GRS PHOTOGRAPH TECHNIQUE SHEET

Purpose:
This sheet explains techniques for shooting aerial photos for Geographic Response Strategies (GRS). GRS are map-based oil spill response strategies to protect a specific sensitive area. The aerial photographs are taken to show responders and response planners the actual location to be protected. This saves valuable time during an actual spill response.

Your participation as a photographer is valuable to this planning effort. A good photograph is worth a thousand words.

Checklist
Before you begin, make sure that you have the following items:

- ❑ index map showing the general location of sites
- ❑ site map for each site showing the frames for the photos requested
- ❑ camera
    - ❑ digital, minimum 2 megapixel, set on HQ or SHQ, capable of producing a JPEG of TIFF file or
    - ❑ 35 mm SLR, shooting color slide film, 30 to 60 zoom lens is best
- ❑ GPS, handheld or aircraft equipment
- ❑ note pad on clipboard with pencils and pens
- ❑ watch or clock
- ❑ tide book
- ❑ sun glasses

Specifications:

- ♦ photo angle — 45º to 75º below horizontal provides the best angle to judge the conditions at the site, see Figure 1.
- ♦ altitude — 500’ to 3,000’ is best altitude range, vary the altitude to frame the field of view show on the site map, it is better to have more in the frame that less.
- ♦ orientation — photograph toward shoreline whenever possible.
- ♦ tide — low to mid tide is best for response planning purpose.
- ♦ lighting — sunlight behind photographer is best to minimize glare.
- ♦ line of sight — clear, do not shoot through Plexiglas windows.
- ♦ time of day — morning is preferred.

Considerations:
Good photographs can be taken from a variety of aircraft. In general the slower the aircraft can operate the better. Helicopters are the best choice because they can almost hold in a stationary position. It is important that the photographer have an unobstructed vantage to shoot down at the site.

Photographs should be taken through an open door or window. Shooting through Plexiglas windows almost always produces poor results.

If someone is available to take notes, ask them to record the GPS location of each photo or mark the aircraft's location on the site map for each photo. It is also desired to note the time and altitude of each shot or at each site.

It is a good idea to plan your route so that the aircraft approaches the site such that the photographer is setup to take the shot. This avoids having to maneuver to get into position. For example, if the photographer is on the right side of the aircraft and the aircraft it to follow a shoreline that faces west, then it is best to fly north along the coast from site to site.

As you approach the site vary the aircraft's altitude to achieve the correct camera frame necessary to capture the field of view shown on the site map. Use the following table to estimate the correct altitude for your shot:

Desired Field of View		Altitude
feet	miles	Feet
< 500	-	500
500 to 1,000	1/10	1,000
1,000 to 2,000	1/4	1,500
2,000 to 3,000	1/2	2,000
3,000 to 5,000	1	2,500
> 5,000	> 1	3,000

Photos should be shot at the highest shutter speed and lowest aperture possible. Take numerous photos with various settings to bracket the shot.

Figure 1.