

10.70 WELLS AND WATER POLLUTION

10.71 SURFACE SPILLS (ON LAND OR WATER)

"**ANY**" construction projects involving activities and/or equipment on or near water need to have contingency plans for containment of discharges into or onto the water. *40 CFR 116* defines a discharge as: "Including, but not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping a controlled material or substance into or onto the water."

Further, *40 CFR 117* states any person in charge of a vessel or an onshore or an offshore facility shall, as soon as they have knowledge of any discharge of a controlled substance from such vessel or facility in quantities equal to or exceeding the reportable quantity, immediately notify the appropriate agency of the U.S. Government.

What Does This Mean?

Basically if you are working on, above, or around water (river, creek, lake, or pond) and discharge (spill) a listed or regulated waste, you **MUST** report this discharge and **IMMEDIATELY** take action to contain and clean it up.

Who Do We Report To?

Initial reporting shall be to the project engineer. The project engineer must relay this information "as soon as possible" to the Office of Construction. Be prepared to give the Office of Construction specifics like: who, what, where, when, how much, of what, and what is being done to contain and clean-up.

Reportable Quantities

A reportable quantity depends on what has been spilled. *40 CFR 117* lists Federal requirements for Reportable Quantities (RQ's) and *567 IAC Chapter 41* contains others regulated by Iowa DNR. Since it is almost impossible to "after-the-fact" quantify anything spilled into the water, the following will be field guidelines:

- ANY fuel or petroleum products which produce a noticeable sheen have to be reported to the Office of Construction. Obviously, some discretion will have to be used since a single drop of oil will produce a sheen. One drop is probably not significant, but one 3 L (1 gallon) "drop" is.
- ANY paint, or paint waste will be reportable. Again some discretion is needed, but there is very little latitude. That is why some type of emergency containment system is recommended for bridge painting projects over water.
- ALL occurrences of herbicides and/or pesticides discharged into water have to be reported.
- ANY foreign liquids such as curing compound discharged into water have to be reported.

What is Meant by Contain and Clean-up?

[Specification 1107.07, C](#) states, in part:

"Contractor shall take other necessary precautions to prevent pollution of streams, lakes, ponds, reservoirs, and other areas with fuels, oil, bitumens, chemicals, or other harmful materials..."

This specification notifies the contractor that we expect them to conduct their operations in a manner which minimizes potential water (and air) pollution. Further, for operations which have potential for water pollution, it is recommended to ask contractors how they plan to contain, mitigate, and remediate spills which may occur during the project.

It is strongly suggested that contractors develop a spill kit where individual "supplies" are stored in a closed, open headed 55 gallon drum. This "kit" method will assure spill containment supplies are dry, clean, and available when needed. The drum can be used to contain collected wastes for disposal. "Supplies" could include, but are not necessarily limited to:

- Containment boom. Boom (skimmer type or sorbent type) should be of sufficient length to encircle a large surface slick. Typically 82 to 115 m (250 to 350 feet) should be adequate.
- Floating petroleum adsorbent pads. Typically two unused cases of 450 x 450 mm (18" x 18") pads are adequate.
- Water skimmer (dippers) to remove floating solids.
- Emulsifying agent. Several different commercially available emulsifying agents are on the market. This chemical is typically a derivative of detergent and, when sprayed onto the surface, breaks down the surface tension and disperses an oil/petroleum slick. **(NOTE: Emulsifying agents shall be used as a "LAST" resort. And then only when a slick cannot be contained or adsorbed by some other means.)**
- Adsorbent material such as floor dry. Typically a couple of bags are sufficient for most spills on land.
- Waste containers to accumulate and temporarily store wastes.

If a spill occurs, proper procedures are:

CASE 1.

Assume a spill is into water and the contaminant has a specific gravity of < 1.0. (It floats.)

1. Immediately deploy the containment boom around and down stream of the spill.
2. Deploy adsorbent pads to soak up the floating contamination.
3. Routinely collect contaminated pads, replace with fresh pads, and dispose of contaminated pads in a sealable metal container. The contractor is then responsible to dispose of all contaminated material in accordance with federal and state regulations.

CASE 2.

Assume a chemical (maybe paint) has spilled onto the soil.

1. Immediately spread adsorbent (floor dry) over the spill or scoop-up soil and spilled material and place on some impervious material (like plastic).
2. After allowing time to adsorb the spilled material, scoop up the adsorbent and surface contaminated soil. The contractor shall place material in a sealable metal container and dispose of in accordance with federal and state regulations.

In both cases the project engineer shall notify the Office of Construction as soon as possible about the spill. In most cases, a report to Iowa DNR will need to be made by the Office of Construction. Therefore, it is important to report:

- Where is the spill, and when did it occur?
- What was spilled, and what is being done?
- How large is the spill?
- How effective is the containment?

10.72 PLUGGING WELLS (WATER OR MONITORING)

Iowa DNR has developed rules for plugging and abandoning wells. (Refer to 567 IAC, Chapter 39 and Chapter 82.) The rules require that all sealed wells are to be reported by the owner to the Iowa DNR within 30 days after sealing. They also require a registered well contractor to do the work. A sample "Abandoned Water Well Plugging

Record" (DNR Form 542-1226) is included in [Appendix 10-6](#). The well contractor shall fill out this form and submit it to the project engineer. The project engineer shall sign as the "owner's agent" and forward the completed form to the Iowa DNR. A copy of the signed form should be placed in the project file.

