

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO : Steve Weaver, Chief Counsel, ADPC&E

FROM : Gerald Delavan, Senior Geologist, Water Division *GD*

SUBJECT : Clarification and Comments Regarding Interpretation and Implementation of El Dorado Chemical CAO LIS 95-070

DATE : July 24, 1997

Steve - In response to our meeting in the Director's office on Wednesday morning July 23, 1997, concerning the EDC CAO LIS 95-070 I have prepared this memo to reiterate and document some of the questions and concerns which came out of that meeting .

Paragraph 21. Requires EDC to pay a civil penalty of \$150,000 with a \$25,000 cash payment and an obligation to perform environmentally beneficial SEP's with a value of \$125,000 as an "in kind service". Randall expressed concern about the excessive dollar amount obligated to SEP's in the order. To date EDC has not submitted a SEP proposal to the Department. However, the final sentence of Paragraph 21 states, "the civil penalty obligation for SEPs performance shall be met in accordance with the requirements of Paragraph 22 and 23 below". Paragraph 22 requires an upgrade of the boiler feed system (BFS) and documentation of a 25% reduction of sulfates and a 50% reduction in the use of sulfuric acid in the BFS. Paragraph 23 state if EDC cannot meet these reduction standards then, EDC must certify a Waste Minimization Plan (WMP) is in place. EDC notified the Department on May 13, 1997, they had not met the reduction standards and would prepare the required WMP. In this notification letter (enclosed) EDC references the BFS upgrade as a SEP and refers to the implementation of a hazardous waste minimization plan as an alternate SEP. Does the Department consider the BFS upgrade to be an environmentally beneficial project? If the BFS upgrade is already required by the order anyway can it be considered an SEP? It is my opinion neither of these projects is a bonafide SEP and neither project is really environmentally beneficial, especially the WMP.

Paragraph 23. Requires EDC to submit a Waste Minimization Plan (WMP) to minimize the generation of hazardous waste at the plant. EDC's WMP identified one hazardous waste stream, sulphuric acid sludge generated in the production of sulphuric acid. This material is drummed and shipped offsite, it is really not a problem at this facility. In the proposed WMP there are no actions to be taken by EDC concerning waste minimization, they state they will utilize the DSN process (no sludge is generated) "whenever practical" as opposed to using the NAC process (sludge is generated in this process). This is all they committed to yet, under the terms of the order EDC receives a \$25,000 credit for implementation and adherence to the WMP, for each year the WMP is in effect.....so, by submitting a plan, under which they agree to do nothing they get a \$25,000 yearly credit for doing nothing....based on this, how could either the BFS upgrade or the WMP implementation be considered an viable SEP?

What really happened is the person(s) who wrote the order missed the point, the scope of the WMP was for haz waste only, haz waste is only a minor problem at this facility, the real problem is nitrate and sulfate contamination from unlined holding ponds, unlined diversion ditches, nitrate and sulfate contaminated surface water runoff, contaminated groundwater plumes moving offsite, poor materials handling practices in and production practices, storm drains that discharge to local creeks.....these issues are the processes and situations which should have been assessed under a waste minimization plan....its the nonhazardous materials handled at this facility causing the problems, not the haz waste generated...so, essentially EDC “dodged the bullet “ concerning what action should have been required under the order. EDC should be required to submit an addendum to the original WMP to address nonhaz contamination concerns and submit plans and specifications for corrective action regarding nitrates and sulfates and target dates for accomplishing these tasks in order to receive any credit towards eliminating the \$125,000 judgement against EDC.

Paragraph 18 - One final item which was not discussed in our meeting but, is causing me some concern is the following; under 95-070, Paragraph 18, EDC is required to undertake a assessment of groundwater quality for nitrates, sulfates, chromium and lead around the entire plant site. In the event the groundwater assessment demonstrates there have been releases of these constituents above background levels, EDC must establish a groundwater protection standard for each constituent according to Section 22.1205 (h) or (i) and, if indicated establish, corrective measures, remedies and corrective action measures. To satisfy these provisions, EDC developed a risk assessment program to establish target monitoring levels for these 4 constituents. Nitrate in the groundwater was identified as the major constituent of concern (1000 ppm in one monitor well/drinking water standard is 10 ppm) . As all risk assessments do, EDC investigated potential receptor populations offsite. These receptors were limited to offsite residents adults and children potentially drinking nitrate contaminated groundwater. As you can imagine no potential receptors were identified, thus EDC indicated nitrate contaminated groundwater moving offsite will not be a problem, if you are a human.

However, if the goal of this work is to protect human health and the environment, the environment which contains the biotic and benthic communities in local streams are not protected. Nitrate contaminated groundwater recharges the streams in question and impacts fish and plant communities in those streams. Because these streams have not been identified as fishable and swimmable, EDC does not have to address potential Nitrate discharges into these streams. Should EDC be allowed to continue to adversely impact surface water sources offsite? No corrective action is proposed because the only potential receptors identified are 4 miles away (one drinking water well)...what about the cattle, deer, fish who play in , drink, and utilize this water downstream. Why should adults and children be the only life forms considered. In my opinion, EDC has “dodged the bullet” again, the scope of the risk assessment is too narrow and should be expanded to address potential impacts of excessive infiltration of an excessive amount of nitrates into receiving streams around the EDC plant site. What to do?, please advise.

Under 22.1205 (j) (2) , the Director may consider exposure threats to sensitive environmental receptors and (3) and consider other site specific exposure or potential exposure to ground water. I need to know what is a “sensitive environmental receptor” is in this context. Because we do not have groundwater standards in place we have utilized drinking water standards, yet because the stream is not a drinking water source, or is not “fishable or swimmable” according to a use attainability analysis (UAA). It appears I am left with little recourse to propose specific corrective measures to adress the continued releases of nitrate contaminated groundwater both off the plant site and into receiving streams around the plant.