PFBC
Big Spring Hatchery
Cumberland Co.
3A
Need Stream Code #!

-----Original Message-----
From: Botts, William
Sent: Thursday, September 23, 1999 10:20 AM
To: Schott, Robert; Embeck, Mark; Oberdick, Leon; Digilarmo, Robert; Dale, Stephen; Ferry, Martin; Musselman, Roger; Fabian, Terry
Subject: FW: big spring fcs formalin treatment

Dave Trusedale informed me that the Big Spring Hatchery recently treated with formaldehyde. I requested some information on how that treatment was done and Dave provided the information below. My comments:
1. This was a minor treatment affecting 8 section out of 80 sections.
2. A low estimation of the discharge concentration using the hatchery discharge rate of 5,767 gpm would be 8 to 10 mg/l formaldehyde, over a 2 to 3 hour period, for 3 consecutive days.
3. The hatchery discharge was >95% of the stream flow so instream concentrations of formaldehyde would almost equal the discharge concentrations.
4. The Chapter 16 maximum concentration for aquatic life is 2.18 mg/l and human health criteria is N.D.

-----Original Message-----
From: dave truesdale [mailto:dtruesda@lazerlink.com]
Sent: Wednesday, September 22, 1999 11:46 AM
To: botts.william@dep.state.pa.us
Cc: dgraff@fish.state.pa.us; rhoopes@lazerlink.com; jharvey@fish.state.pa.us; bigspfcs@epix.net
Subject: big spring fcs formalin treatment

As per your request on September 21, 1999, I am submitting formalin treatment records for the most recent formalin treatment at Big Spring FCS.

Treatment Dates: September 8, 9, and 10, 1999
Treatment Duration: 60 minutes
Raceway Units Treated: Row H, Sections 3, 4, and 5 upper series and Row G, Sections 1, 2, 3, 4, and 5 lower series
Raceway Flows: Row H was 882 gpm and Row G was 967 gpm
Hatchery Discharge: 5,767 gpm
Formalin Quantity Used: 34.054 Liters in Row H, 37.335 Liters in Row G

The formalin treatment was administered by syphons at the head end of Row H Section 3 and Row G Section 1 after 2:00 P.M. on all three days. The syphon at Row H was started first, and the syphon at Row G was started approximately 15 minutes later. The formaldehyde treatment concentrations were 68 ppm. The treatments were administered because of high trout mortalities caused by external parasites.

The formalin treatment in Row G mixed with 4,800 gpm overtopping water from the other raceways in the lower series before being discharged. The formalin treatment in Row H mixed with 4,885 gpm overtopping water from the other raceways in the upper series. This water was mixed in the lower series aerator before flowing through the raceways in the lower series. The foramlin treatment in the lower series discharged before the formalin treatment in the upper series.

PFBC Big Spring Hatchery

Botts, William 3A Cumberland Co.

From: Botts, William
Sent: Thursday, September 16, 1999 11:47 AM
To: Schott, Robert
Cc: Oberdick, Leon; Embeck, Mark; Dale, Stephen; Digilarmo, Robert; Ferry, Martin; Musselman, Roger; Fabian, Terry
Subject: Big Spring Hatchery-formaldehyde

After I received conformation from Dave Trusedale through an e-mail that the hatchery may in fact discharge formaldehyde at concentrations of 34 mg/l, I called Dave. Below are the highlights of that conversation.

- 3 PFBC Hatcheries have NPDES limits for formaldehyde of N.D.-Union City, Linesville and Fairview.
- They found 20 mg/l of formaldehyde in the discharge at Fairview with an 8 hr. composite sample. They only treat with the formaldehyde for 1 hour so this would be a diluted result.
- The Corry Hatchery has a monitor only requirement for formaldehyde. They found 10 mg/l of formaldehyde in the discharge with an 8 hr. composite sample. Corry will be getting a N.D. limit very soon.
- Dave thought that at the Big Spring Hatchery during a 4 raceway treatment a more realistic discharge concentration would be some what less than 34 mg/l. As the slug of formaldehyde travels through the hatchery it tends to spread out a little. So the estimated concentration would be 25 to 30 mg/l over a longer period of time.
- They recently treated with formaldehyde at Big Spring Hatchery. The Hatchery is currently using most of the spring flow so during their recent treatment we can assume the **instream concentration of formaldehyde would have been at least > 20 mg/l**.
- We did not like Dave's proposal to sample for formaldehyde with an 8 hour composite sample because the treatment is only for 1 hour. We also thought they should do some instream samples for formaldehyde. Dave requested we send him a letter explaining what we wanted.

This information indicates that during the September 7 meeting the PFBC was well aware of the Chapter 16 requirement for formaldehyde, and they knew they were discharging formaldehyde in concentrations that were toxic to aquatic life and hazardous to human health.

We wanted the PFBC to sample for formaldehyde so we could determine if the concentration was high enough to impact aquatic life or human health. After I considered what we already know I do not think we should send them a letter requesting they sample for formaldehyde during a treatment. We already know this will be a toxic discharge of formaldehyde and the letter requesting they sample during the treatment will be analogous to the Department granting permission for the discharge. We should send them a letter explaining that their NPDES permit does not authorize them to discharge formaldehyde, the discharge could be toxic to aquatic life and hazardous to human health, and any discharge of a toxic substance (formaldehyde) could be a violation of the Clean Streams Law.