

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: JAN 30 1984

SUBJECT: Summary of Findings at US Smelting
Lead Refining, East Chicago, Indiana

FROM: Charles Steiner, Aquatic Biologist
Central Regional Laboratory

TO: Ed DiDomenico SWOC
Water Quality Branch

Via: Curtis Ross, Director
Central Regional Laboratory

EPA Region 5 Records Ctr.



308211

On January 10, 1984, John McGuire (CDO) and I investigated a report of a duck kill at USS Lead, East Chicago, Indiana. We spoke with Mr. Golden, Plant Manager, and Anthony Traicoff, Maintenance Superintendent. They felt the duck kill was the result of hunters not retrieving all the birds they shot.

We then proceeded to collect samples and make the following observations at the plant site. The discharge channel was the area where the dead ducks had been found. The plant discharge is usually a high percentage of non-contact cooling water and possibly some in-plant storm drain and sewer runoff, etc. (reported in 1980 RCRA inspection). At the time of our inspection the plant was not operating the cooling water and had not been since January 4, 1984. The discharge channel, which is about 8 feet wide runs approximately north and south between a slag fill area and a substantial wetland area (See attached map). No ducks were present, either dead or alive, on the day of our observations. The marsh and the central open water area were frozen solid, while the discharge channel was open for approximately 40 yards before it flowed into the marsh. Water samples were collected at the permit sampling point and the old water intake channel.

(719) 844-5016

After our onsite inspections, we spoke with Terry McClowsky (Game Warden) about his report on the duck kill. There were 15-18 ducks (3 coots, 15 mallards) found in the channel. All had been dead about 36 hours. Several specimens were collected. This occurred on December 29, 1983. McClowsky stated that there was no evidence that any of the birds had been shot.

Based on my observations and the weather conditions at the time in question, I propose the following scenario as to the chain of events leading up to the duck kill. During the severe cold of December 23, 24 and 25, a migrating flocks of birds from off Lake Michigan or other area were attracted to the heated effluent channel of USS Lead, because it would have been giving off steam during this time period. These

puddle ducks did some feeding and loafing in the discharge channel. The sediments and/or water contained a high level of lead, which could have been from the effluent, leachate from the slag or the slag material itself (Reference the high lead values for the 1980 RCRA inspection). Some or all the birds in the flock ingested enough lead to result in the inability to fly (loss of equilibrium). If these "grounded" birds were part of a larger flock, they were left behind when the flock moved on. The sick birds continued to feed in this area, eventually consuming enough lead to be lethal.

On the day of our visit no dead birds were seen. The possible explanations for this are;

1. Plant personnel got wind of the kill and cleaned up the carcasses.
2. The dead birds were scavanged by local residents be they humans, domestic or wild animals.

Based on the high visibility of plant personnel to OSHA safety requirements, even though the plant was not operating, suggests that plant management anticipated a visit by one or more regulatory agencies. I feel that the plant management knew about the kill and had cleaned up.

If I can be of any more assistance in this matter, either now or in the future, please contact me at 353-9070.

Attachments

cc: John McGuire, CDO
Ron Kovach, 5WQC