

TO: The US Department of Energy

FROM: The Colorado Department of Health

SUBJECT: Review and Comment, IM/IRA for Surface Water in OU 2,
903 Pad, Mound, and East Trenches

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Comment 1: Section 2.2.3.2

In the fourth paragraph of this section, there is reference to a hydraulic gradient of 0.02 feet/feet. The proper units to this are foot/foot.

Comment 2: Section 2.2.3.2 Figure 2-7

As this map is contoured, there are several places where the potentiometric surface is above the topographic surface. Some of these places are on or near known surface seeps and it is reasonable to expect that the potentiometric surface would be equivalent to, but not higher than (as shown currently on the map), the ground surface at these locations. There are also several other places on the map where a similar phenomenon is indicated where seeps have not been found. The reverse is also true. Several of the known surface seeps are shown with the potentiometric surface well below their topographic elevation. Please review this figure and correct the contours accordingly (see attached copy of Figure 2-7 for examples of the above).

Comment 3: Section 2.2.3.2 Bedrock Groundwater

Omit the word "flow" from the first sentence of the first paragraph. True ground water flow in the lenticular Arapahoe Formation sandstones has not been completely characterized and may turn out to be a misnomer. Later, in the third and fourth sentences of the same paragraph, reference is made to usable groundwater in the Arapahoe aquifer east of RFP. Add some additional text explaining more precisely where geographically and where stratigraphically within the Arapahoe this water is produced.

In the third paragraph, there is reference again to "flow" in the sands being regionally west to east. If this statement is based on the regional gradient only, then a statement to that effect is necessary. If it is based on other data, then show the data.

ADMIN RECORD

A-DU02-000229

Comment 4: Section 2.3.2 Ground-Water Contamination.

Omit "on a routine basis" from the first sentence of the introductory paragraph. This phrase implies more than RFP can deliver in terms of past sampling regularity and frequency.

Comment 5: Section 2.3.2.1 Figures 2-8, 2-9, and 2-10

These figures show contours of various contaminate plumes but show no data posted next to wells. As presented, a user or reader of this document has to cross-reference these figures with the appropriate appendix which is a laborious and time consuming process. Post the data used to construct the contours next to the appropriate wells.

Comment 6: Section 2.3.3 Soil Contamination

Within the text, wherever there is reference to a surface water, ground water, or sediment sample there is a map that accompanies the discussion that shows where the samples were taken. This section needs a map similar to the others that locates the soil samples so that the reader can locate the soil sample data geographically.

Comment 7: Section 2.5 Site Conditions That Justify an IRA

This section does a poor job of convincing the public that this IM/IRA is justified. Please add text to explain that:

1. Even though the present threat to health and the environment is not immediate, without implementation of this IM/IRA a significant imminent threat could result.
2. If left unchecked, this contamination has a much greater chance of leaving the RFP plantsite even though presently all water is treated before leaving plantsite.
3. Implementation of this IM/IRA will enhance RFP's efforts to prevent the uncontrolled release of contaminated water.
4. By limiting contaminant spreading and, therefore, affected areas, this IM/IRA will save large amounts of future expenditures because future cleanup projects will be smaller.

Comment 8: Section 3.1 Scope of IM/IRA

The first sentence of this section should describe the collected surface water as contaminated surface water.

Comment 9: Section 4.3.1.1 Surface Water Collection

A discussion as to why the proposed design is limited to only "base flow" is necessary so that misconceptions on the purpose and scope of this IM/IRA can be avoided.

Comment 10: Section 4.3.1 Surface Water Collection

In the draft version of this document, there were two figures (Figures 4-3 and 4-4) that were very instructive. There is no reason given in the response to comments as to why these were removed. These figures were helpful in visualizing all the verbage in the text as to how these various collections will be physically constructed and should be included in the final version.

Comment 11: Section 4.4.3.1 Activated Carbon Adsorption

In the "Effectiveness" paragraph, vinyl chloride, methylene chloride, and acetone are mentioned as 1) being below detection limits at SW-61 and 2) not readily adsorbed by GAC. Several questions arise and some clarification in the text is necessary. First, all three of these constituents were detected in various locations in the surface water sample locations in Upper South Walnut Creek. What happens to these chemicals between where they were seen and SW-61? Are they diluted to the non-detection limit, volatilized, or what? Second, since these three are found, and since GAC does a poor job of stripping them from the collected water, what will happen to them?

Comment 12: Section 4.4.3.1 Activated Carbon Adsorption

See Comment 11 as it applies to the "Costs" paragraph.

Comment 13: Section 6.1.1 Surface Water Collection

In the last sentence of the second paragraph, the text says that "the excess flow will return through overflow piping to the drainage way below the weir." Please clarify "way below."

Comment 14: Section 6.3 Additional Documents

Please attach a schedule of deadlines for these documents.

Comment 15: Section 7.10 Cumulative Impacts

The last paragraph of this section needs clarification, particularly regarding discharges from pond B-5. Discussion concerning the need for the discharges, pond B-5 capacity, and why releases will not impact Walnut Creek downstream is necessary.

GENERAL COMMENTS

Comment 1:

In the executive summary, the first paragraph would give the casual reader the impression that this IM/IRA is being done only because EPA and CDH want it done. By omitting the sentence "EPA and CDH consider an interim remedial action for surface water to be a high priority" this incorrect impression would be avoided.

Comment 2: ARAR's - Appendix E

All of the seeps that are part of this IM/IRA as well as the treatment discharge point become part of "Segment 5" of the South Platte Drainage Basin after collection and treatment. Therefore, the standards proposed for Walnut Creek by the Colorado Water Quality Control Commission should be the ARAR's. A list of the constituents and their applicable and relevant standards (ARAR's) follow for parameters that need to be changed or added:

<u>Constituent</u>	<u>ARAR ug/l</u>	<u>Reference</u>
Aluminum	150	CDH Aquatic Life
Cadmium	11	CDH Aquatic Life
Nickel	18.5	RCRA Subpart F

Comment 3: Detection Limits - Appendix E

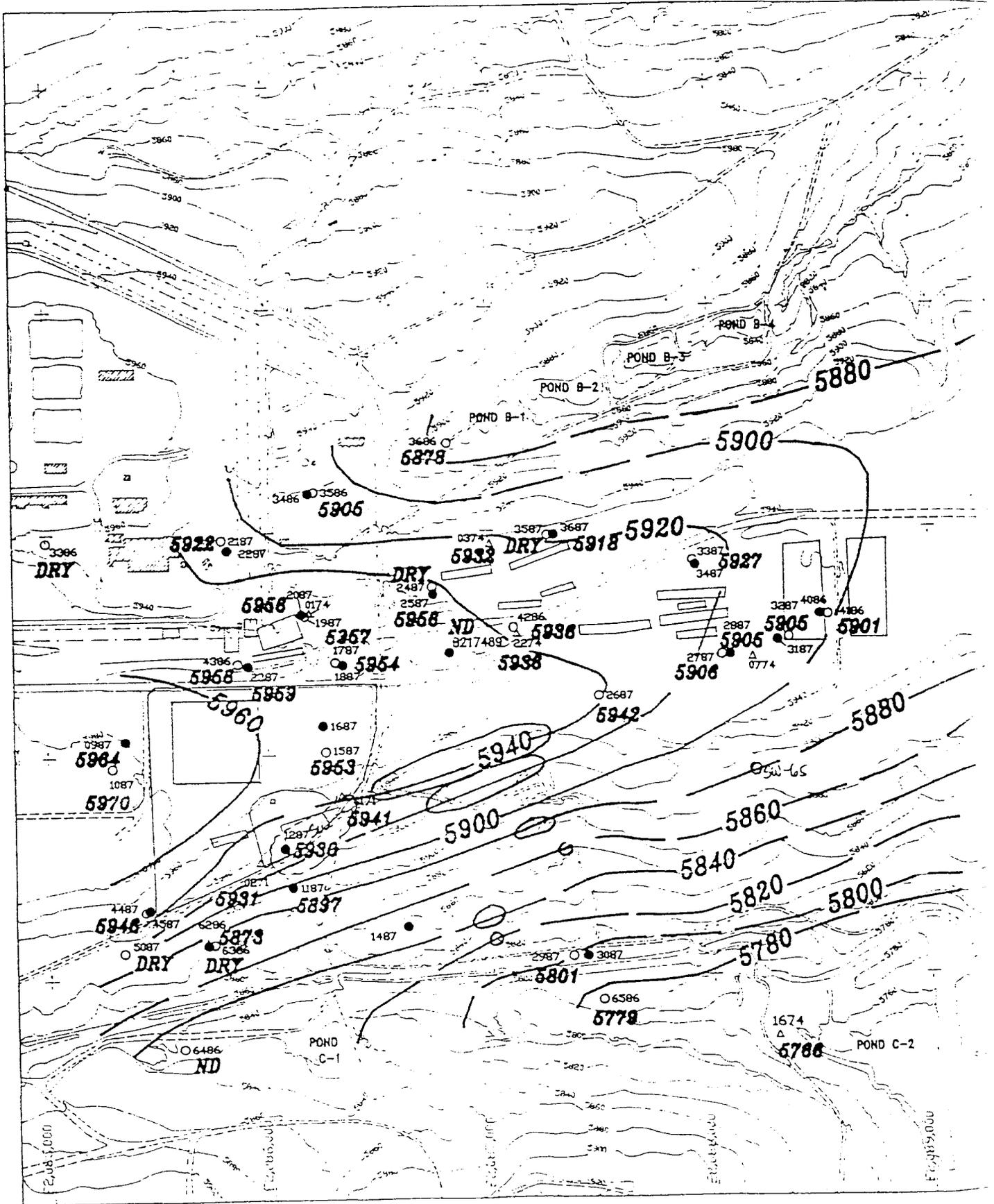
Based upon the list of EPA Methods, detection limits associated with the following constituents are lower than those listed in the IM/IRA document:

<u>Constituent</u>	<u>EPA Method</u>	<u>Detection Limit</u>
Trichloroethene	502.2	1.0 ppb (ug/l)
Tetrachloroethene	502.2	1.0 ppb (ug/l)
1,1 Dichloroethane	502.2	1.0 ppb (ug/l)
1,2 Dichloroethene	502.2	1.0 ppb (ug/l)
Carbon Tetrachloride	502.2	1.0 ppb (ug/l)
Methylene Chloride	502.2	1.0 ppb (ug/l)
Vinyl Chloride	502.2	1.0 ppb (ug/l)

Of these, only Tetrachloroethene and Vinyl Chloride have a standard associated with them that is lower than the ARAR in the IM/IRA and closer to the above listed detection limit. Please correct the detection limits for these constituents and change the ARAR of Tetrachloroethene and Vinyl Chloride to 1.0 ug/l and 2.0 ug/l respectively.

Comment 4:

Because the impending Water Management Plan is such an important document in addressing water quality at RFP, some cross-references at proper points throughout this document would be nice. Tying the two programs together is not required (since the WTP is not part of the IAG) but would be very helpful, particularly in discussing ARAR's, background vs. baseline contaminate levels, site-wide treatment performance standards, and continuing monitoring plans.



9036006.PJ-050890

EXPLANATION



INDIVIDUAL HAZARDOUS SUBSTANCE SITE (IHSS)

5798

POTENTIOMETRIC SURFACE ELEVATION (feet above mean sea level)

ALL DATA BASED ON MEASUREMENTS MADE APRIL 4-8, 1988 INCLUSIVE

5860

LINE OF EQUAL POTENTIOMETRIC SURFACE ELEVATION (feet above mean sea level)—DASHED WHERE APPROXIMATELY LOCATED

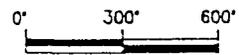
ND

NO DATA

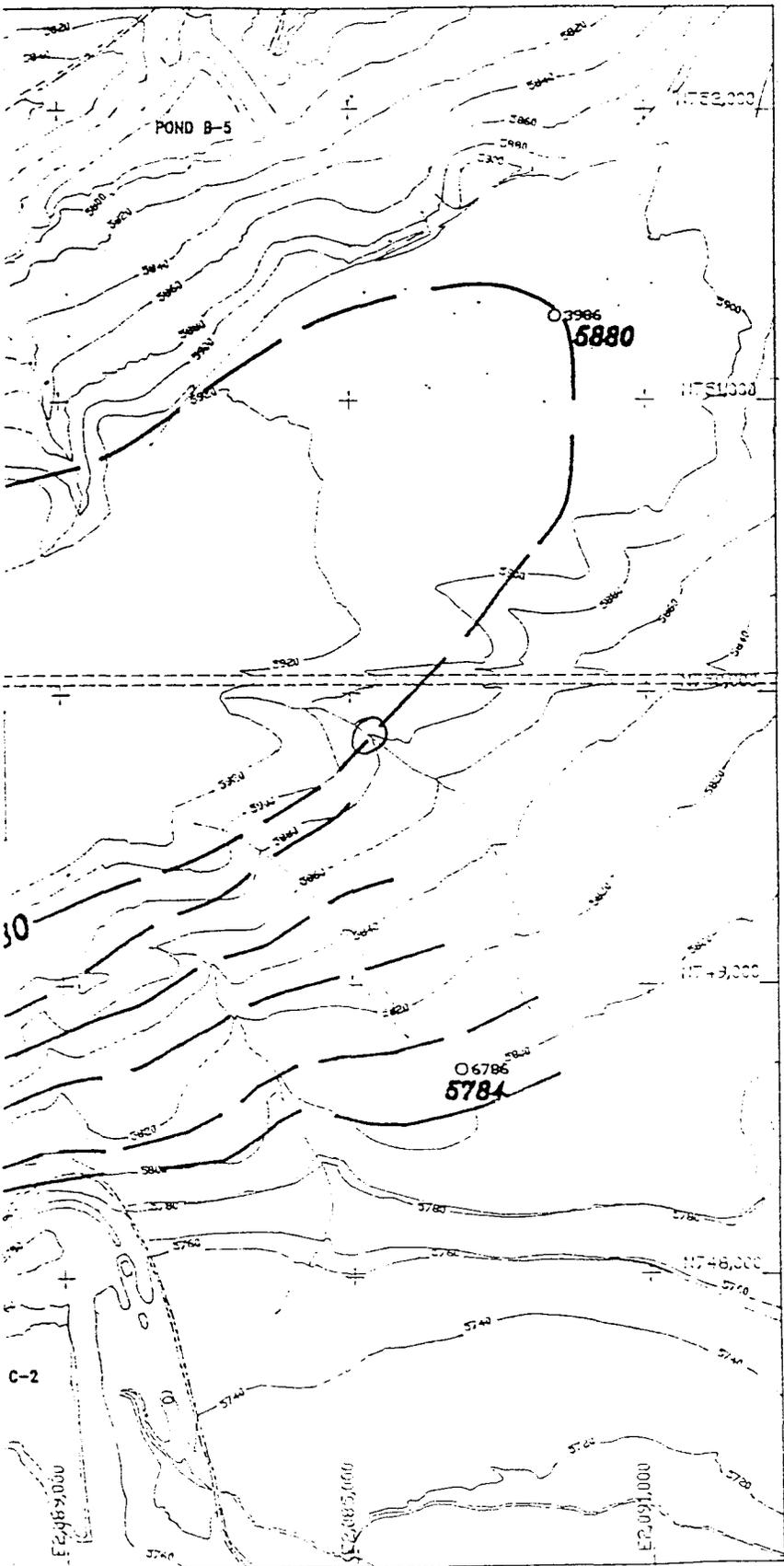
- 2587 ● BEDROCK MONITOR WELL
- 3789 ○ ALLUVAL MONITOR WELL
- 0382 △ PRE-1986 MONITOR WELL



Scale: 1" = 600'



CONTOUR INTERVAL = 20'



U.S. DEPARTMENT OF ENERGY
Rocky Flats Plant
Golden, Colorado

OPERABLE UNIT NO. 2
SURFACE WATER IM/IRA

FIGURE 2-7
POTENTIOMETRIC SURFACE OF THE
UNCONFINED GROUND-WATER
FLOW SYSTEM