

Proposed CAO for PG&E's Chromium in Hinkley Groundwater

November 4, 2015

Item 6

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Outline of Presentation

1. Chronology
2. Comments and Proposed Changes
3. Late Revisions
4. Recommendation
5. Other Presentations (PG&E, IRP Manager, Water Board Prosecution Team)

Chronology for CAO

September 2014 – Water Board workshop

November 2014 – Water Board workshop

January 2015 – CAO draft #1 out for public review

March 2015 – received six comment letters

May 2015 – Advisory Team held workshop

July 2015 – consensus text submitted

September 2015 – CAO draft #2 out for public review

September 2015 – Water Board workshop

September 2015 – received eleven comment letters

November 2015 – Water Board considers final CAO

Comments and Proposed Changes

- a. Long-Term Replacement Water
- b. Lower aquifer cleanup levels
- c. “Uncertain” in northern uncertain plumes
- d. “Interim” in interim maximum background levels
- e. Plume mapping requirements



Comments and Proposed Changes

a. Long-Term Replacement Water

Comments:

- For whole house
- For all indoor uses

Proposed Change:

- For drinking and cooking only
- Legal authority limits to at-risk uses
- OEHHA letter stating low risk for showering and no risk for swamp cooler use

Comments and Proposed Changes

b. Lower aquifer cleanup levels

Comments:

- Cleanup should be to non-detect
- Require on-going remediation

Proposed Change:

- Cleanup discharge linked to PG&E
- Require on-going remediation
- Require background study and remediation feasibility

Proposed Change – **LATE REVISION**

Add text to Finding 34 c), page 6-18

Comments and Proposed Changes

c. “Uncertain” in northern uncertain plumes

Comments:

- Cr(VI) presence is not disputed
- Source of Cr(VI) is disputed
- Background level is uncertain
- No explanation how the term is used

Proposed Change:

- Changed to “disputed”
- Acknowledged evidence questioning source
- Added text to clarify how “disputed” term is used

Comments and Proposed Changes

d. “Interim” in interim maximum background levels

Comments:

- Changes enforceability
- Inappropriate and confusing

Proposed Change:

- Retained “interim”
- Links to completing the USGS background study
- Reinforces intent to change to final numbers
- Added text to clarify how “interim” is used

Comments and Proposed Changes

e. Plume mapping requirements

Comments:

- Should connect monitoring wells $\frac{1}{2}$ mile apart
- Continue mapping for consistency and comparability to previous maps
- Will reopen disagreements with PG&E about mapping requirements
- Gives perception of the plume disappearing in certain areas

Comments and Proposed Changes

e. Plume mapping requirements

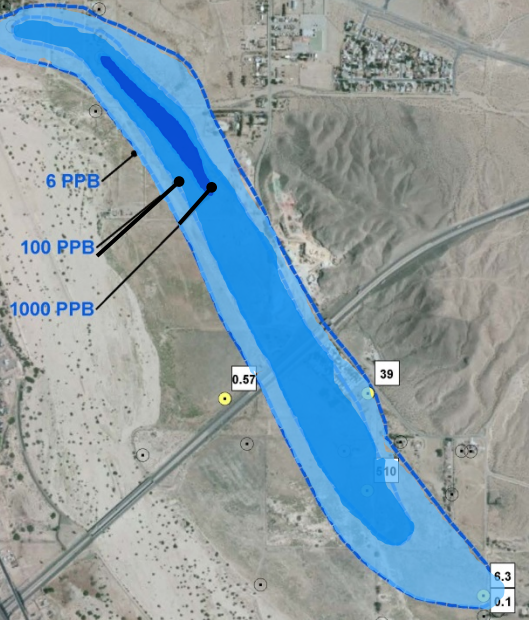
Proposed Change:

- Isoconcentration contour lines will be substantially similar to maps previously required and shows effects of remediation
- Must incorporate all science in drawing the isoconcentration lines, including the USGS results
- Added a dispute resolution process

Residential and Groundwater Monitoring Wells

- Sampled Wells
- January 2015 Sampled Wells
- ▭ January 2015 Estimated Plume Contour

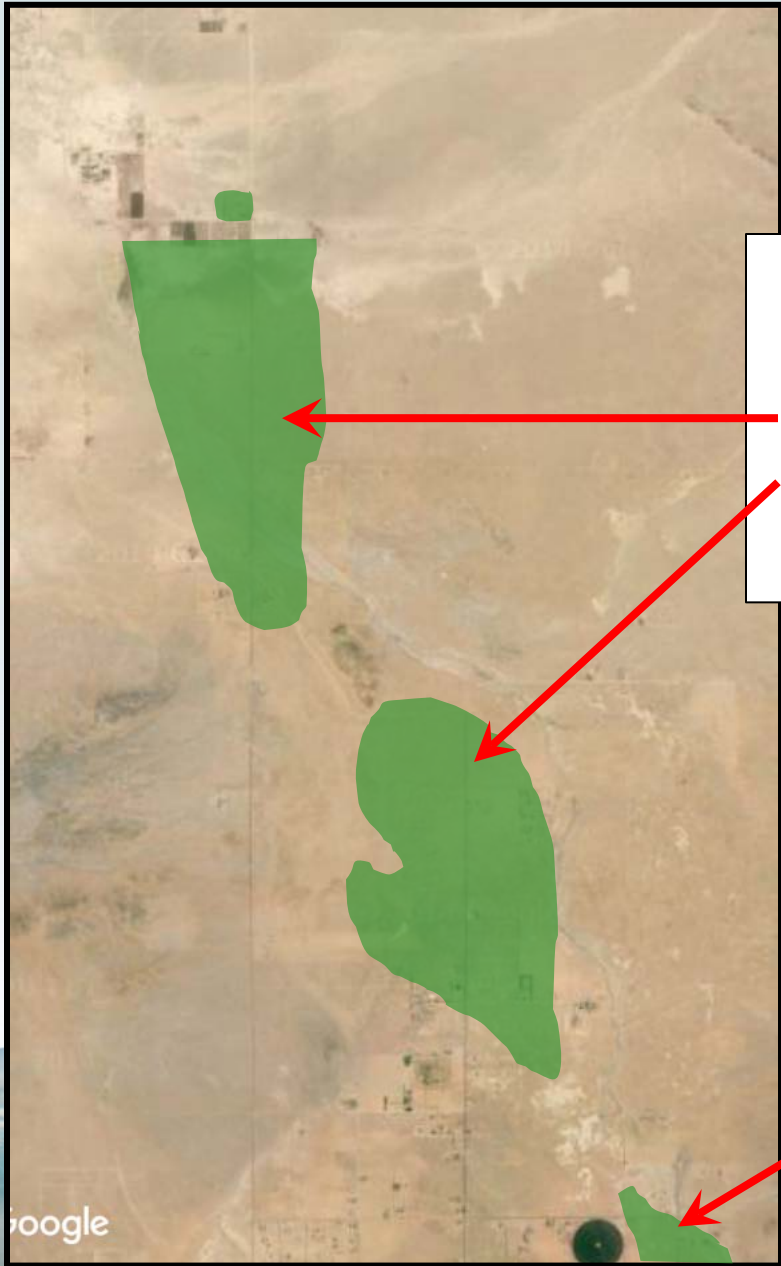
0 2,000 Feet



Perchlorate
isoconcentration
contour lines in
Barstow

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community





**Northern
Disputed
Plumes**

Southern Plume

Previous compliance

Northern Disputed Plumes

PG&E interpretation

google

google

**Previous
compliance**

DC&E interpretation

**isoconcentration
contours**

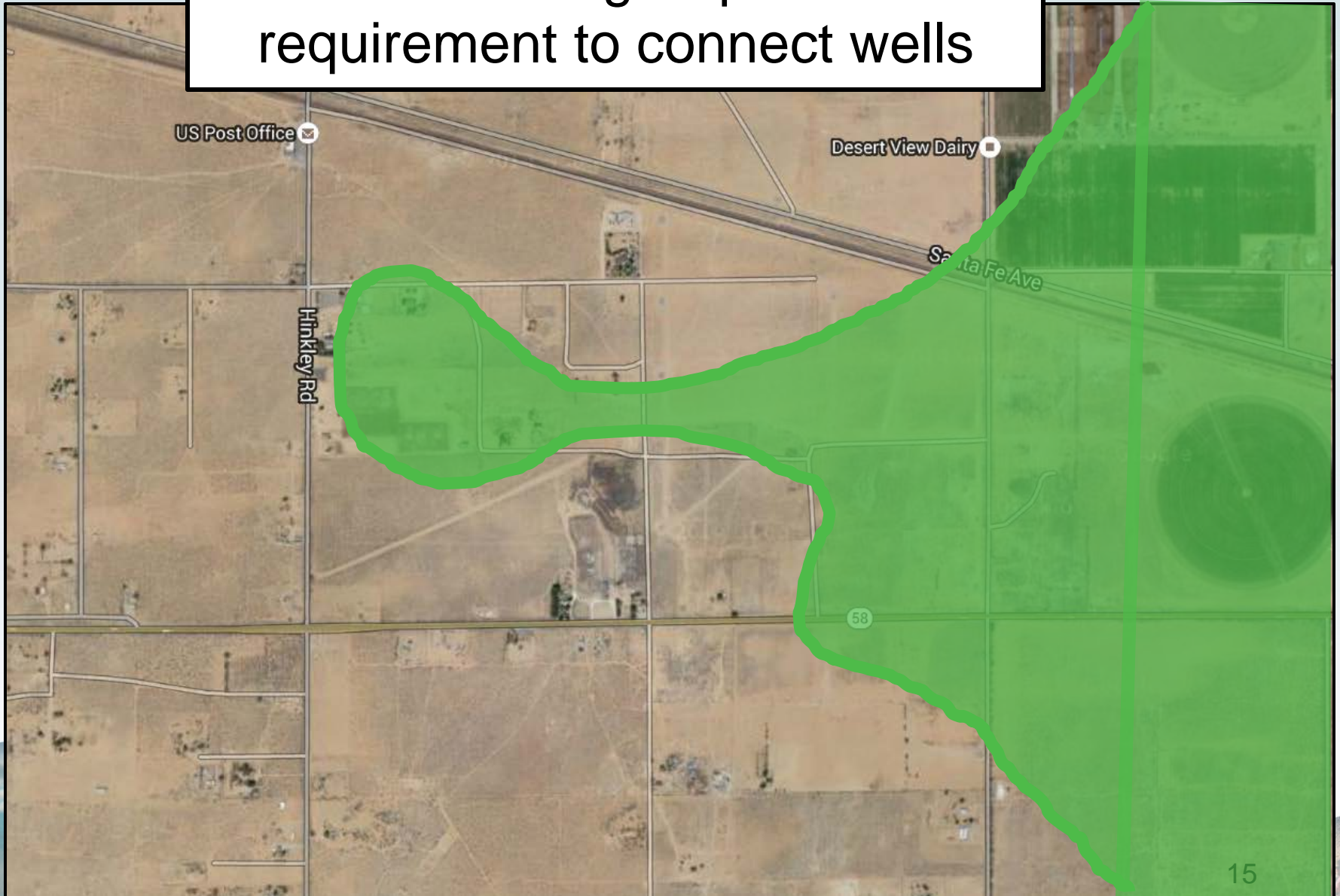
Northern
Disputed
Plumes

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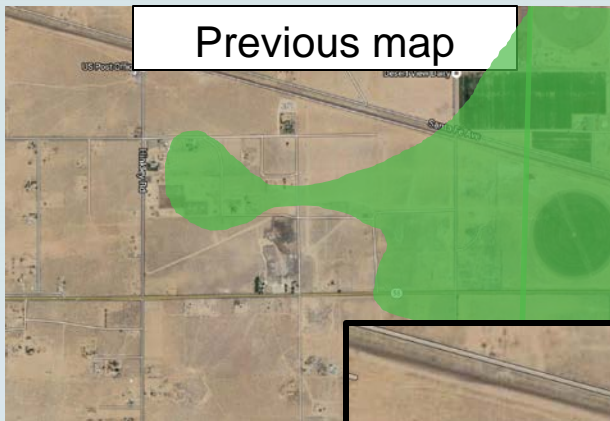
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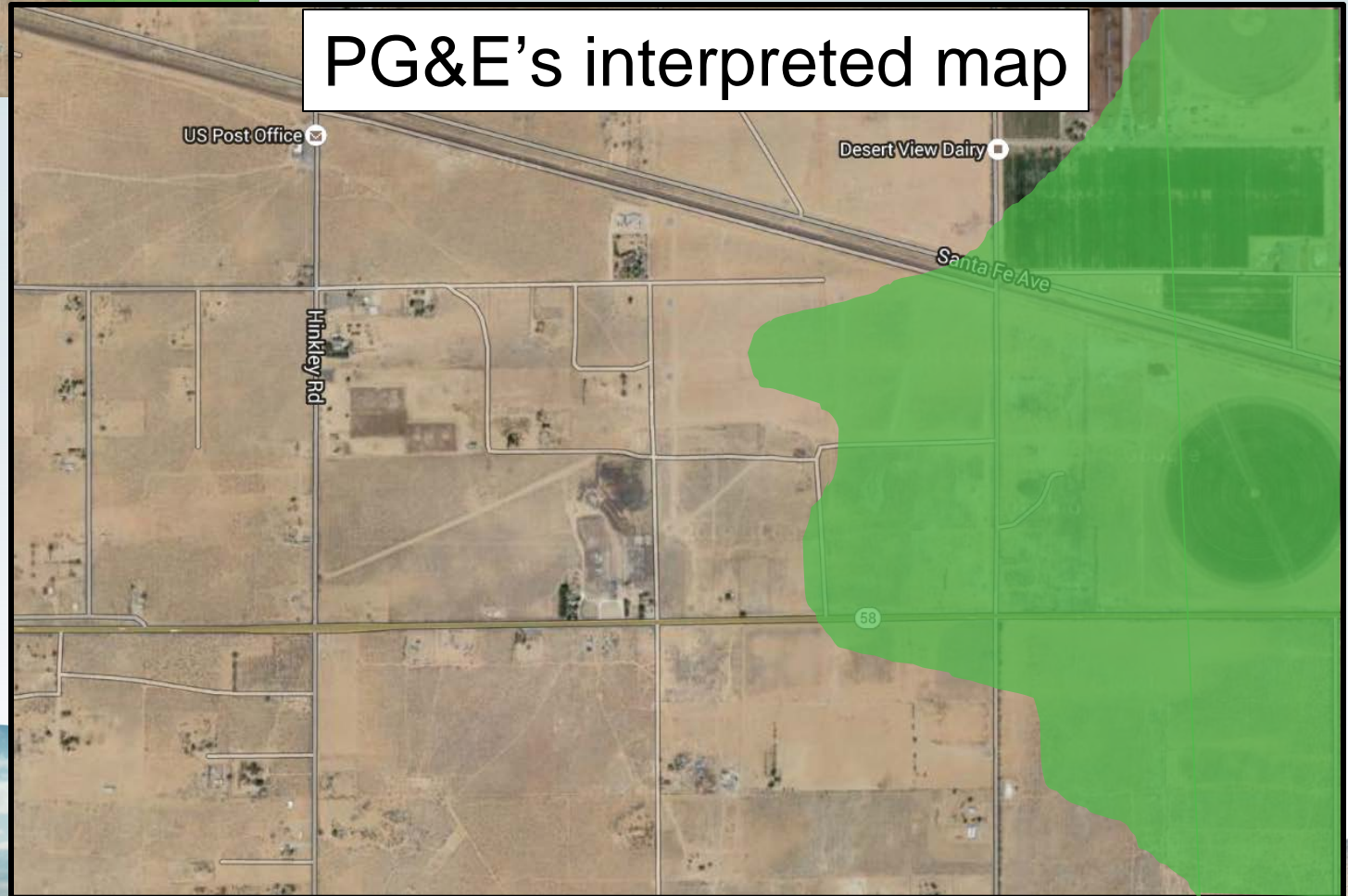
Western Finger- previous requirement to connect wells



Previous map



PG&E's interpreted map

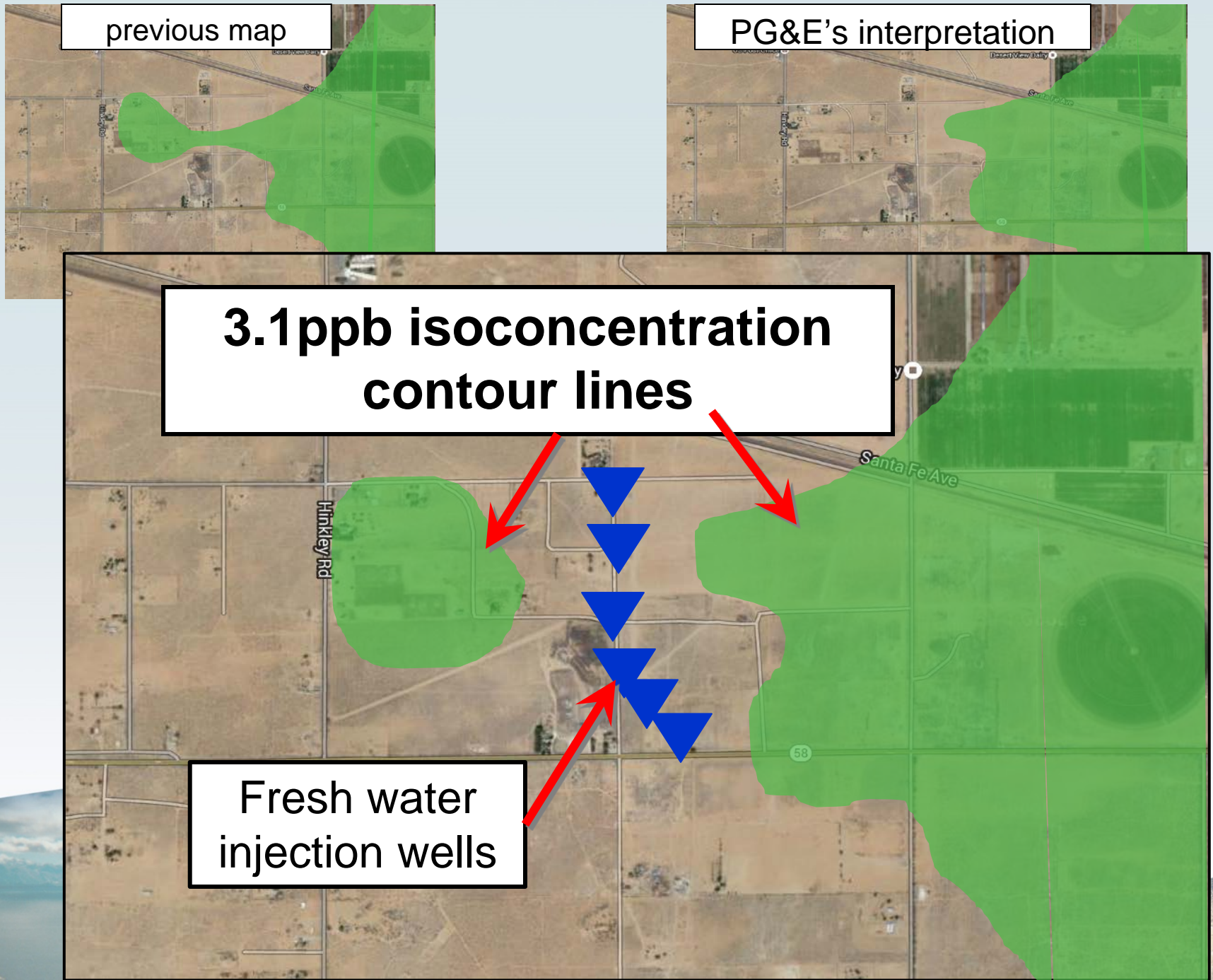


previous map

PG&E's interpretation

**3.1ppb isoconcentration
contour lines**

Fresh water
injection wells



Late Revisions

1. Page 6-18, Finding 34 b), delete “directly and unequivocally”
2. Page 6-18, Finding 34 c), change 0.02 to 0.2ppb
3. Page 6-18, Finding 34 c), add sentence stating the need to assess the effects of remediation.
4. Page 6-22, Finding 47, remove last sentence regarding DDW advice.
5. Page 6-24, add Findings about Sept 1 draft, 30-day comment period, Sept 16 workshop, and Sept 30 comments received.
6. Page 6-25, Order IV.B, add “IV.A.1”
7. Page 6-33, Order VII.2.b), add DDW consultation

Recommendation

Adopt the Order and all nine Attachments as proposed with late revisions

