



Update On Citrus Report

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Draft Analysis Report



- Preliminary results on citrus sampling results presented to Food Safety Panel (FSP) at public meeting June 28th
- Draft technical report on citrus samples sent to Food Safety Panel on September 16th
- Discussed draft report at FSP working meeting September 20th
- FSP delivered comments and suggestions on draft report in October
- Draft technical report being revised to address comments in November - January

FSP & CVRWQCB Comments (Briefly)



- Introduction
 - Add more explanatory text
 - Add detailed background section
 - Project goals & objectives, selection of analytes, etc.
- Results & Discussion
 - Further explain mass spectra results
 - Conduct nonparametric analysis
 - Discuss limitations, detection levels, etc.
- Methods Section
 - Add details on sampling procedures, statistical methods, add CASRN, etc.
 - Site description
- Add appendix including all analytical results

Further Data Analysis

- Conducted nonparametric statistical analysis of analytical data
 - Addressed concerns about applicability of parametric analysis (ANOVA, etc.) to data
 - Wilcoxon/Kruskal-Wallis Tests (Rank Sums)
 - Median Test (Number of Points Above Median)
 - Kolmogorov Smirnov Two-Sample Test
 - Results were consistent with results from parametric statistics
- Writing description of statistical tests & justification



Discuss Limitations

- Conducted statistical tests on detection limits & reporting limits
 - Putting in context of data quality objectives & risk assessment
 - Results now an appendix in report
- Evaluation of “what is not being measured”
 - Evaluation of data gaps
 - Examined analytical measurements in context of what is know about oil field chemicals
 - Shonkoff et al. 2016 report for Food Safety Panel



Name	CASRN	Included in Analysis	Notes
1,2,3 Trimethylbenzene	526-73-8	No	
1,3,5 Trimethylbenzene	108-67-8	Yes	EPA 8260B
Acrolein	107-02-8	Yes	EPA 8260B
Aluminum chloride hydroxide	12042-91-0	No	
Aluminum stearate	300-92-5	No	
Antimony trioxide	1309-64-4	Yes	EPA 6020A/6020B
Cellophane	9005-81-6	No	Solid
Coke, petroleum, calcined	64743-05-1	No	Solid
Copper sulfate pentahydrate	7758-99-8	Yes	EPA 6020A/6020B
Crystalline silica (quartz)	14808-60-7	No	Solid
Cumene (isopropylbenzene)	98-82-8	Yes	EPA 8260B
Cyclohexylamine	108-91-8	No	
Dinonylphenyl polyoxyethylene	9014-93-1	No	
Ethanol	64-17-5	No	Labile in environment
Ethyl acetate	141-78-6	No	Labile in environment
Ethylbenzene	100-41-4	Yes	EPA 8260B
Ethylene glycol	107-21-1	No	Labile in environment
Fatty acid oxyalkylate	70142-34-6	No	
Glutaraldehyde	111-30-8	No	Labile in environment
Heavy aromatic naphtha	64742-94-5	No	Mixture
Hydrochloric acid	7647-01-0	No	Labile in environment
Hydrofluoric acid	7664-39-3	No	Labile in environment
Hydroquinone	123-31-9	No	



Name	CASRN	Included in Analysis	Notes
Hydrotreated light distillate	64742-47-8	No	Mixture
Iodine	7553-56-2	No	
Isoquinoline	119-65-3	No	
Kerosene	8008-20-6	No	Mixture
Lithium carbonate	554-13-2	Yes	EPA 6010B
Lithium chlorate	36355-96-1	Yes	EPA 6020A/6020B
Lithium hypochlorite	13840-33-0	Yes	EPA 6020A/6020B
Methanol	67-56-1	Yes	EPA 8015D
Naphthalene	91-20-3	Yes	EPA 8270C-SIM/8260B
Nickel sulfate	7786-81-4	Yes	EPA 6020A/6020B
Polyamine	64114-46-1	No	
Propargyl alcohol	107-19-7	No	Labile in environment
Silica, crystalline, tridymite	15468-32-3	No	Solid
Siloxanes and silicones	63148-62-9	No	
Sodium dichloroisocyanurate	2893-78-9	No	
Sodium hypochlorite	7681-52-9	No	Labile in environment
Stearic acid	57-11-4	No	Labile in environment
Stoddard solvents	8052-41-3	No	Mixture
Sulfuric acid	7664-93-9	No	Labile in environment
Toluene	108-88-3	Yes	EPA 8260B
Xenon radionuclide	14932-42-4	No	Gas
Xylene	1330-20-7	Yes	EPA 8260B
Zinc chloride	7646-85-7	Yes	EPA 6020A/6020B



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