



March 5, 2019

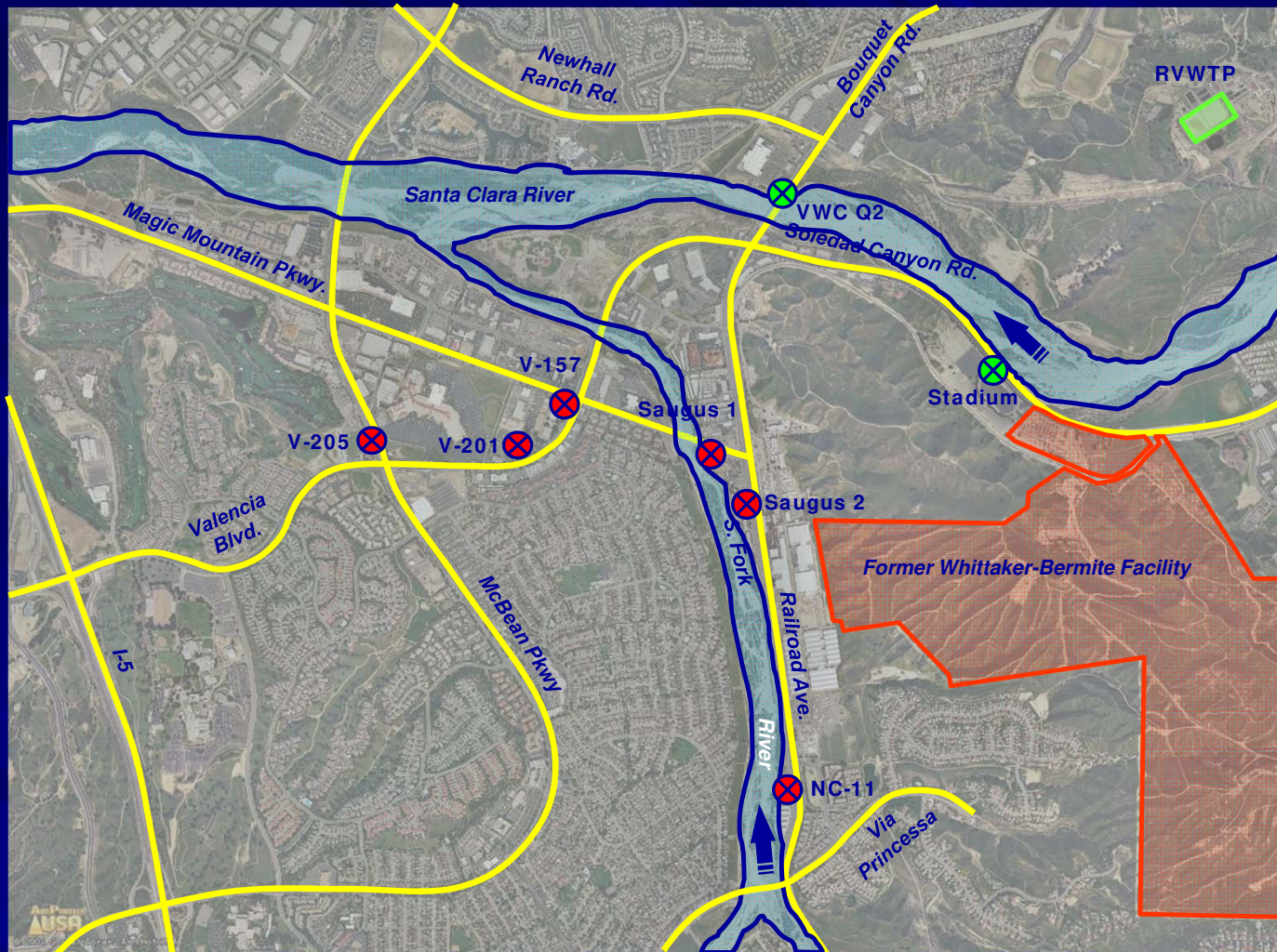
Update on Perchlorate Related Activities

Board of Directors

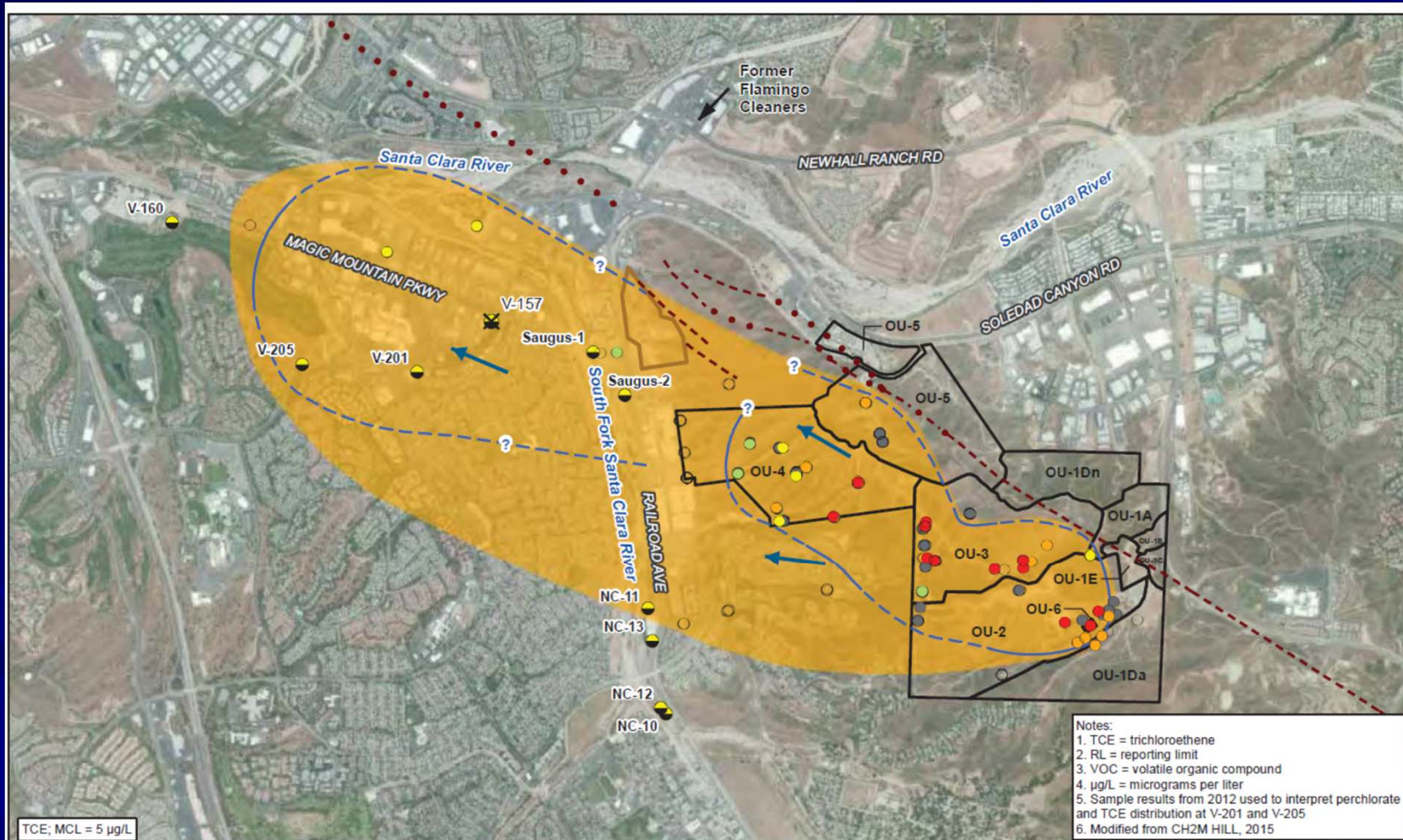
Outline

1. Introduction/History/Background
2. SPTF
3. V-201
4. V-205
5. VOCs
6. Replacement Wells status

Wells with Perchlorate Detected



Saugus Formation Perchlorate Plume



Saugus Formation Wells Affected by Perchlorate

Well	Lost Capacity (GPM)	Restored Capacity (GPM)	Capacity Deficit (GPM)	Action Taken
<i>Per Settlement Agreement</i>				
V-157	1,500	1,500	0	Replaced with Well V-206
NC-11	1,200	0	(1,200)	Taken out of service
Saugus 1	2,600	1,100	(1,500)	Rehabilitated with treatment
Saugus 2	2,600	1,100	(1,500)	Rehabilitated with treatment
Subtotal	7,900	3,700	(4,200)	
<i>Post Settlement Agreement</i>				
V-201	2,400	2,000	(400)	Will be restored with treatment
Total	10,300	5,700	(4,600)	

Background

- 💧 **Settlement Agreement executed 2007**
- 💧 **Cost recovery for design, construction and O&M of Saugus 1 and 2 wells**
- 💧 **Perchlorate > MCL**
- 💧 **VOCs detected less than < MCL**
- 💧 **DDW operating permit**

Saugus Perchlorate Treatment Facility (SPTF)

- ◆ **Operated at 2,200 gpm (3,500 AFY) since 2011**
- ◆ **Performance has improved**
- ◆ **Overcome operational challenges**
- ◆ **Whittaker Bermite began onsite containment system (SFTP) 2018**
- ◆ **Trace amounts of TCE persist, but are decreasing**
- ◆ **Containment Evaluation**

DDW Memo 97-005

Guidelines for permitting waters from
“*extremely impaired*” sources

Operational Goal

*“ . . . CLWA shall establish operational procedures and verification measures , including the minimum blending ratio required, to achieve the operational goal of non-detectable levels of all regulated volatile organic compounds (VOCs) at the blending locations (purveyor turnouts) . . . ”**

* CLWA Operational Permit Amendment 2
Condition 20 (DPH, now SWRCB DDW)

Operational Goal

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In 2018, 99% of samples were non-detect.

* CLWA Operational Permit Amendment 2
Condition 20 (DPH, now SWRCB DDW)

Well V-201

- 💧 **Perchlorate detected in 2010**
- 💧 **Well shut down**
- 💧 **Design and construction complete**
 - **Paid directly by Whittaker per V-201 Agreement**
- 💧 **Started up in November 2017**
- 💧 **Operating capacity is 2,000 gpm (3,200 AFY)**
- 💧 **DDW permit pending**
- 💧 **Currently discharging to SC River**
 - **Sulfate restrictions**
 - **Flow <1,000 gpm**
 - **Blended with SWP water**

Well V-205

- 💧 **Down gradient of V-201**
- 💧 **Trace levels of perchlorate detected in 2010**
- 💧 **Well shut down**
- 💧 **Levels exceeded MCL in 2017 during routine sampling**
- 💧 **Whittaker given notice on April 2018**

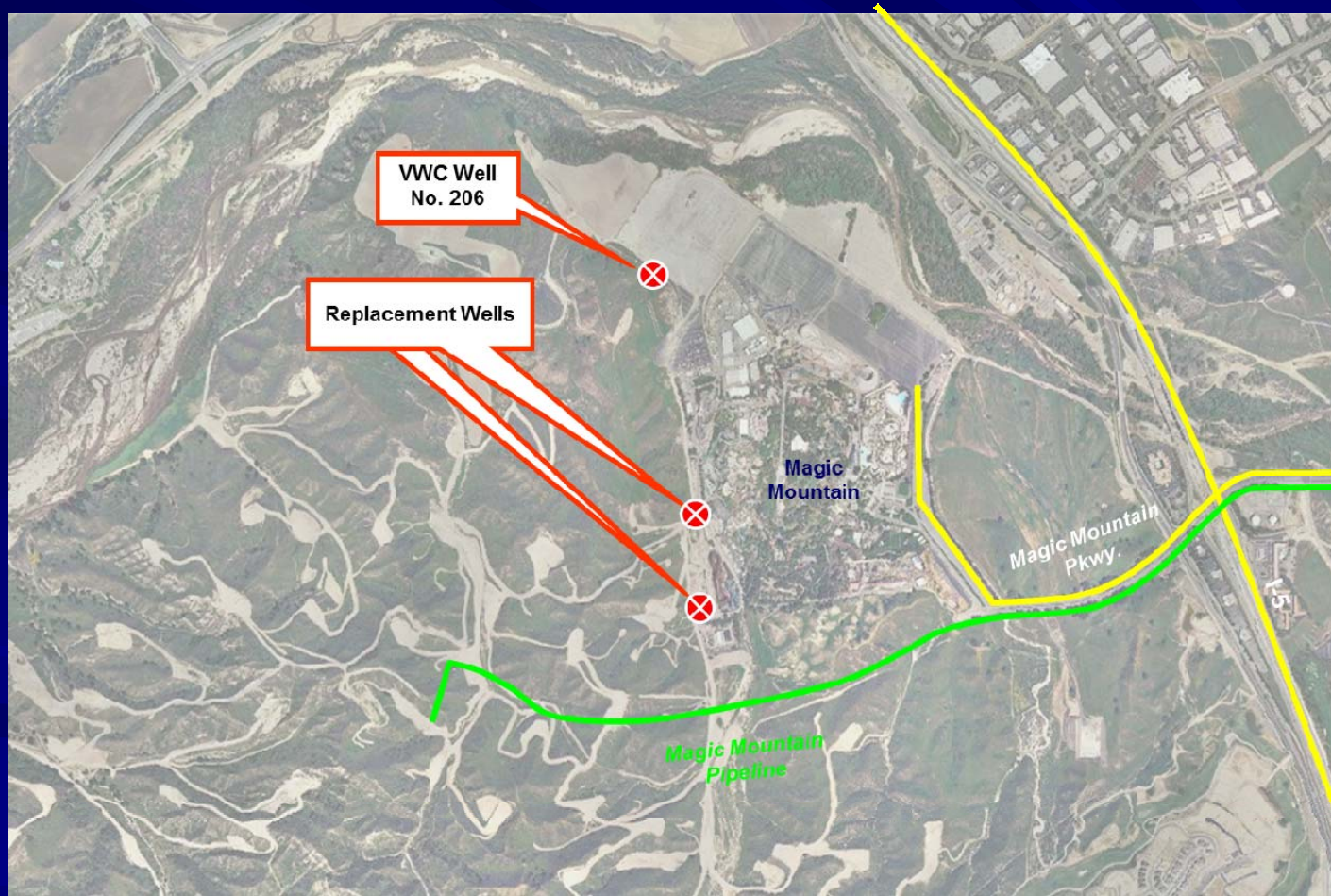
VOCs

- 💧 All wells (S1, S2, V-201, V-205) comply with MCL
- 💧 97-005 applies
- 💧 Source investigation—2015
 - Whittaker likely source
 - Whittaker disputes
- 💧 Issue is in litigation
- 💧 NCP/CERCLA Process
- 💧 Possible Compliance Agreement with DDW
- 💧 Affects V-201 permit
- 💧 Design and construction, if needed, after NCP

Replacement Wells

- ◆ Specified in Settlement Agreement
 - Restore lost capacity
- ◆ Two wells
 - 2,000 gpm (3,200 AFY) each
 - 4,000 gpm (6,400 AFY) total
- ◆ Site and pipeline work
- ◆ Cost Recovery
 - Whittaker obligated for up to \$8.4 million

Replacement Wells Locations



Questions