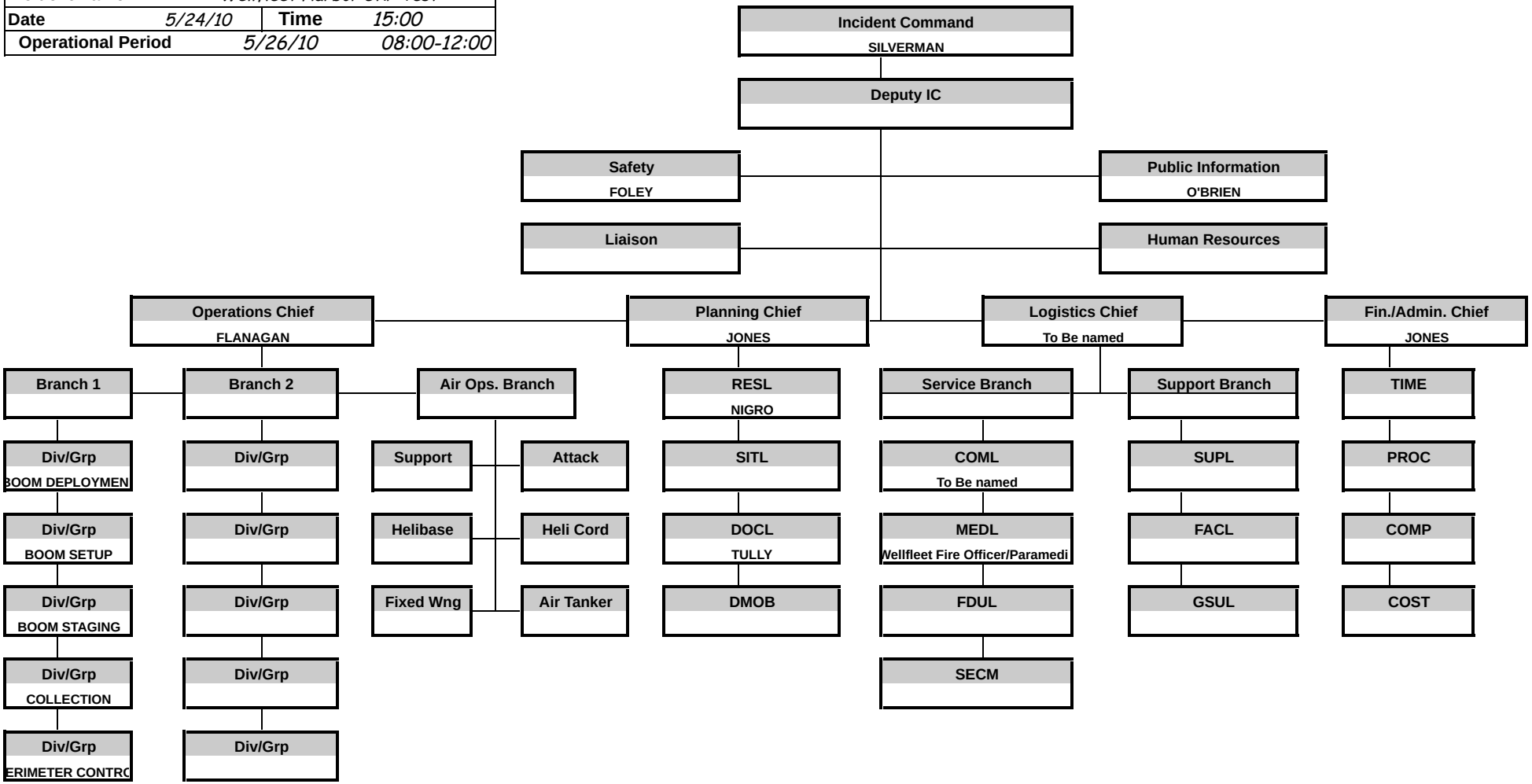
Name	Address	Travel Time Air	Travel Time Grnd	Phone	Helipad Yes	Helipad No	Burn Center Yes	Burn Center No
CAPE COD HOSP.	PARK STREET, HYANNIS, MA	15	35	508-775-1800		X		X
FALM. HOSP	100 TER HUEN DRIVE, FALMOUTH, MA	20	75	508-548-5300				X
					X			

8. Medical Emergency Procedures

Report all injuries to your supervisor immediately
Call 911 for any signficant injuries. Incident ambulance may handle minor injuries.
Notify Safety Officer of any injuries

ICS-206	Prepared by (Medical Unit Leader	Reviewed by (Safety Officer)

Incident Name	*Wellfleet Harbor GRP Test*		
Date	*5/24/10*	**Time**	*15:00*
Operational Period	*5/26/10*		*08:00-12:00*



Agency Representatives	
Name	Agency
NUKA	*DECOLA & SCHNEIDE*
MASS DEP	*PACKARD*
CCNS	*CRARY*
BOSTON LINE SVCS	*CORNELL*
USCG	*MORGAN & GUILLEME*

Technical Specialists	
Name	Specialty

UNIT LOG	1. Incident Name *Wellfleet Harbor GRP Test*	2. Date Prepared *5/24/10*	3. Time Prepared *15:00*
4. Unit Name/Designators	5. Unit Leader (Name and Position)	6. Operational Period *5/26/10* *08:00-12:00*	

7. Personnel Roster Assigned		
Name	ICS Position	Home Base

8. Activity Log	
Time	Major Events

9. Prepared by (Name and Position)

Incident Action Plan

ICS 223
Health and Safety Message

Incident Name	Date Prepared:	Time Prepared:
Wellfleet Harbor GRP Test	5/24/10	15:00

Operational Period Date:	Operational Period Time:
5/26/10	08:00-12:00

Major Hazards and Risks:
FALLING OVERBOARD

COLD WATER

SUN EXPOSURE

Narrative:
ALL PERSONNEL WORKING ON WATER SHALL WEAR PFD'S
SAFETY VESSEL TO MONITOR WORKERS ON THE WATER AND BE READY TO PICK-UP PERSONNEL WHO FALL OVERBOARD
WEAR GLOVES TO PROTECT HANDS FROM COLD WATER
WEAR SUNSCREEN WHEN NECESSARY

Prepared By:	ICS Position:
Approved By:	ICS Position:

Appendix C

Map Legend

BB Beach Berm	DF Deflection Booming	MD Mosquito Ditch	Protected-water Boom (Flood Tide)
CB Culvert Block	EX Exclusion Booming	U.S. Coast Guard Station	Protected-water Boom (Ebb Tide)
DV Diversion Booming	SR Shoreside Recovery	Boat Ramp	Beach Berm Material
PR Passive Recovery	FO Free-oil Recovery	Snare or Sorbent Boom	

A total of 4 State Response Trailers are required to implement all of the tactics in this GRP.
Responders should always consider on-scene conditions before deploying GRP tactics. Tactics may not be safe or effective under certain conditions. Responder safety should always be the first priority.

ID	Location and Description	Response Strategy	Implementation

CI-05-01
DV
	Wellfleet Harbor
	a. Lat. 41º55'26.5"N
	Lon.70º01'57.6"W
	Alternate:
	Lat. 41º55'45.2"N
	Lon. 70º01'49.8"W
	
	b. Lat. 41º55'33.4"N
	Lon. 70º01'24.7"W
		Divert and Collect - Shoreside
		Place and anchor sections of boom in a cascaded fashion to divert the oil to the identified shoreside collection locations.
			Deploy anchors and boom with skiffs.
			For (a) place 7x 300ft. sections of 12 to 18" boom at the proper angle to divert incoming oil to the collection site at the base of the spit.
			For (alt) place 7 x 300ft. sections of 12 to 18" boom across the entrance to the harbor. Set up shoreside recovery on Shirttail Point and tend throughout the tide.
			For (b), on an ebbing tide with oil coming from the harbor place 5 x 300ft. sections to divert oil.

CI-05-02 EX	**Wellfleet Harbor** Lat. 41º55'46.2"N Lon. 70º01'24.9"W	**Exclusion** Exclude oil from entering or leaving Wellfleet Harbor.	Deploy anchors and boom with skiffs at high tide. Place 200ft of 16 to 18'' boom in an array in a chevron pattern with the apex extending into the harbor if the oil is coming from within the harbor and extending out if the source is outside the harbor. Structures in the harbor may provide anchoring points for the boom. Tend throughout the tide.
CI-05-03 PR	**Wellfleet Harbor** Lat. 41º55'29.3"N Lon. 70º02'03.3"W	**Passive Recovery** Place passive recovery tactics to recover oil and prevent it from entering sensitive areas. Deploy at locations that are likely to be impacted and the booms can be adequately secured.	Place and anchor snare or sorbent boom along the jetty at the entrance to the harbor. Replace as necessary to maximize the recovery.
CI-05-04 CB	**Herring River at Chequesset Neck Road** Lat. 41º55'51.9"N Lon. 70º03'49.5"W	**Culvert block** Close off the water control structure on the Herring River at Chequesset Neck Road to prevent oil from being carried up the Herring River by a flood tide.	Consult with local public works to facilitate the closure of the flow into the Herring River under the Chequesset Neck Road. This will be executed on an ebb tide to prevent the migration of oil further up the river. Note that although it is preferable to block the culvert on the ebb tide, it is most important to implement as early as possible. Flow may be re-established as the tide changes.
CI-05-05 FO	**Wellfleet Harbor** Nearshore waters in the general area of: Lat. 41º55'23.8"N Lon. 70º02'16.0"W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Wellfleet Harbor depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Wellfleet Harbor. Use aerial surveillance to locate incoming slicks. Ensure that responders have experience with on-water free-oil recovery.

ID	Response Resources	Staging Area Site Access	Resources Protected	Special Considerations
CI-05-01 DV	**Deployment** ***Equipment*** 3600 ft. 12 to18" boom 34 anchor systems 4 anchor stakes 2 shoreside recovery systems ***Vessels*** 2 skiffs ***Personnel/Shift*** 6 total (1 vessel operator + 2 responders per vessel) **Tending** ***Vessels*** 1 skiff ***Personnel/Shift*** 4 total (1 vessel operator + 3 responders)	Harbor Boat Ramp and parking area Road access is available on each shore. (Rte 6 to Main St. to Holbrook Ave to Commercial St. and Kendrick Ave.) Coordinate with CCNS for vehicle access to the gut and Jeremy Point. Boat ramps may not be useable at low tide. Chart 13250-1	Fish-shellfish, finfish Birds-waterfowl concentration Marine mammals- seals Habitat- marsh, sheltered tidal flats Human Use- Commercial boat harbor, aquaculture, high-use recreational area Land management – CCNS	Vessel master should have local knowledge. Entire site surveyed: 10/30/07. Federal and State listed threatened wildlife may be present, particularly from March through August, limiting site access, especially near Jeremy Point. Coordinate with CCNS, USFWS, and the Mass. Natural Heritage and Endangered Species Program. Tested: not yet
CI-05-02 EX	**Deployment** ***Equipment*** 200 ft. 12 to18" boom 3 anchor systems 2 anchor stakes ***Vessels/Personnel/Shift*** Same as CI-05-01 **Tending** ***Vessels/Personnel/Shift*** Same as CI-05-01	Same as CI-05-01	Same as CI-05-01	Vessel master should have local knowledge. Tested: not yet
CI-05-03 PR	**Deployment** ***Equipment*** 800 ft. snare or sorbent boom 8 anchor stakes ***Vessels/Personnel/Shift*** Same as CI-05-01 **Tending** ***Vessels/Personnel/Shift*** Same as CI-05-01	Same as CI-05-01	Same as CI-05-01	Use snare boom for persistent oils and sorbent boom for non-persistent oils. Passive recovery is preferred tactic for use on CCNS shoreline areas, if feasible.
CI-05-04 CB	**Deployment** ***Transport*** 1 truck ***Vessels/Personnel/Shift*** Same as CI-05-01 **Tending** ***Vessels/Personnel/Shift*** Same as CI-05-01	Same as CI-05-01	Same as CI-05-01	Note that planning is underway for the restoration of tidal hydrology to the Herring River system; the current water control structure will be modified significantly as restoration proceeds.
CI-05-05 FO	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Same as CI-05-01	Same as CI-05-01	Vessel master should have local knowledge. Use extreme caution, shoal waters with, rocks & continually shifting sand bars. Currents and winds are locally variable and can create dangerous operating environments.

Site Photographs and Contact Information

Contact Information:

Wellfleet-Fire: (508) 349-3702

Wellfleet-Harbormaster & Marina: (508) 349 0320

Wellfleet-Shellfish Department: (508) 349-0325

NPS/Cape Cod Nat'l Seashore: (617) 242-5659 (24 hr.)

USFWS: (413) 539-3194

Wellfleet inner harbor, jetty and pier looking northeast.

Wellfleet Harbor pier and mooring fields looking north.

Wellfleet Harbor pier looking southwest (bottom left) and Wellfleet Harbor jetty looking north (bottom right).

Appendix D

1. Incident Name: Wellfleet Harbor Spill Drill	2: Operational Period: 5/26/2010 From: 0700 To: 1800	3. Check-in Location: ☐ Command Post ☐ Other: ☐ Staging Area: Wellfleet Harbor Parking Lot	CHECK-IN LIST (Personel) ICS 211p-OS

Personnel Check-in Information — 8. Initial Incident Check-in?

4. Name	5. Department / Agency	6. Assignment	7. Contact phone	HR Rate	9. Time In	Out
DAN SILVERMAN	WELLFLEET FD / BCIMT	IC	774 836 5300		0730	
GENE TULLY	BCIMT	PLANNING/RESOURCES			0730	
ROY E. JONES III	BCIMT - PSC	PSC	508-776-0878	☐	0730	
MIKE FLANAGAN	Wellfleet HM	OPS CHIEF	508-349-0320	☐	0730	
Wellfleet Spill Trailer	"		"	☐	0730	
21' Alcar 200 HP	HM Boat		"	☐	0730	
20 Alcar 150 HP	HM Boat		"	☐	0730	
16 Alcar 45 HP	HM BOAT		"	☐	0730	
ANDREW Koch	Shellfish Dep		508-349-0325	☐	0805	
Chris Manulla	Shell fish		" " "	☐	0805	
Joshua Nigro	DCR	Resource	508-889-4094	☐	0806	
Len Croteau	Wellfleet HM. office		508-3490230	☐	0806	
Rachel Hutchinson	Eastham DNR		508-240-5972	☐	0810	
19" Carolina Skiff 40 HP	Eastham DNR		"	☐	0810	
Eastham Spill Trailer	Eastham DNR		"	☐	0810	
Amie Vos	ACC Eastham DNR		715-892-0986	☐	0810	
Joe Francis	Truro HM		508-349-2555	☐	810	
Peter Carlow	Eastham, DNR		508-240-5972	☐	8:13	
DAVID CRARY JR	NPS - CAPE COD NS		508-274-5221 (cell)	☐	8:13	
ENGINE 270 100 GAL	4WD PICKUP FORD 150		" " "	☐		
Patrick Grady	Mass Env Police		800 632-8075	☐	8:00	
Clint Austin	Shellfisherman		508 360 2183	☐	8:00	
Barbara Austin	Shellfisherman		774-216-9367	☐		
				☐		

10. Prepared by: J. Nigro	Date/Time: 5/26/2010 0700	11. Date/Time Sent to Resources Unit:

NON PARTICIPANTS

1. Incident Name: Wellfleet Harbor Spill Drill	2: Operational Period: 5/26/2010 From: 0700 To: 1800	3. Check-in Location: ☐ Command Post ☐ Other: ☐ Staging Area: Wellfleet Harbor Parking Lot	CHECK-IN LIST (Personel) ICS 211p-OS

Personnel Check-in Information

8. Initial Incident Check-in?

4. Name	5. Department / Agency	6. Assignment	7. Contact phone	HR Rate	9. Time In	9. Time Out
Jake Hutcheson	MassDEP	Observer	508 946 2852			
Dan Cretton	MassDEP	observer	508 946 2721			
JASON NATTI	U.S. C.G. P-TOWN	OBSERVER	617 233 8817	☐		
NICK MORGAN	U.S.C.G MSD CC	OBSERVER	508-968-6556	☐		
JAKE GUILLEMETTE	USCG MSD CAPE COD	OBSERVER	508-968-6556	☐		
				☐		
				☐		
				☐		
ELISE DeCola	NUKA	Facil./Responder	508-454-4009	☐		
RICH PACKARD		Facil./Responder		☐		
				☐		
				☐		
				☐		
				☐		
BARRY	PRESS —			☐		
CALEB Queen	NUKA	Observer		☐		
SANN ESCHNEIDER	NUKA	Observer-LOGISTICS	508-468-6578	☐		
		LIASION		☐		
				☐		
				☐		
				☐		
				☐		
				☐		
				☐		

10. Prepared by: J. Nigro	Date/Time: 5/26/2010 0700	11. Date/Time Sent to Resources Unit:

1. Incident Name: Wellfleet Harbor Spill Drill	2: Operational Period: 5/26/2010 From: 0700 To: 1800	3. Check-in Location: ☐ Command Post ☐ Other: ☐ Staging Area: ___Wellfleet Harbor Parking Lot_____	CHECK-IN LIST (Personel) ICS 211p-OS

Personnel Check-in Information

8. Initial Incident Check-in?

4. Name	5. Department / Agency	6. Assignment	7. Contact phone	HR Rate	9. Time In	Out
Amy Wallace	BCREPC	PIO (Sub)	~~cell: 774-487-1879~~ 508-375-6908		840	
Brian Davis	Truro F.D		774-836-8482		840	
Paul Brazil	Truro F.D.		774-722-1547		840	
Jim Willis	WFD	EMS	508 2376 25			
Sean O'Brien	BCREPC	PIO	508-737-4118		9:20	

10. Prepared by: J. Nigro Date/Time: 5/26/2010 0700

11. Date/Time Sent to Resources Unit:

Appendix E

Test Conditions Data Sheet	
ALL FORMS IN THIS PACKET SHOULD BE COMPLETED IN FULL BY FACILITATOR. Use a separate set of forms for each individual tactic tested.	
Data Recorder Name: Sanne Schneider	Data Recorder Organization: Nuka Research
Date: May 26, 2010	GRP Site Name: Wellfleet Harbor
GRP # CI-05	Tactic # DV-01alt
Test Start Time (begins at completion of safety & operation briefings): 0915	Test End Time (ends when all equipment removed and demobilized either back to trailer or to new testing site): 1130
Tide stage at **start** time: Mid-tide, flooding	Tide stage at **end** time: High tide
Tide height at **start** time: Approx. 4 ft	Tide height at **end** time: Approx. 10.2 ft
Approximate wave height (ft) during test: N/A	Approximate wave period during test (describe): N/A
Average wind speed (kts) during test:5-10	Wind direction during tests: SW
Max wind speed during test: 10 kts	Estimated visibility (mi) during tests: 10 mi
Estimated current speed at **start** time:5-8 kts	Estimated current speed at **end** time:5 kts
Current direction at **start** time: SW	Current direction at **end** time: SW
Notes:	

Deployment Details Data Sheet	
Data Recorder Name: Sanne Schneider	Data Recorder Organization: Nuka Research
Date: May 26, 2010	GRP Site Name: Wellfleet Harbor
GRP # CI-05	Tactic # DV-01alt
Total elapsed time required to deploy tactic: 2 hrs 15 min	Number of vessels used to deploy (do not count observers): Four
1. Vessel information (fill out for each vessel involved)	
Vessel name & ownership: Wellfleet Harbormaster	Type: Alcor
Length: 21’	Engine type & HP: Honda, 200HP
Vessel name & ownership: Wellfleet Harbormaster	Type: Alcor
Length: 20’	Engine type & HP: Honda, 150HP
Vessel name & ownership: Wellfleet Harbormaster	Type: Alcor
Length: 16’	Engine type & HP: Honda, 45HP
Vessel name & ownership: Eastham DNR	Type: Carolina Skiff
Length: 19’	Engine type & HP: 40HP

Deployment Details Data Sheet	
2. Response Personnel information	
Number & type of response personnel required per GRP: For DV-01alt deployment, 6 personnel (2 vessel operators, 4 responders)	
Total number of personnel involved in deployment:13	Number of vessel operators: Three
Number of vessel-based responders:Six	Number of shore-based responders:Four
List all response personnel by name and organization (do not include observers or facilitators):	
Responder name	Organization
Barbara Austin	Shellfisherman
Clint Austin	Shellfisherman
Paul Brazil	Truro Fire Department
Peter Carlow	Eastham Department of Natural Resources
Len Croteau	Wellfleet Harbormaster
Dan Crafton	MassDEP
Brian Davis	Truro Fire Department
Joe Francis	Truro Harbormaster
Julie Hutcheson	MassDEP
Rachel Hutchinson	Eastham Department of Natural Resources
Andy Koch	Wellfleet Shellfish Department
Chris Mannila	Wellfleet Shellfish Department
Amie Vos	Eastham Department of Natural Resources

Deployment Details Data Sheet	
3. Response Equipment information	
Amount and type of boom, anchor sets, and other equipment required per written GRP: 2100' boom, multiple anchor sets	
Type (size) of boom and other equipment used in deployment: 18" boom	Total amount of boom used in deployment: 1000'
Number of anchor sets used in deployment: Four	Other equipment used during deployment: Danforth Anchor used on shore
Boom configuration in GRP as written: Cascade array	Actual boom configuration during deployment tests: First leg of cascade array
Describe major differences/changes to deployment compared to GRP as written. Due to time constraints and in order to leave the harbor open, only the first leg of the array was deployed.	
Based on deployment, are changes recommended to GRP? (consider input from responders, observers, and facilitators) No changes were recommended, except to use a boat with more power to assist in setting the mid-line anchors and possibly towing the entire leg out farther, letting it drift down and setting the shoreline anchor last.	
Describe how on-scene conditions impacted deployment overall, and list any observations regarding the potential for local conditions to impact future deployments of this GRP. The tide was strong and it was difficult to set the leg straight.	

Deployment Details Data Sheet		
4. Participant information		
Total number of participants (responders, facilitators, observers, other):31		
List all participants by name and organization:		
Participant	Organization	Role (Observer, Facilitator or Responder)
Rich Packard Dan Crafton	MassDEP MassDEP	Facilitator Responder
Julie Hutcheson Dan Silverman	MassDEP Wellfleet Fire Dept.	Responder I.C.
Roy E. Jones Mike Flanagan	BCIMT Wellfleet Harbormaster	PSC Ops. Comm.
Gene Tully Andrew Koch	BCIMT Wellfleet Shellfish Dept.	Planning/Resource Responder
Chris Mannila Joshua Nigro	Wellfleet Shellfish Dept. DCR	Responder Resource
Len Croteau Rachel Hutchinson	Wellfleet Harbormaster Eastham DNR	Responder Responder
Amie Vos Joe Francis	Eastham DNR Truro Harbormaster	Responder Responder
Peter Carlow David Crary, Jr.	Eastham DNR NPS	Responder Observer
Patrick Grady	Mass. Enivronmental Police	Observer
Clint Austin Barbara Austin	Shellfisherman Shellfisherman	Responder Responder
Brian Davis Paul Brazil	Truro Fire Dept. Truro Fire Dept.	Responder Responder
Jim Willis Sean O'Brien	Wellfleet Fire Dept. BCREPC	Observer Observer
Amy Wallace Jason Natti	BCREPC USCG	Observer Observer
Nick Morgan Jake Guillamette	USCG USCG	Observer Observer
Elise DeCola Caleb Queen	Nuka Research Nuka Research	Facilitator Observer
Sanne Schneider Barry	Nuka Research Press	Observer Observer

Appendix F

GRP Deployment Test Evaluation Form		
GRP # CI-05 Wellfleet Harbor	**Test date: 5/26/10**	
Instructions to Evaluators: Complete this form based on your observations of the GRP testing today. Please e-mail to sanne@nukaresearch.com or fax to 240-368-7467 or mail to Nuka Research, PO Box 1672 Plymouth, MA 02362.		
Evaluator Name:	Evaluator Organization:	
What was your role in exercise? (responder, observer, facilitator, etc.)		
What was your level of spill response experience prior to this exercise?		
Please check a box to respond to the following.	YES	NO
1. I feel more prepared to deploy GRPs now than I did prior to this exercise.		
2. I have a better understanding of spill response tactics than I did prior to this exercise.		
3. I would participate in future GRP deployments at other sites.		
4. The objectives were clearly explained and the deployment test met the objectives.		
5. The exercise was conducted safely.		
Other comments or suggestions about exercise design & facilitation?		

GRP Deployment Test Evaluation Form	
GRP # CI-05 Wellfleet Harbor	**Test date: 5/26/10**
Evaluation of Tactics – Diversion Boom Array	
Were responders able to effectively deploy DV-01alt using 1,000 ft boom (as directed at exercise in-briefing)?	
Describe any challenges or setbacks you encountered or observed in setting the boom.	
Based on your experience today, would you feel comfortable setting a similar boom array during an actual incident?	
Please evaluate how well Wellfleet Harbor worked for deploying and demobilizing boom from the trailer for this deployment: ___ Ideal staging area for boom for this tactic. ___ Sufficient as a staging area for boom for this tactic. ___ Not sufficient as a staging area for boom for this tactic. Elaborate:	

GRP Deployment Test Evaluation Form	
GRP # CI-05 Wellfleet Harbor	**Test date: 5/26/10**

Evaluation of Deployment Overall
Was the equipment available (boom, anchors, line, etc.) sufficient to accomplish the deployment? If not, describe.
Were there enough vessels to deploy the boom? Did vessels have adequate power and maneuverability?
Did responders appear to have sufficient equipment, training and knowledge to deploy the boom? If no, explain any deficits.
Did the GRP document (map diagram and table) provide clear direction as to how and where to deploy the boom? If not, please identify problems & suggest improvements.

GRP Deployment Test Evaluation Form	
GRP # CI-05 Wellfleet Harbor	**Test date: 5/26/10**
Evaluation of ICS Component	
What was your level of ICS training/experience prior to this exercise?	
Did the inclusion of the Barnstable County IMT and use of Incident Action Plan (IAP) enhance the exercise?	
Did the emphasis on ICS/IAP help you to better understand how the agencies & organizations would come together in a spill?	
Would you feel comfortable working in an ICS environment (forms, etc.) based on your experience during the exercise?	