GROUNDWATER CHARACTERIZATION AND MONITORING WELL INSTALLATION

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PROFESSIONAL CERTIFICATION

Groundwater Characterization and Monitoring Well Installation Cargill Salt – Alameda Facility Alameda California

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1 INTRODUCTION

This report presents the results of groundwater sampling and monitoring well installation activities conducted by Crawford Consulting, Inc. (CCI) and Conor Pacific/EFW at the Cargill Salt Dispensing Systems Division facility, 2016 Clement Avenue in Alameda, California (Figure 1). The work was conducted to characterize volatile organic compounds (VOCs) in groundwater consistent with a request from the Alameda County Environmental Health Services (ACEHS, 1999) and a workplan submitted to the ACEHS (CCI, 1999). This section reviews the site background and summarizes the investigative and remedial activities to date.

1.1 SITE BACKGROUND

Alameda is an island on the east side of San Francisco Bay, separated from Oakland by a tidal canal (Figure 1). The island is underlain by unconsolidated marine and non-marine sediments, and is part of the East Bay Plain Groundwater Basin. The site is underlain by the Merritt Sand, and lies within the Merritt Sand Outcrop groundwater subarea (Muir, 1993). The Merritt Sand is not considered a primary source of water supply because of its limited areal extent and thickness. According to the Alameda County Flood Control and Water Conservation District, water from the area should only be used for irrigation or other non-potable uses because the Merritt Sand is a relatively thin unit susceptible to anthropomorphic contamination (Hickenbottom and Muir, 1988). There are no known supply wells within ½ mile down- or cross-gradient from the site (Groundworks Environmental, Inc. [GEI], 1995).

Cargill's Alameda facility is located on a rectangular lot in an industrial and residential neighborhood. The facility building occupies approximately one-third of the site and is separated from the vacant, unpaved side of the lot by an asphalt driveway (Figure 2). The site is bordered by a sheet-metal shop and a residential lot to the northwest, an apartment complex to the southwest, and a residential lot to the southeast.

From 1951 to 1978, the Alameda facility produced salt-dispensing units, which required casting and milling aluminum parts. Casting now occurs off site; the facility still mills and repairs salt-dispensing units.

Constituents of concern associated with site operations have included casting sands with elevated concentrations of metals, and solvents, machine oils, and grease used in casting and milling operations. As discussed below, previous investigations and remedial activities have investigated and remediated metals and VOCs in vadose-zone soil.

1.2 SUMMARY OF INVESTIGATIVE AND REMEDIAL ACTIVITIES

Cargill Salt initiated site investigative activities in 1993 to determine if facility operations had impacted site soils. Cargill Salt submitted the results of the soil sampling investigation to the ACEHS in October 1993 along with a workplan for excavation and disposal of impacted soils and assessment of potential impact to groundwater (GEI, 1993).

After approval of the workplan by ACEHS, Cargill Salt conducted several phases of soil remediation and groundwater characterization. Surficial soils impacted by metals were excavated for disposal off site. Vadose-zone soils with the highest degree of impact by VOCs were also excavated for off-site disposal (Figure 2).

The results of these activities were submitted to the ACEHS in a report, *Soil and Groundwater Investigations and Remedial Activities, July 1993 – September 1994, Cargill Salt – Alameda Facility, Alameda, California* (GEI, 1995). Recommendations for additional work to further delineate the lateral and vertical extent of VOCs in groundwater beneath the site were presented in the report.

A workplan for the additional delineation of VOCs in groundwater, *Workplan for Groundwater Characterization and Monitoring Well Installation*, 2016 Clement Avenue, Alameda, California (CCI), was submitted to the ACEHS in July 1999. After approval of the workplan by the ACEHS, Cargill Salt conducted groundwater sampling and well installation activities during August and November of 1999.

This report presents the procedures and results for groundwater sampling and monitoring well installation work conducted to further delineate the extent of VOCs in groundwater at the facility.

2 PLUME CHARACTERIZATION

The lateral and vertical extent of VOC impact to groundwater at the Alameda facility was further characterized by conducting a groundwater sampling program on August 16, 17, and 18, 1999. Conor Pacific/EFW conducted the work under County of Alameda Public Works Agency drilling permit number 99WR468 (Appendix A), and was supervised by CCI. The plume characterization program involved collecting depth-discrete groundwater samples along two transects positioned across the vacant lot of the facility (Figure 2) and analyzing the samples for VOCs. The extent of VOCs in groundwater defined by this task was then used to locate groundwater-monitoring wells for monitoring of the VOC plume.

2.1 PROCEDURES

Prior to conducting the groundwater-sampling program, all boring locations were marked and Underground Services Alert (USA) was notified. All boring locations were cleared for underground utilities by Cruz Brothers of Scotts Valley, California.

The groundwater sampling program consisted of using a groundwater-sampling probe to collect four samples at approximately 7.5, 11.5, 16.5, and 22.5 feet below ground surface (bgs) at six equally-spaced locations along the two transects shown on Figure 2. One additional groundwater grab sample was collected at a depth of 27.5 feet bgs from the sampling location most immediately downgradient from the soil excavation area where the highest concentrations of tetrachloroethene (PCE) were detected during previous work. The locations of the sampling points were chosen to provide good vertical and lateral definition of VOCs in on-site groundwater near the source area and further downgradient.

Grab samples were collected with the help of Precision Sampling, Inc. of Richmond California. Precision's small Vibra-Push rig was used to advance 1.75-inch-diameter steel drive casing equipped with a 1.5-foot-long retractable stainless steel screen and drop off tip. After reaching a target sample depth the drive casing was pulled back to expose the screen to the aquifer and allow groundwater to fill the drive casing. Grab samples were then collected from the drive casing using a stainless steel bailer. After collecting a sample the drive casing and screen were withdrawn from the boring to be cleaned. To collect the next deepest sample at each boring location, clean drive casing, screen, and a new drop off tip were advanced

through the same borehole to the next target depth and the sampling procedure was repeated. All down-hole equipment was steam cleaned before use. Rinsate was collected in 55-gallon drums for disposal off site.

After collecting samples from the four target depths at each boring, the borings were grouted to ground surface using a cement grout. Grout was tremied to the bottom of each boring using the drive casing of the sampling system.

All grab groundwater samples were properly preserved in 40-milliliter sample vials. Sample vials were labeled and stored in a cooler chilled with blue ice for delivery to the laboratory. Samples were submitted with appropriate chain-of-custody documentation to Sequoia Analytical for laboratory analyses of U.S. Environmental Protection Agency (EPA) Method 8010 VOCs using EPA Method 8021B. Sequoia Analytical is a state-certified laboratory in Petaluma, California.

2.2 FINDINGS

Certified analytical reports for the analyses of groundwater grab samples are presented in Appendix B. The results of the laboratory analyses are summarized in Table 1. Cross-sectional isoconcentration plots of PCE and trichloroethene (TCE) are shown on Figures 3 and 4.

Five VOCs including PCE, TCE, 1,1-dichloroethene (1,1-DCE), cis-1, 2-DCE, and 1,1,1-trichloroethane (1,1,1-TCA) were detected in groundwater at concentrations from 0.532 to 2090 micrograms per liter (µg/l). As shown on Table 1, PCE was the predominant VOC detected similar to previous investigation results. The other VOCs are almost exclusively detected along the downgradient transect. The presence of TCE and cis-1, 2-DCE are most likely related to the presence of PCE, as both TCE and cis-1, 2-DCE are known to be degradation products of PCE. 1,1-DCE is a known breakdown product of both PCE and 1,1,1-TCA (Dragun, 1988). Thus the increased proportion of breakdown products detected downgradient indicates that PCE is naturally degrading.

PCE and TCE isoconcentrations plotted in Figures 3 and 4 show the lateral and vertical extent of the VOC plume across the facility. The southern, upgradient transect (borings B-1 through B-6, Figure 3) shows the VOC plume at highest concentrations near boring B-1, next to the fence line. The plume along this transect extends as far southeast as the paved driveway at the facility and likely extends partially under the northwest adjacent property. Based on the definition of the plume core shown in Figure 3 and the site's groundwater flow direction (see section 3.2.3 and Figure 7), it is estimated that VOCs in groundwater may extend laterally approximately 20 feet further to the northwest. Thus the total plume width at this transect is estimated to be approximately 50 feet wide. The vertical extent of the plume along this transect is approximately 23 feet bgs, near borings B-2 and B-3.

The northern, downgradient transect (borings B-7 through B-12, Figure 4) shows a more laterally extensive and deeper plume core located between borings B-9 and B-10. Along this transect, the plume again extends partially off the facility to the northwest. Similar to what was estimated for the upgradient transect and for the same reasons, VOCs in groundwater probably extend less than 20 feet further to the northwest. The southeast margin of the plume along the northern transect is estimated to extend beyond boring B-12 approximately 20 feet. The total plume width at this transect is estimated to be approximately 70 feet.

Information from previous investigations, including on-site source area results and results for grab groundwater from Clement Avenue, indicate that the VOC plume is approximately 200 feet long and extends approximately 40 feet off site. Previous investigations detected 22 μ g/l PCE at upgradient boring AGB-2 next to the southern property boundary, and 4.2 μ g/l PCE at downgradient boring AP-3 in Clement Avenue near the sanitary sewer (Figure 5) (GEI, 1995).

3 MONITORING WELL INSTALLATION

The position of the VOC plume delineated by the plume characterization program was used to select appropriate locations for three groundwater-monitoring wells. Two monitoring wells (MW-1 and MW-2) were proposed along the core of the VOC plume near boring B-1 and B-10 (Figure 2). A third monitoring well (MW-3) was proposed to monitor groundwater outside of the plume. Proposed well locations were approved by the ACEHS after review of the VOC isoconcentration plots presented in the previous section. Monitoring well installation activities were conducted in November and December 1999. Conor Pacific/EFW performed the work under County of Alameda Public Works Agency drilling permit number 99WR468 (Appendix A), and was supervised by CCI. The following section discusses monitoring well installation procedures and findings.

3.1 PROCEDURES

Monitoring well installation activities conducted at the Alameda facility included well installation, development and sampling, and surveying. Prior to installing the monitoring wells, well locations were marked and Underground Services Alert (USA) was notified. All monitoring well locations were cleared for underground utilities by Cruz Brothers of Scotts Valley, California.

3.1.1 Well Installation

Monitoring wells MW-1, MW-2, and MW-3 were installed on November 8, 1999 by Precision Sampling, Inc. of Richmond California under the supervision of Conor Pacific/EFW and CCI. Precision's small Vibra-Push rig was used to advance a 2.5-inch-diameter steel drive casing equipped with a 2-inch-diameter, 3-foot-long, butyrate-lined inner soil-sampling barrel.

Monitoring well borings were started by hand auger to four feet bgs to facilitate placement of a surface seal material and well monument during well construction. Soil samples were then collected using the Vibra-Push rig by advancing the drive casing and core barrel in three-foot intervals. After advancing each interval the core barrel was retrieved while the outer drive casing was left in place to keep the boring open and minimize vertical cross contamination.

Each section of soil core was removed from the sample barrel and logged using the Unified Soil Classification System. The sample barrel was then re-lined and lowered through the outer drive casing to be advanced again. This process was repeated until the desired depth of each boring was reached. The borings for monitoring wells MW-2 and MW-3 were advanced to 18 feet bgs, and the boring for MW-1 was advanced to 22 feet bgs. Hydrostratigraphic profiles for each boring are included in Appendix C.

Small-diameter groundwater monitoring wells were then constructed in each of the borings. The monitoring wells were constructed within the outer drive rods using 1-inch-diameter, Schedule 40, flush-threaded PVC casing and 0.010-inch, machine-slotted screen. Based on the results of the transect analyses, a twelve-foot interval of groundwater was screened from 5 or 6 feet bgs to 17 or 18 feet bgs. A sand pack (030-grade) was placed in the annular space around the casing from the bottom of the open boring to approximately 1.0 foot above the top of the well screen. At least a 2-foot-thick seal of bentonite pellets was placed above the sand pack. Above the bentonite, a sanitary seal of neat cement was placed to within one foot of the ground surface. A water-tight vault was installed at the surface. All well heads were capped with water-tight locking expansion well caps. Construction diagrams for each monitoring well are included in Appendix C.

All down-hole drilling equipment, casing, and screen were steam cleaned before use. Rinsate and soil cuttings were collected in 55-gallon drums for disposal off site.

3.1.2 Well Development and Sampling

Conor Pacific/EFW developed and sampled monitoring wells MW-1, MW-2, and MW-3 on November 16, 1999. Surge and bail techniques were used to develop each monitoring well. Purge water was monitored for temperature, electrical conductivity (EC), and pH. Imhoff cones were used to quantify sand and silt quantities of the purge water. During this process several casing volumes of water were removed from the well. Well development forms for each well are included in Appendix D.

At the completion of well development each monitoring well was sampled using a clean stainless steel bailer. All groundwater samples were properly preserved in 40-milliliter sample vials. Sample vials were labeled and stored in a cooler chilled with blue ice for

delivery to the laboratory. Samples were submitted with appropriate chain-of-custody documentation to Sequoia Analytical for laboratory analyses of EPA Method 8010 VOCs using EPA Method 8021B.

3.1.3 Well Surveying

Wade Hammond Surveyors of Newark, California, surveyed the locations and elevations of monitoring wells MW-1, MW-2, and MW-3 on December 3, 1999. Monitoring wells were surveyed for northing and eastings, top of casing elevations, and monument elevations (elevations were recorded relative to mean sea level [MSL]). The locations of the north and southwest corners of the facility building were also surveyed. Survey results are presented in Appendix D and are also included on monitoring well hydrostratigraphic logs and well construction diagrams (Appendix C).

3.2 FINDINGS

3.2.1 Hydrostratigraphy

Soil encountered in borings for wells MW-1, MW-2, and MW-3 are described in the hydrostratigraphic profile for each well (Appendix C). The soils encountered in each boring were similar to each other and previous borings. Silty and clayey sands with lenses of sandy clay were encountered. In the boring for MW-2, silty and clayey sands were encountered to a depth of 11 feet, with a sand lens at 4 to 5 feet bgs, above first encountered water. A sandy clay lens was encountered from approximately 11 to 12 feet bgs. Silty and clayey sands were again encountered beneath the sandy clay to a depth of 18 feet. The sandy clay lens correlates with the change in VOC concentrations seen in boring B-1 (Figure 3). A sandy clay lens was not encountered in the boring for MW-1, where the core of the VOC plume is seen at a greater depth (Figure 3). A sandy clay lens was encountered from approximately 15 to 16 feet bgs in the boring for MW-3, where no VOCs were detected in groundwater (see below).

First encountered water in each boring ranged from 5 feet bgs (5 feet MSL) at the boring for MW-2 to 7 feet bgs (0 feet MSL) at the boring for MW-1.

3.2.2 Well Development and Sampling

Well development forms for each monitoring well are included in Appendix D. In general, the wells were developed until water quality parameters had stabilized. Less than ten casing volumes were removed from wells MW-1 and MW-3 during development due to slow recharge. This slow recharge is a reflection of the low-yielding subsurface material at the site. An elevated pH of approximately 9.3 was noted in purge water from well MW-3.

Certified analytical results for groundwater samples collected from each monitoring well are included in Appendix E and summarized in Table 2 and Figure 6. PCE, TCE, or both were detected above their respective California Primary Maximum Contaminant Level (MCL) for drinking water, which is 5 µg/l for each, in two of the three wells. PCE was detected at a concentration of 840 µg/l in the groundwater sample from upgradient well MW-2; no TCE was detected. This concentration of PCE correlates well with the average concentration detected in boring B-1 and the concentration detected by previous investigations upgradient from this area (890 µg/l at boring AGB-3, Figure 5) (GEI, 1995). At downgradient well MW-1, PCE was detected at a concentration of 906 μg/l and TCE was detected at a concentration of 178 µg/l. These concentrations also correlate well with the average concentrations detected in boring B-10 and reasonably well with the concentrations detected by previous investigations upgradient from this area (1,400 and 79 µg/l, respectively at boring AGB-6, GEI, 1995). The presence of TCE in downgradient groundwater suggests that PCE is naturally degrading via reductive dechlorination to this compound. Further dechlorination to cis-1,2-DCE appears limited based on the low and infrequent detection of this compound. No other VOCs were detected at wells MW-1 and MW-2. No VOCs were detected at monitoring well MW-3. This is consistent with the results of previous investigations (boring AP-5, Figure 5) (GEI, 1995).

3.2.3 Groundwater Flow Direction and Gradient

Surveyed top of casing elevations and static water levels (collected at each monitoring well on November 16, 1999) were used to construct a groundwater contour plot for the facility (Figure 7). Top of casing and groundwater elevation information is summarized in Table 3. Groundwater levels across the facility range from 2.58 to 4.59 feet MSL. Groundwater flows towards the northeast at an approximate gradient of 0.01. This is consistent with the results of previous investigations (GEI, 1995) and the distribution of VOCs shown in Figures 3 and 4.

This relatively steep gradient is also a reflection of	the low-yielding subsurface	materials at
the site.		

4.1 CONCLUSIONS

Groundwater grab sampling at multiple depths along two transects identified the location of the core of the VOC plume at the site. Work completed along the two transects indicate that the VOC plume is approximately 50 feet wide at the upgradient transect, and approximately 70 feet wide at the downgradient transect. Upgradient, the core of the plume, consisting primarily of PCE, is close to the northwestern property fence. Downgradient, the core of the VOC plume is seen at a greater depth to the northeast, reflecting the local groundwater flow direction. Information from the transect work and previous investigations indicate that the VOC plume extends approximately 40 feet off site, which is approximately 200 feet downgradient from the remediated on-site source area.

VOCs detected in groundwater were PCE, TCE, 1,1-DCE, cis-1,2-DCE and 1,1,1-TCA at concentrations ranging from $0.532~\mu g/l$ to $2,090~\mu g/l$. PCE and its breakdown product TCE are the predominant VOCs detected in groundwater at the site. The presence of TCE and other breakdown products in downgradient groundwater suggests that PCE is naturally degrading. However, little cis-1,2-DCE is present, indicating that further degradation via reductive dechlorination is hampered.

Three groundwater-monitoring wells were installed to monitor groundwater quality, flow direction, and gradient. Two wells were installed along the core of the VOC plume (wells MW-1 and MW-2) and one cross-gradient from the plume (well MW-3). Boring logs for each monitoring well location show subsurface materials as silty to clayey sands with lenses of sandy clay that have influenced the upgradient distribution of VOCs. Groundwater flows towards the northeast at a gradient of approximately 0.01. These subsurface materials have low hydraulic conductivity and subsequently, will not yield significant quantities of groundwater.

The concentrations of PCE detected in the groundwater samples from MW-1 and MW-2 exceed California's Primary MCL for PCE in drinking water, which is $5 \mu g/l$. The concentration of TCE detected in the groundwater sample from MW-1 exceeds California's

Primary MCL for TCE in drinking water, which is also 5 μ g/l. To date, PCE and TCE exceeding MCLs has only been detected at on-site locations.

Although MCLs are exceeded in on-site groundwater, shallow groundwater at the site is not considered to be suitable as a source of drinking water (GEI, 1995). It may be suitable for irrigation, but site information indicates the yield to be too low to be practicably used.

4.2 RECOMMENDATIONS

Based on the results of this investigation and the discussions above, CCI and Conor Pacific/EFW recommend the following actions for the site.

- Confirm the groundwater analytical results of the newly installed monitoring wells and the groundwater flow direction and gradient via quarterly groundwater monitoring.
- If possible, further delineate the extent of VOCs in groundwater off site, particularly near the fence line to the northwest and downgradient across Clement Avenue. The possibility of further delineation will depend on whether access will be restricted.
- Investigate whether sewer lines and other utilities beneath Clement Avenue may be possible conduits or pathways for migration of VOCs in groundwater.
- Collect hydraulic information (e.g., transmissivity) and natural attenuation information as part of evaluating the fate and transport of VOCs in the subsurface and the associated risk.
- Evaluate potential corrective action alternatives for the site.

As these recommendations are implemented and additional information on site conditions is obtained, these recommendations should be reevaluated and revised as appropriate.

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LIMITATIONS

Services on this project were performed in accordance with current generally accepted environmental consulting principles and practices. This warranty is in lieu of all others, be it expressed or implied. Environmental conditions may exist at the site that could not be observed. Where the scope of services was limited to observations made during site reconnaissance, interviews, and/or review of readily available reports and literature, our conclusions and recommendations are necessarily based largely on information supplied by others, the accuracy and sufficiency of which may not have been independently reviewed by us. Our professional analyses are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions between such sampling points. Additional data from future work or changing conditions may lead to modifications to our professional opinions and recommendations. Any reliance on this report, or portions thereof, by a third party shall be at such party's sole risk.

Table 1 Summary of Analytical Results - Groundwater Grab Sampling Cargill Salt, Alameda Facility

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				alytical Rest		-
Transect Sample		PCE	TCE	1,1-DCE	≎1,2-DCE	
Designation	ff. bgs	ug/l	ug/l	ug/l	ug/l	ug/l
B-1-7.5	7.0-8.0	1250	<50.0	<50.0	<50.0	<50.0
B-1-11.5	10.5-12.0	2090	<100	<100	<100	<100
B-1-16.5	14.5-17.0	33.1	<1.00	<1.00	<1.00	<1.00
B-1-22.5	21.0-23.0	4.01	< 0.500	<0.500	<0.500	< 0.500
B-2-7.5	7.0-8.0	102	<5.00	<5.00	<5.00	<5.00
B-2-11.5	10.0-13.0	25.5	<1.00	<1.00	<1.00	<1.00
B-2-16.5	15.5-17.0	0.532	<0.500	<0.500	<0.500	<0.500
B-2-22.5	21.0-23.0	0.613	<0.500	<0.500	<0.500	<0.500
B-2-27.5	27.0-23.0	< 0.500	<0.500 <0.500	<0.500	<0.500	<0.500
			0.000			
B-3-6.5	<i>5.0-7.5</i>	59.6	<2.50	<2.50	<2.50	<2.50
B-3-11.5	10.0-13.0	<0.500	<0.500	<0.500	<0.500	<0.500
B-3-16.5	15.0-17.0	<0.500	<0.500	<0.500	<0.500	<0.500
B-3-22.5	21.0-23.0	2.16	<0.500	<0.500	<0.500	<0.500
B-4-6.5	5.0-7.0	73.1	<2.50	<2.50	<2.50	<2.50
B-4-11.5	9.0-12.5	1.86	<0.500	<0.500	<0.500	<0.500
B-4-16.5	15.5-17.5	<0.500	<0.500	<0.500	<0.500	<0.500
B-4-22.5	21.5-23.5	<0.500	<0.500	<0.500	<0.500	<0.500
B-5-6.5	5.0-7.5	0.723	3.90	<0.500	< 0.500	<0.500
B-5-11.5	10.5-12.5	<0.500	<0.500	<0.500	<0.500	<0.500
B-5-16.5	15.5-17.5	<0.500	<0.500	<0.500	< 0.500	< 0.500
B-5-22.5	21.5-23.5	<0.500	<0.500	<0.500	<0.500	<0.500
B-6-5.0	4.0-6.0	1.09	11.6	<0.500	0.87	<0.500
B-6-10.0	9.0-11.0	< 0.500	< 0.500	<0.500	< 0.500	< 0.500
B-6-15.0	14.0-16.0	< 0.500	<0.500	<0.500	< 0.500	<0.500
B-6-21.0	20.0-22.0	< 0.500	< 0.500	< 0.500	<0.500	< 0.500
!						
B-7-6.5	5.0-7.5	29.8	2,66	<1.00	<1.00	<1.00
B-7-11.5	10.5-12.5	177	19.1	<2.50	<2.50	<2.50
B-7-16.5	15.0-18.0	406	41.2	<10.0	<10.0	<10.0
B-7-22.5	21.5-23.5	<0.500	<0.500	<0.500	<0.500	<0.500
B-8-6.5	5.0-7.5	20.5	0.867	< 0.500	<0.500 ·	< 0.500
B-8-11.5	11.0-11.5	90.5 ^{2,3}	12.5	<0.500	<0.500	0.664 4
B-8-16.5	15.0-18.0	503	75.6	<10.0	<10.0	<10.0
B-8-22.5	21.5-23.5	278	51.2	<5.00	<5.00	<5.00
B-9-6.5	5.0-7.5	58.8	3.21	<2.50	<2.50	<2.50
B-9-11.5	10.0-13.0	327	3.21 47.4	<10.0	<10.0	<10.0
B-9-16.5	15.0-18.0	1100	227	<25.0	<25.0	<25.0
B-9-22.5	21.5-23.5	0.672	< 0.500	<0.500	<0.500	<0.500
B-10-6.5	5.0-7.5	386	34.4	<10.0	<10.0	<10.0
B-10-11.5	10.0-13.0	1600	266	<50.0	<50.0	<50.0
B-10-16.5	15.0-18.0	823	178	<25.0	<25.0	<25.0
B-10-22.5	21.5-23.5	1.91	<0.500	<0.500	<0.500	<0.500
B-11-6.5	5.0-7.5	574	44.0	<12.5	<12.5	<12.5
B-11-11.5	10.0-13.0	576	152	10.9	<10.0	<10.0
B-11-16.5	15.0-18.0	316	64.4	6.04	<5.00	<5.00
B-11-22.5	21.5-23.5	1.02	< 0.500	< 0.500	<0.500	<0.500
B-12-6.5	5.0-7.5	147	6.80	<5.00	<5.00	<5.00
B-12-11.5	10.0-13.0	275	46.7	<5.00	<5.00	<5.00 <10.0
B-12-16.5	15.0-18.0	411	84.8	<10.0	<10.0 <0.500	<10.0 <0.500
B-12-22.5	21.5-23.5	0.575	<0.500	<0.500	~0.300	~U.DUU

Notes:

fl.bgs = feet below ground surface

fl.bgs = feet below ground surface

fl.e = Trichloroethene

1,1-DCE = 1,1-Dichloroethene

1,1,-TCA = 1,1,1-Trichloroethene

1,1,-TCA = 1,1,1-Trichloroethene

ug/l = concentration in micrograms per liter

Groundwater sampled by EPA Method 8021B, only Method 8010 list reported,
all other Method 8010 list constituents not reported in this table are below the reporting limit

This value is considered an estimate

¹ mis value is considered an estimate

Due to insufficient sample availability, a dilution could not be analyzed on this sample

Due to insufficient sample availability, a confirmation could not be analyzed for this sample

Table 2
Summary of Analytical Results - Groundwater Monitoring Wells
Cargill Salt, Alameda Facility

ethene (PCE) Trichloroethene(TCE) g/l ug/l
g/l ug/l
06 178
40 <50
.500 <0.500
).

Notes:

¹ EPA Method 8010 volatile organic compounds by Method 8021B all other constituents are below the reporting limit

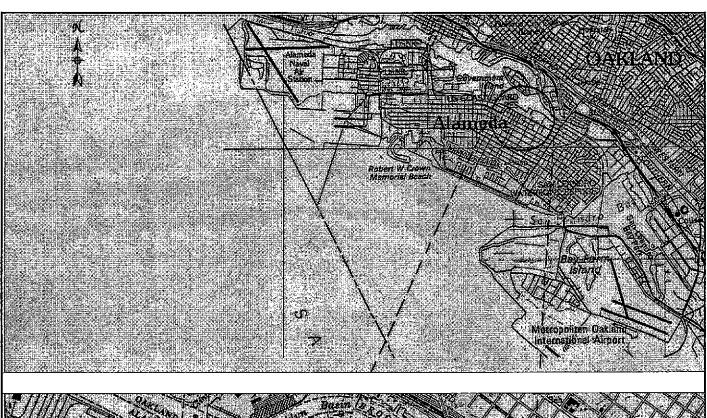
Table 3 Groundwater Levels, November 16, 1999 Cargill Salt, Alameda Facility

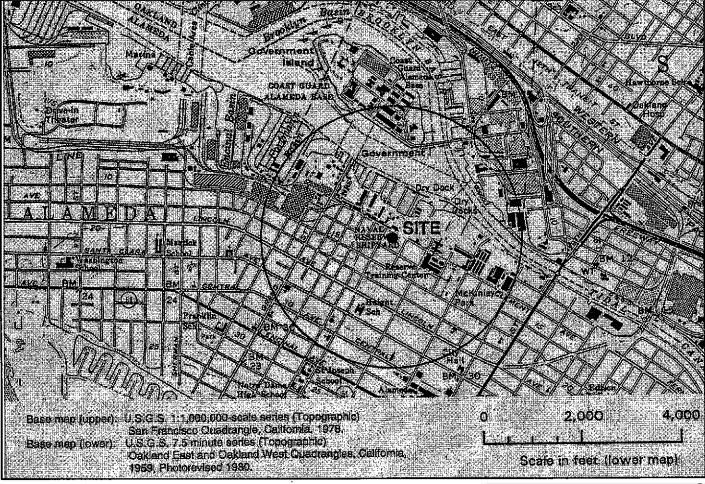
Well Designation	Top of Casing Elevation (ft. MSL) ¹	Depth to Water (ft. btoc)	Date of Measurement	Water-level Elevation (ft. MSL)
MW-1	6.75	3.75	11/16/1999	3.00
MŴ-2	9.81	5.22	11/16/1999	4.59
MW-3	6.92	4.34	11/16/1999	2.58

Notes:

ft. MSL = feet above mean sea level

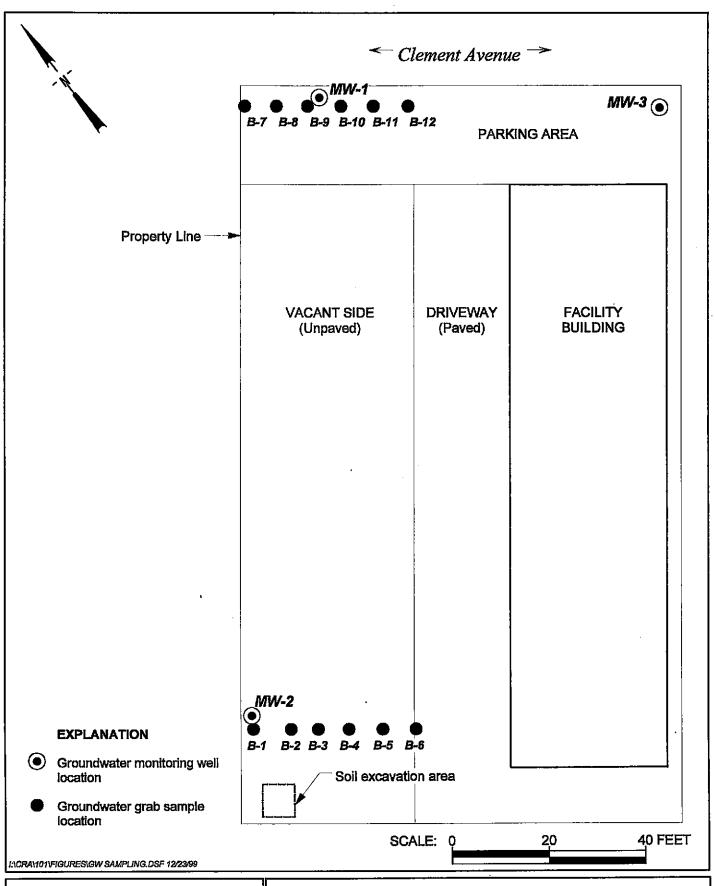
ft. btoc = feet below top of casing





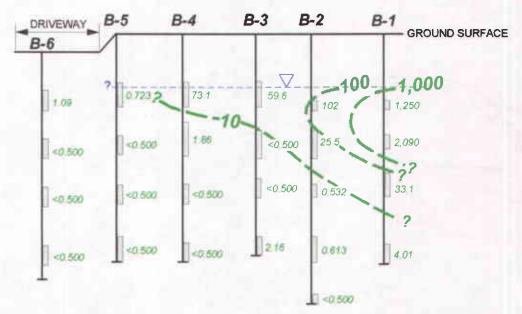


Cargill Salt Dispensing Systems Division 2016 Clement Avenue, Alameda, California Figure 1. Site Location

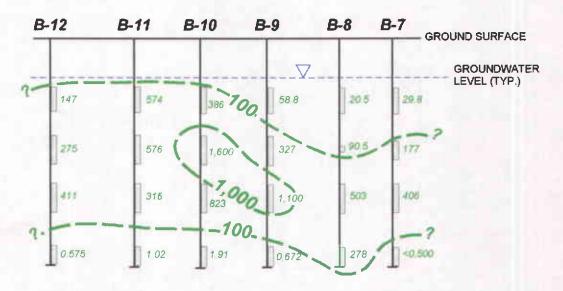




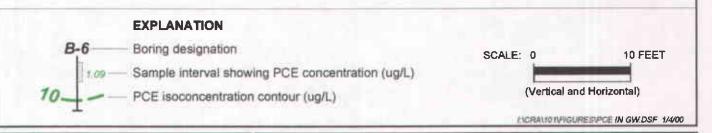
Cargill Salt Dispensing Systems Division 2016 Clement Avenue, Alameda, California Figure 2. Groundwater Sampling and Monitoring Well Locations



TRANSECT B-1 TO B-6 PCE CONCENTRATIONS (ug/L)
(LOOKING SOUTHWARD)

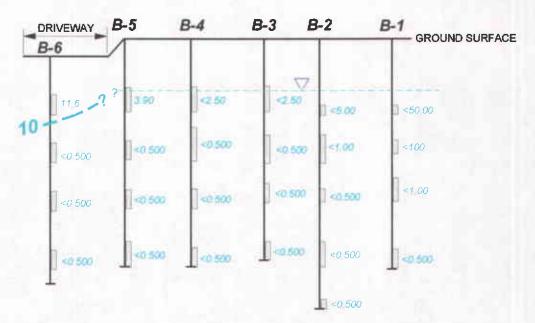


TRANSECT B-7 TO B-12 PCE CONCENTRATIONS (ug/L) (LOOKING SOUTHWARD)

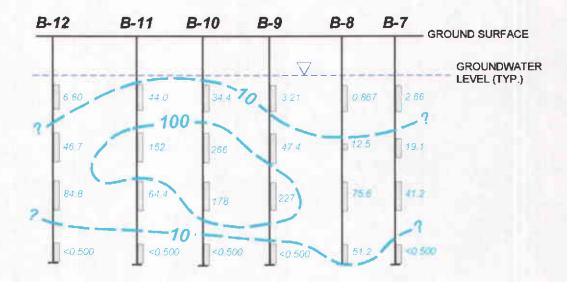




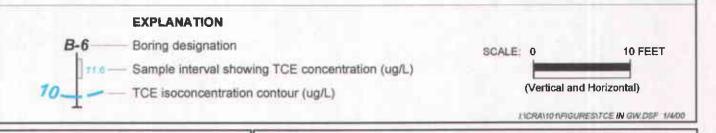
Cargill Salt Dispensing Systems Division 2016 Clement Avenue, Alameda, California Figure 3. Transect PCE Concentrations in Groundwater



TRANSECT B-1 TO B-6 TCE CONCENTRATIONS (ug/L) (LOOKING SOUTHWARD)

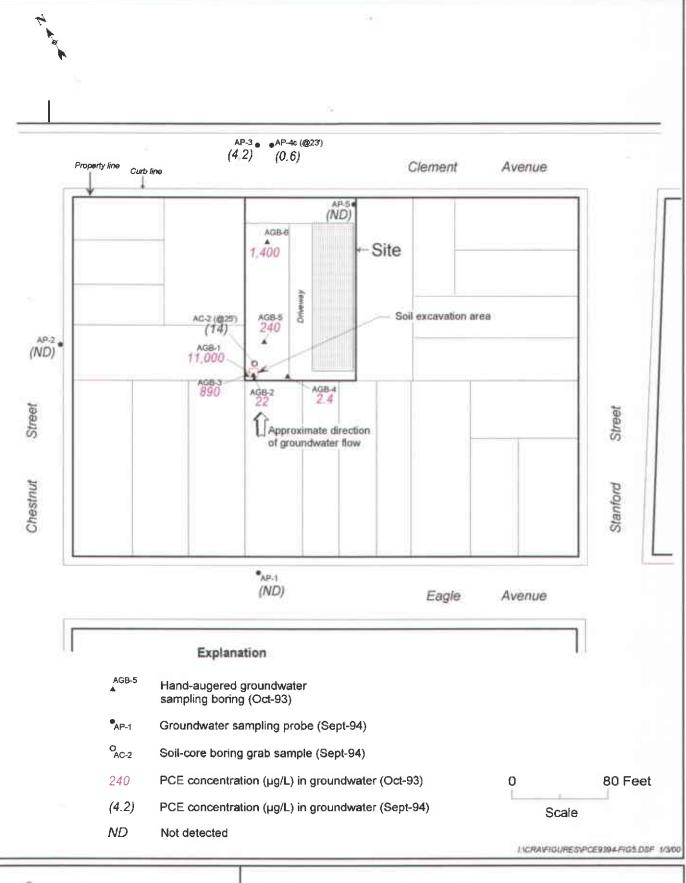


TRANSECT B-7 TO B-12 TCE CONCENTRATIONS (ug/L) (LOOKING SOUTHWARD)





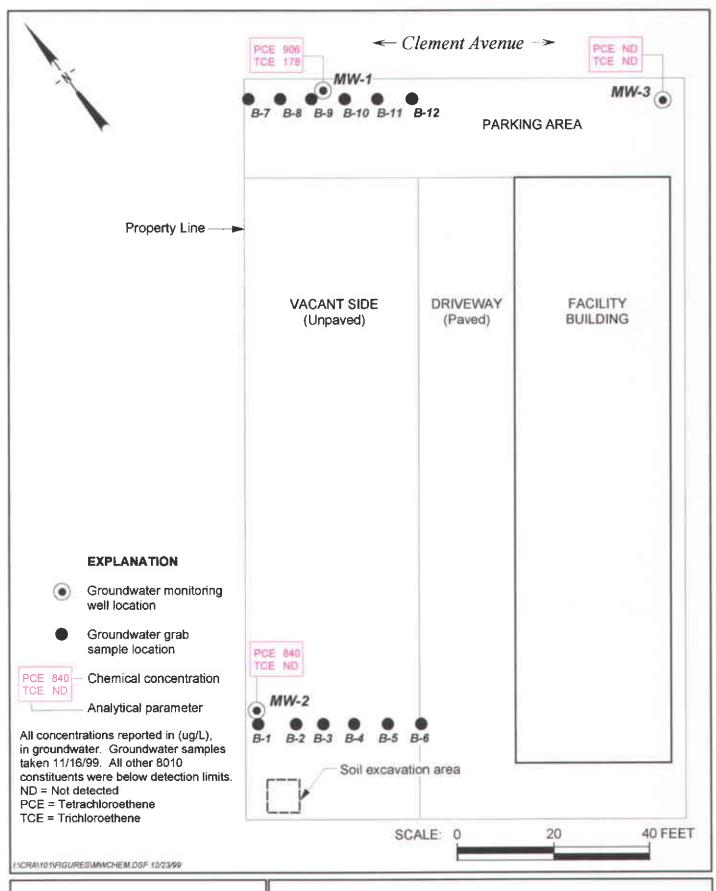
Cargill Salt Dispensing Systems Division 2016 Clement Avenue, Alameda, California Figure 4. Transect TCE Concentrations in Groundwater





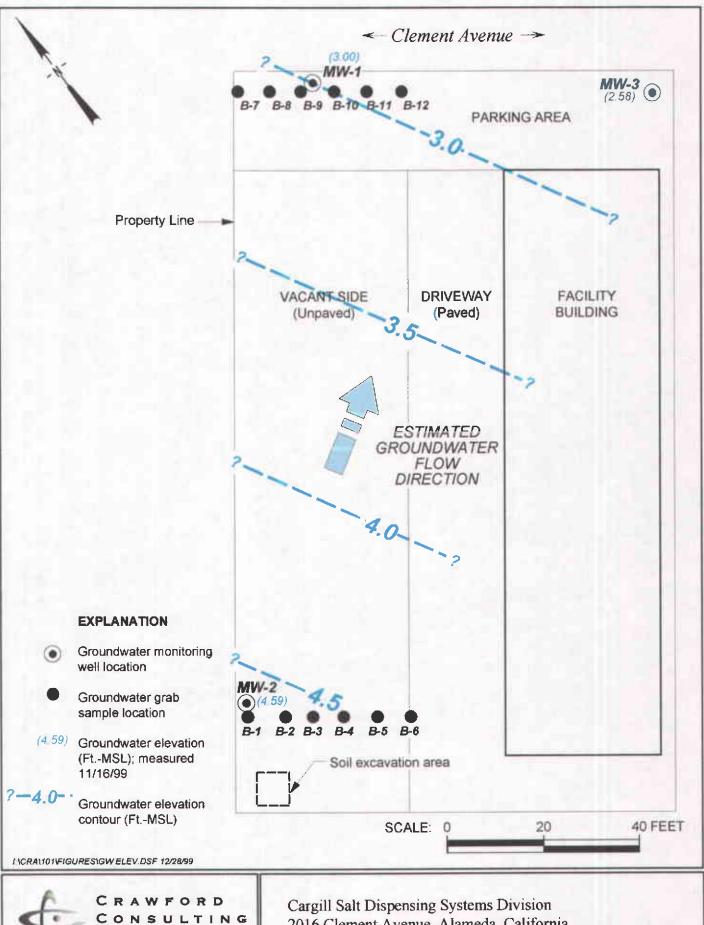
CRAWFORD CONSULTING INC. Cargill Salt Dispensing Systems Division 2016 Clement Avenue, Alameda, California

Figure 5. PCE Concentrations in Groundwater (October 1993 and September 1994)





Cargill Salt Dispensing Systems Division 2016 Clement Avenue, Alameda, California Figure 6. VOC Concentrations in Groundwater





2016 Clement Avenue, Alameda, California Figure 7. Groundwater Elevation Contours

PUBLIC WORKS

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

951 TURNER COURT, SUITE 366, RAYWARD, CA 94545-2651 PHONE (510) 670-5575 ANDREAS GODFREY (510) 670-5248 ALVIN KAN

FAX (510) 670-5262

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE	FOR OFFICE USE
Dansed CA Clarant Auc	PERMIT NUMBER 99WR468 WELL NUMBER
California Countinates Source R. CCI ft. Assaurley ± ft.	PERMIT CONDITIONS
APN	Circled Permit Requirements Apply
CLIENT PLANTING RANGEM, Cargill Gult Address 710 Learning Mill mone City Alla Learning 100 Zip G4560-4206	A. GENERAL A permit application should be submitted so as to strive at the ACPWA office five days prior to acopy according date.
APPLICANT ROOM LANGOOM CON PULL EFW Address 760 F15 545 650 543 - 38 28 City Park Alto Langony Phone 250 543 - 38 28	2/Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location storch for Paotechnical projects. 3 Permit is void if project not began within 90 days of
TYPE OF PROJECT Wail Construction Geotzchnics Investigation Cathodic Protection O General O Water Supply O Contamination Monitoring Well Description O	approval date. B. WATER SUPPLY WELLS I. Minimum surface real thickness is two inches of sement grout placed by tremic. 2. Minimum scal depth is 30 feet for manicipal and industrial wells or 20 feet for domestic and irrigation.
PROPOSED WATER SUPPLY WELL USE New Domestie C Replacement Domestic Municipal D Irrigation C NA Industrial D Other C	wells unless a lesser depth is specially approved. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS 1. Minimum surface scal thickness is two inches of coment grout placed by tremie. 2. Minimum stal depth for monitoring wells is the maximum depth practicable or 20 feet.
Mud Romry D Air Romry D Auger D Cable D Other 100 DRILLER'S LICENSE NO. 636387	D. GEOTECHNICAL Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In steam of known or suspected contamination, tremied
WELL PROJECTS Drill Hole Diameter 2 3/8 in. Maximum Casing Diameter 1 in. Depth 25 ft. Surfact Scal Depth 2 ft. Number 3	cement grout shall be used in place of compacted curtings. E. CATRODIC Fill hole shows anoth sone with concrete placed by tremic. F. WELL DESTRUCTION See awached.
DESTIMATED STARTING DATE SETIMATED COMPLETION DATE DESTIMATED COMPLETION DATE SETIMATED COMPLETION DATE SETIMATED COMPLETION DATE	G. SPECIAL CONDITIONS APPROVED AMANDA DATE 7-29-
bereby agree to comply with all requirements of this permit and alameda County Ordinance No. 73-68.	

APPENDIX B

Certified Analytical Reports - Groundwater Grab Sampling

August 16, 1999

Robert Langdon Conor Pacific / EFW 2650 East Bayshore Rd. Palo Alto, CA 94303

RE: Cargill Salt/P908372

Dear Robert Langdon

Enclosed are the results of analyses for sample(s) received by the laboratory on August 16, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Michelle M. Portis Project Manager

CA ELAP Certificate Number I-2374



1455 McDowell Blvd. North, Ste. D Petaluma, CA 94954 (707) 792-1865 FAX (707) 792-0342

Conor Pacific / EFW 2650 East Bayshore Rd. Palo Alto, CA 94303

Project: Cargill Salt
Project Number: CRA101

Sampled: Received:

8/16/99 8/16/99

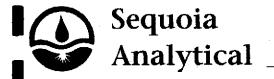
Project Manager: Robert Langdon

Reported: 8/16/99

ANALYTICAL REPORT FOR P908372

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
B-2-27.5	P908372-01	Water	8/16/99





Conor Pacific / EFW 2650 East Bayshore Rd. Palo Alto, CA 94303 Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 Received: 8/16/99 Reported: 8/16/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-2-27.5</u>			P9083	<u>72-01</u>			Water	•
Bromodichloromethane	9080208	8/16/99	8/16/99		0.500	ND	ug/l	
Bromoform	II .	11	· II		0.500	ND	Ü	
Bromomethane	11	"	"		0.500	ND	*1	
Carbon tetrachloride	11	11	It .		0.500	ND	*1	
Chlorobenzene	tf	11	It		0.500	ND	41	
Chloroethane	H	П	I†		0.500	ND	11	
2-Chloroethylvinyl ether	н	II	+		5.00	ND	Л	
Chloroform	н	Ц	н		0.500	ND	It	
Chloromethane		ц	17		0.500	ND	II ·	
Dibromochloromethane	п	н	**		0.500	ND	11	
1,2-Dibromoethane (EDB)	**		**		0.500	ND	tŧ	
1,2-Dichlorobenzene	TŤ	re	17		0.500	ND	u .	
1,3-Dichlorobenzene	11	н	н		0.500	ND		
1,4-Dichlorobenzene	**		H		0.500	ND	**	
hlorodifluoromethane		н	**		0.500	ND	••	
-Dichloroethane	n	н	**		0.500	ND	ur .	
1,2-Dichloroethane	**	u	n		0.500	ND -		
1,1-Dichloroethene	11	**	*1		0.500	ND	#	
cis-1,2-Dichloroethene	. 11	Ħ	ii		0.500	ND	**	
trans-1,2-Dichloroethene	11	n	п		0.500	ND	**	
1,2-Dichloropropane	11	**	п		0.500	ND	TI .	
cis-1,3-Dichloropropene	II	n			0.500	ND	91	•
trans-1,3-Dichloropropene	II	H	п		0.500	ND	11	
Freon 113	ír	*1	ш		0.500	ND	п	
_ Methylene chloride	D	11	H		0.500	ND	II	
1,1,2,2-Tetrachloroethane	#	11	H		0.500	ND	н	
Tetrachloroethene	••	11	H		0.500	ND	H	
1,1,2-Trichloroethane	11	н .	11		0.500	ND	н	
1,1,1-Trichloroethane	TI	n	17		0.500	ND	и	
Trichloroethene	11	н	11		0.500	ND	**	
Trichlorofluoromethane	#	H	**		0.500	ND	**	
Vinyl chloride		**	11		0.500	ND	•	
Surrogate: Bromochloromethane	"	"	<i>n</i>	65.0-135		99.7	%	
Surrogate: 1,4-Dichlorobutane	n	"	"	65.0-135		109	"	

uoia Analytical - Petaluma





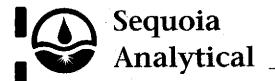
Conor Pacific / EFWProject:Cargill SaltSampled:8/16/992650 East Bayshore Rd.Project Number:CRA101Received:8/16/99Palo Alto, CA 94303Project Manager:Robert LangdonReported:8/16/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit Reco	ov. RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	% Limit	% Notes'
Batch: 9080208	Date Prepa	rad. 8/0/00)		Eviro	tion Method: EPA 503	(A suratare	
Blank	9080208-BI		4		MALIA	tion Method. El A 505	U WALCIS	,
Bromodichloromethane	8/9/99			ND	ug/l	0.500		
Bromoform	11			ND	11 11 11	0.500		
Bromomethane	It.			ND	н	0.500		
Carbon tetrachloride	II.			ND	11	0.500		
Chlorobenzene	It.			ND	*1	0.500		
Chloroethane	It .				**	0.500		
2-Chloroethylvinyl ether				ND ND	**			
Chloroform	16			ND	**	5.00		
Chloromethane				ND		0.500		1
				ND	"	0.500		
Dibromochloromethane				ND	11	0.500		
1,2-Dibromoethane (EDB)				ND	"	0.500		
1,2-Dichlorobenzene				ND		0.500		'
1,3-Dichlorobenzene	11			ND	H	0.500		
-Dichlorobenzene				ND	**	0.500		
ichlorodifluoromethane	11			ND	It	0.500		
1,1-Dichloroethane	"			ND	11	0.500		
1,2-Dichloroethane	u			ND	17	0.500		
1,1-Dichloroethene	"			ND	11	0.500		
cis-1,2-Dichloroethene	*1			ND	"	0.500		· ·
trans-1,2-Dichloroethene	*1			ND	11	0.500		
1,2-Dichloropropane	•			ND	**	0.500		
cis-1,3-Dichloropropene	н			ND	Ħ	0.500		
trans-1,3-Dichloropropene	n			ND	tt	0.500		,
Freon 113	H			ND	**	0.500		
Methylene chloride	*1			ND	"	0.500		
1,1,2,2-Tetrachloroethane	n			ND	n	0.500		
Tetrachloroethene	H			ND	**	0.500		
1,1,2-Trichloroethane	н			ND	**	0.500		
1,1,1-Trichloroethane	**			ND	**	0.500		
Trichloroethene	11			ND	n	0.500		
Trichlorofluoromethane	et			ND	*	0.500	-	
Vinyl chloride	•			ND	**	0.500		·
Surrogate: Bromochloromethane	"	30.0		29.8	· 17	65.0-135 99	١ ٦	
Surrogate: 1,4-Dichlorobutane	"	30.0		30.8	"		93	
Blank	9080208-BI	.K2						1
Bromodichloromethane	8/10/99			ND	ug/l	0.500		ļ
Bromoform	B) 10/99			ND	ug/i	0.500 0.500		·
Bromomethane	и			ND ND	**	0.500 0.500		
Carbon tetrachloride	11				**			1
CMICON (SHROMOIMC				ND		0.500		•

Juoia Analytical - Petaluma





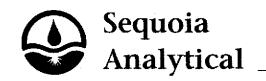
Conor Pacific / EFW	Project:	Cargill Salt	Sampled:	8/16/99
2650 East Bayshore Rd.	Project Number:	CRA101	Received:	8/16/99
Palo Alto, CA 94303	Project Manager:	Robert Langdon	 Reported:	8/16/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

		Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
	Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit		Notes*
_											
_	Blank (continued)	9080208-BI	<u>.K2</u>								
	Chlorobenzene	8/10/99			ND	ug/l	0.500				
	Chloroethane	11			ND	11 ,	0.500				
	2-Chloroethylvinyl ether	11			ND	11	5.00				
	Chloroform	**			ND	п	0.500				
	Chloromethane	***			ND	11	0.500				
•	Dibromochloromethane	***			ND	II.	0.500				
	1,2-Dibromoethane (EDB)	**			ND	16	0.500				
	1,2-Dichlorobenzene				ND	11	0.500				
	1,3-Dichlorobenzene	11			ND	n	0.500				
	1,4-Dichlorobenzene	11			ND	61	0.500				
-	Dichlorodifluoromethane	11			ND	**	0.500				
	1,1-Dichloroethane	П			ND	o o	0.500				
•	1,2-Dichloroethane	11			ND	11	0.500				
	1,1-Dichloroethene	11			ND	t+	0.500				
	1,2-Dichloroethene	11			' ND	**	0.500				
	.is-1,2-Dichloroethene	11			ND	**	0.500				
_	1,2-Dichloropropane	н			ND	71	0.500				
_	cis-1,3-Dichloropropene	μ			ND	Ð	0.500				
	trans-1,3-Dichloropropene	11			ND	H	0.500				
	Freon 113				ND	11	0.500				
	Methylene chloride	п			ND	11 .	0.500				
	1,1,2,2-Tetrachloroethane	n			ND	П	0.500				
ı	Tetrachloroethene	*I			ND	и .	0.500	•			
_	1,1,2-Trichloroethane	**			ND	IF	0.500				
_	1,1,1-Trichloroethane	**			ND.	11	0.500				
	Trichloroethene	T*			ND	**	0.500				
	Trichlorofluoromethane	` H			ND	**	0.500	*			
	Vinyl chloride	ti .			ND		0.500			·	
	Surrogate: Bromochloromethane	n	30.0		30.0	"	65.0-135	100			
	Surrogate: 1,4-Dichlorobutane		30.0	•	31.3	"	65.0-135	104			
_									•		
_	<u>Blank</u>	9080208-B	LK3								
	Bromodichloromethane	8/16/99			ND	ug/l	0.500				
	Bromoform	II .			ND	11	0.500				
	Bromomethane	ft.			ND	91	0.500				
	Carbon tetrachloride	U			ND	11	0.500				
	Chlorobenzene	11			ND	*11	0.500				
	Chloroethane	II.			ND	11	0.500				
	2-Chloroethylvinyl ether	u			ND	11	5.00				
	Chloroform				ND	н	0.500				í
	Chloromethane	**			ND	II .	0.500				
	1										

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Selection (Algorithms)

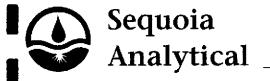
Conor Pacific / EFWProject:Cargill SaltSampled:8/16/992650 East Bayshore Rd.Project Number:CRA101Received:8/16/99Palo Alto, CA 94303Project Manager:Robert LangdonReported:8/16/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequeia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit		Notes*
							•	• •		
Blank (continued)	9080208-B	LK3							•	
Dibromochloromethane	8/16/99			ND	ug/l	0.500				
1,2-Dibromoethane (EDB)	11			ND	**	0.500				•
1,2-Dichlorobenzene	11			ND	**	0.500				
1,3-Dichlorobenzene	41			ND	11	0.500	•			1
1,4-Dichlorobenzene	11			ND	н	0.500				
Dichlorodifluoromethane	11	•		ND	н	0.500				
1,1-Dichloroethane	11			ND	*1	0.500				
1,2-Dichloroethane	п			ND	" .	0.500				1
1,1-Dichloroethene	п			ND	11	0.500				i
cis-1,2-Dichloroethene	II .			ND	*1	0.500				
trans-1,2-Dichloroethene	II			ND	11	0.500				
1,2-Dichloropropane	II			ND	П	0.500				
cis-1,3-Dichloropropene	и			ND	11	0.500				
trans-1,3-Dichloropropene	. "			ND	11	0.500				
on 113	п			. ND	11	0.500				1
ethylene chloride	II			ND	11	0.500			-	
1,1,2,2-Tetrachloroethane	II		•	ND	п	0.500				•
Tetrachloroethene	II			ND	11	0.500				_
1,1,2-Trichloroethane	. "			ND	11	0.500				
1,1,1-Trichloroethane	п			ND	11	0.500				
Trichloroethene	II			ND	11	0.500				
Trichlorofluoromethane	II .			ND	11	0.500				1
Vinyl chloride	II			ND	#1	0.500				
Surrogate: Bromochloromethane	н	30.0		28.9	fr	65.0-135	96.3	-		
Surrogate: 1,4-Dichlorobutane	rr .	30.0		30.6	m .	<i>65.0-135</i>	102			_
	•					•				
<u>LCS</u>	9080208-B	<u>S1</u>								
Chlorobenzene	8/9/99	10.0		11.1	ug/l	65.0-135	111			
1,1-Dichloroethene	11	10.0		9.69	11	65.0-135	96.9			1
Trichloroethene	rr	10.0		9.39	Ц	65.0-135	93.9			
Surrogate: Bromochloromethane	#	30.0		29.4	. н	65.0-135	98.0			1
Surrogate: 1,4-Dichlorobutane	И	30.0		30.4	tt	65.0-135	101			•
<u>LCS</u>	9080208-B	<u>S2</u>								
Chlorobenzene	8/10/99	10.0		11.0	ug/l	65.0-135	110			•
I,1-Dichloroethene	It	10.0		9.41	IF	65.0-135	94.1			_
Trichloroethene	tt.	10.0		8.82	"	65.0-135	88.2			
Surrogate: Bromochloromethane	"	30.0		29.1	"	65.0-135	97.0			
Surrogate: 1,4-Dichlorobutane	n	30.0		30.3	#	65.0-135	101			_

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Conor Pacific / EFW	Project:	Cargill Salt	Sampled:	8/16/99
2650 East Bayshore Rd.	Project Number:	CRA101	Received:	8/16/99
Palo Alto, CA 94303	Project Manager:	Robert Langdon	Reported:	8/16/99

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
LCS	9080208-B	S 3						,		
Chlorobenzene	8/16/99	10.0		10.9	ug/l	65.0-135	109			
1,1-Dichloroethene	Ц	10.0		9:65	17	65.0-135	96.5	-		
Trichloroethene	er e	10.0		9.74	11	65.0-135	97.4			•
Surrogate: Bromochloromethane	п	30.0	· ·	28.5	H	65.0-135	95.0			
Surrogate: 1,4-Dichlorobutane	Ħ	30.0		28.8	#.	65.0-135	96.0			
Matrix Spike	9080208-M	S1 P	908177-02							
Chlorobenzene	8/9/99	10.0	ND	10.7	ug/l	65.0-135	107			
1,1-Dichloroethene	11	10.0	ND	9.37		65.0-135	93.7			
Trichloroethene	11	10.0	1.15	9.49	77	65.0-135	83.4			
Surrogate: Bromochloromethane	"	30.0		28.1	н —	65.0-135	93.7			
Surrogate: 1,4-Dichlorobutane	m .	30.0		28.4		65.0-13 5	94.7			
Matrix Spike Dup	9080208-M	SD1 P	908177-02							
orobenzene	8/9/99	10.0	ND	10.6	ug/l	65.0-135	106	20.0	0.939	
Dichloroethene	11	10.0	ND	9.65	"	65.0-135	96.5	20.0	2.94	
Trichloroethene	11 .	10.0	1.15	9.65	**	65.0-135	85.0	20.0	1.90	
Surrogate: Bromochloromethane	"	30.0		29.4	"	65.0-135	98.0			
Surrogate: 1,4-Dichlorobutane	u	30.0		30.0	Ħ	65.0-135	100			



1455 McDowell Blvd. North, Ste. D Petaluma, CA 94954 (707) 792-1865 FAX (707) 792-0342

Conor Pacific / EFWProject:Cargill SaltSampled:8/16/992650 East Bayshore Rd.Project Number:CRA101Received:8/16/99Palo Alto, CA 94303Project Manager:Robert LangdonReported:8/16/99

Notes and Definitions

Note

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

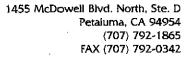
NR Not Reported

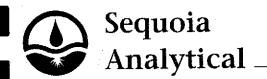
dry Sample results reported on a dry weight basis

Recov. Recovery

RPD Relative Percent Difference

FIC	NARS	ON & WA	TSON	1		CHAIN RACT LABORATO					URN-	∎ I	UND	TIM	E:	Par		/age of _
Project No			6	Name Orgi	// 4	palt	<i></i>			×	/ /	7		nalys		<u></u>		7
Sampler(s) Rober): (printed) + La	ngdor	٧	signature	ut B	Lang					k \$2/	//	/ /	/ /	$^{\prime}$ $/$	$^{\prime}$ $/$		
Sample I.D.	Lab I.D.		ection	Matrix	Depth	Container	T	1		82/	\mathbb{Z}/\mathcal{Z}					/	/ ,	/ Pomado
B-2-27-5	****	Date	Time	H16	17-5	Type/Volume	Qnty		Prsrv.	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\		pa	/ 108:	/ 37,2	/ -21		/ /	Remarks * McHod
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Reinquisted by: (PIXM		Processes Name of the Control of the	Received by:	Myramy			Date/Tin	ne: 0:55 ne:	- 8/	16/9	<u>'</u> P	EIN/ 2650	ARS 0 Ea	ON, st B	FOV aysh	VLEH ore F	Langlan R& WATSON Road
N. M. Relinquished by: (<u>UNAK</u> signature)	<u></u>	• •	Received by:	(signature)			ට් <u>// උ</u> Date/Tin		12	.02		Palo Phoi) Alto), CA 415,	4 <i>94</i> 1 <i>843</i>	1303 3-382	





August 31, 1999

Robert Langdon Conor Pacific / EFW 2650 East Bayshore Rd. Palo Alto, CA 94303

RE: Cargill Salt/P908485

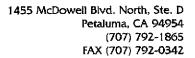
Dear Robert Langdon

Enclosed are the results of analyses for sample(s) received by the laboratory on August 20, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Michelle M. Portio Michelle M. Portis Project Manager

CA ELAP Certificate Number I-2374





Project: Cargili Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

ANALYTICAL REPORT FOR P908485

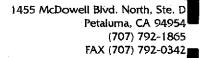
-			
Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
B-1-7.5	P908485-01	Water	8/16/99
B-1-11.5	P908485-02	Water	8/16/99
B-1-16.5	P908485-03	Water	8/16/99
B-1-22.5	P908485-04	Water	8/16/99
B-2-7.5	P908485-05	Water	8/16/99
B-3-11.5	P908485-06	Water	8/16/99
B-2-11.5	P908485-07	Water	8/16/99
B-3-16.5	P908485-08	Water	8/16/99
16.5	P908485-09	Water	8/16/99
B-2-22.5	P908485-10	Water	8/16/99
B-3-22.5	P908485-11	Water	8/16/99
B-4-11.5	P908485-12	Water	8/17/99
B-4-22.5	P908485-13	Water	8/17/99
B-6-5	P908485-14	Water	8/17/99
B-8-6.5	P908485-15	Water	8/17/99
B-9-6.5	P908485-16	Water	8/17/99
B-7-6.5	P908485-17	Water	8/17/99
B-6-10	P908485-18	Water	8/17/99
B-6-15	P908485-19	Water	8/17/99
B-11-6.5	P908485-20	Water	8/17/99
B-6-21	P908485-21	Water	8/17/99
a			

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The results in this report apply to the samples analyzed in accordance with the chain of custody document.

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Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

ANALYTICAL REPORT FOR P908485

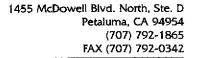
·.			
Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
B-12-6.5	P908485-22	Water	8/17/99
B-10-6.5	P908485-23	Water	8/17/99
B-3-6.5	P908485-24	Water	8/17/99
B-5-11.5	P908485-25	Water	8/18/99
B-4-16.5	P908485-26	Water	8/18/99
B-4-6.5	P908485-27	Water	8/18/99
B-5-16.5	P908485-28	Water	8/18/99
B-5-6.5	P908485-29	Water	8/18/99
·-22.5	P908485-30	Water	8/18/99
B-7-22.5	P908485-31	Water	8/18/99
B-8-11.5	P908485-32	Water	8/18/99
B-9-22.5	P908485-33	Water	8/18/99
B-9-16.5	P908485-34	Water	8/18/99
B-8-16.5	P908485-35	Water	8/18/99
B-9-11.5	P908485-36	Water	8/18/99
B-8-22.5	P908485-37	Water	8/18/99
B-7-11.5	P908485-38	Water	8/18/99
B-10-11.5	P908485-39	Water	8/18/99
B-7-16.5	P908485-40	Water	8/18/99
B-12-22.5	P908485-41	Water	8/18/99
B-10-16.5	P908485-42	Water	8/18/99
	+		

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This analytical report must be reproduced in its entirety.







Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99

Received: 8/20/99 Reported: 8/31/99

ANALYTICAL REPORT FOR P908485

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
B-11-11.5	P908485-43	Water	8/18/99
B-11-16.5	P908485-44	Water	8/18/99
B-12-16.5	P908485-45	Water	8/18/99
B-12-11.5	P908485-46	Water	8/18/99
B-11-22.5	P908485-47	Water	8/18/99
B-10-22.5	P908485-48	Water	8/18/99



Project: Project Number: CRA101

Cargiil Salt Project Manager: Robert Langdon

Sampled: Received:

8/16/99 to 8/18/99

8/20/99 8/31/99 Reported:

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-1-7.5</u>			P9084	85-01			Water	
Bromodichloromethane	9080565	8/23/99	8/23/99	<u> </u>	50.0	ND	ug/l	
Bromoform	"	*	II		50.0	ND	n.	
Bromomethane	н	Ħ	ıı.		50.0	ND	**	
Carbon tetrachloride	#	50	n		50.0	ND	**	1
Chlorobenzene	*1	н	II.		50.0	ND	**	
Chloroethane	91	n	u		50.0	ND	н	'
2-Chloroethylvinyl ether	п	н	D.		500	ND	11	
Chloroform	п	11	•		50.0	ND	11	
Chloromethane	т п	31	**		50.0	ND	11	į
Dibromochloromethane	ц	n	11		50.0	ND	п	
1,2-Dibromoethane (EDB)	п	11	11		50.0	ND	и	1
1,2-Dichlorobenzene	п	n	**		50.0	ND	It	
1,3-Dichlorobenzene	п	11	**		50.0	ND	и	•
1.4-Dichlorobenzene	II.	μ	•		50.0	ND	H	
hlorodifluoromethane	п	п	**		50.0	ND	, re	
1,1-Dichloroethane	ш	ш	11		50.0	ND	н	
1,2-Dichloroethane	и	н	*1		50.0	ND	н	
1,1-Dichloroethene	u	н	н	,	50.0	ND	н	
cis-1,2-Dichloroethene	н	n '	n		50.0	ND	11	
trans-1,2-Dichloroethene	It	н	#1		50.0	ND	**	
1,2-Dichloropropane	ít	н	Ir		50.0	ND	*1	
cis-1,3-Dichloropropene	tt.	u	Ħ		50.0	ND	n	
trans-1,3-Dichloropropene	H	If	**		50.0	ND	**	•
Freon 113	Ħ	r*	"		50.0	ND	27	•
Methylene chloride	e7		*1		50.0	ND.	71	1
1,1,2,2-Tetrachloroethane	Ħ	н	11		50.0	ND	**	
Tetrachloroethene	41	•	н		50.0	1250	"	(
1,1,2-Trichloroethane	11	**	11		50.0	ND	*1	
1,1,1-Trichloroethane	Ħ	11	п		50.0	ND	0	1
Trichloroethene	11	11	и .		50.0	ND	4	
Trichlorofluoromethane		**	11		50.0	ND	11	'
Vinyl chloride	Ħ	11	II .		50.0	ND	11	
Surrogate: Bromochloromethane	,,	"	II .	65.0-135		90.7	%	
Surrogate: 1,4-Dichlorobutane	"	"	11	65.0-135		100	н	•

Juoia Analytical - Petaluma





Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99

8/31/99

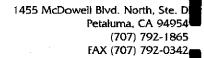
Reported:

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D 1 11 5			DOCO 4	25.03			Water	
B-1-11.5 Bromodichloromethane	9080565	8/23/99	<u>P90848</u> 8/23/99	55-02	100	ND	water ug/l	
	9080505	8/43/99	8/23/99		100	ND	n navi	
Bromoform	**		#		100	ND	н	
Bromomethane	**	ii It	**		100	ND ND	14	
Carbon tetrachloride	.,					ND ND	1 1	
Chlorobenzene	"				100 100	ND ND		
Chloroethane		" H	 11			ND ND	19	
2-Chloroethylvinyl ether	,,	11	"		1000	ND ND	Ħ	
Chloroform		"			100		п	
Chloromethane	n .	,	.,		100	ND		
Dibromochloromethane	"	"	i'		100	ND		
1,2-Dibromoethane (EDB)	"	11	,		100	ND		
1,2-Dichlorobenzene	" It	11	"		100	ND		
1,3-Dichlorobenzene	"		"		100	ND		
1.4-Dichlorobenzene	II.	11	•		100	ND		
hlorodifluoromethane	"	11	**		100	ND	.,	
1,1-Dichloroethane					100	ND		
1,2-Dichloroethane	u	It	11		100	ND	" *	
1,1-Dichloroethene	**	ii.	H		100	ND	"	
cis-1,2-Dichloroethene	**	"	11		100	ND	,,	
trans-1,2-Dichloroethene	٠.	"	11		100	ND	11	
1,2-Dichloropropane	++	11	и		100	ND	"	
cis-1,3-Dichloropropene	11	н	10		100	ND	"	
trans-1,3-Dichloropropene	11	19	19		100	ND		
Freon 113	II	**	**		100	ND		•
Methylene chloride	II	H	**		100	ND	**	
1,1,2,2-Tetrachloroethane	tt	н	**		100	ND		
Tetrachloroethene	H	. "	**		100	2090		
1,1,2-Trichloroethane	*	11	**		100	ND		
1,1,1-Trichloroethane	H	11+	H		100	ND	**	
Trichloroethene	**	H	H		100	ND	II	
Trichlorofluoromethane	"	n	(I		100	ND		
Vinyl chloride	t1	**			100	ND	II	
Surrogate: Bromochloromethane	н	n	u	65.0-135		95.0	%	
Surrogate: 1,4-Dichlorobutane	. "	#	н	65.0-135		106	#	

uoia Analytical - Petaluma - Petaluma



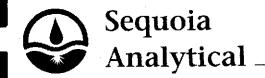




Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting		-	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-1-16.5			P9084	R5-03			Water	
Bromodichloromethane	9080565	8/24/99	8/24/99	<u> </u>	1.00	ND	<u>17,000,</u> 11g/l	
Bromoform	•	н	п		1.00	ND	11	!
Bromomethane	н	U			1.00	ND	91	
Carbon tetrachloride	**	10	н		1.00	ND		
Chlorobenzene	н	10	п		1.00	ND	11	
Chloroethane	H	10	. •		1.00	ND	10	'
2-Chloroethylvinyl ether	Ħ	10	•		10.0	ND		
Chloroform	н	10	*1		1.00	ND	tr .	
Chloromethane	н	п	\$1		1.00	ND	**	
Dibromochloromethane	н	Ir	*1		1.00	ND		
1,2-Dibromoethane (EDB)	н	11	n		1.00	ND	**	
1,2-Dichlorobenzene		11	**		1.00	ND	u	
1,3-Dichlorobenzene	H	*11	**		1.00	ND	н	į
1,4-Dichlorobenzene	, H	*1	п		1:00	ND	11	
hlorodifluoromethane	II .	*1	**		1.00	ND	U	1
., t-Dichloroethane	ш	H	**		1.00	ND	и .	
1,2-Dichloroethane	н	18	н .	•	1.00	ND	31	'
1,1-Dichloroethene	41	**	m	•	1.00	ND	31	
cis-1,2-Dichloroethene	11	••	te.		1.00	ND	17	
trans-1,2-Dichloroethene		**	u.		1.00	ND	**	į
1,2-Dichloropropane	**	**	or .		1.00	ND	n	
cis-1,3-Dichloropropene	H	t t	ц		1.00	ND	н	ı
trans-1,3-Dichloropropene	#	11	п		1.00	ND	n	
Freon 113	**	()	11		1.00	ND	н	'
Methylene chloride	н	19	O .		1.00	ND	u	_
1,1,2,2-Tetrachloroethane	н	н	11		1.00	ND	и	
Tetrachloroethene	н	н	IF		1.00	33.1	п	
1,1,2-Trichloroethane	10	I.	11		1.00	ND	п	
1,1,1-Trichloroethane	Ħ	ı t	41		1.00	ND	и ,	(
Trichloroethene	11	10	11		1.00	ND	u ·	
Trichlorofluoromethane	11	16	*1		1.00	ND	н	•
Vinyl chloride	n	It	11		1.00	ND	п .	
Surrogate: Bromochloromethane	"	H	Н	65.0-135		93.3	. %	
Surrogate: 1,4-Dichlorobutane	u	n	n	65.0-135		101	n ·	



Project: Cargill Salt Project Number: CRA101 Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 8/20/99 Received: 8/31/99

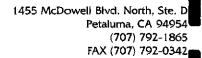
Reported:

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting		TT 5	3
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-1-22.5			P90848	85-04			Water	
Bromodichloromethane	9080565	8/23/99	8/23/99		0.500	ND	ug/l	
Bromoform	11	•	h		0.500	ND	n	
Bromomethane	u	1 1	R		0.500	ND	**	
Carbon tetrachloride	11	11	Iŧ		0.500	ND	#1	
Chlorobenzene	, R	ц	н		0.500	ND	u	
Chloroethane	н	D	н		0.500	ND	D	
2-Chloroethylvinyl ether	H	n	**		5.00	ND	н.	
Chloroform	**	н	н		0.500	ND	H	
Chloromethane	n	ŧŧ	#		0.500	ND	n	
Dibromochloromethane	**		11		0.500	ND	r	
1,2-Dibromoethane (EDB)	н	н	п		0.500	ND	"	
1,2-Dichlorobenzene	n .	н	п		0.500	ND	Ħ	
1,3-Dichlorobenzene	и	11 .	H ,		0.500	ND	11	
_ 1,4-Dichlorobenzene	п	11	11		0.500	ND	н	
hlorodifluoromethane	H.	н	11		0.500	ND	II	
1,1-Dichloroethane		If .	11	•	0.500	ND	H	
1,2-Dichloroethane	Ħ	H)†		0.500	ND	10	
1,1-Dichloroethene	Tt .	*1	Ħ		0.500	ND	n	
cis-1,2-Dichloroethene	**	11	"		0.500	ND	**	
trans-1,2-Dichloroethene	*1	**	#	•	0.500	ND	#	
1,2-Dichloropropane	*1	n	11		0.500	ND	"	
cis-1,3-Dichloropropene	11	n	н	•	0.500	ND	**	
trans-1,3-Dichloropropene	· п	11	IF.		0.500	, ND	ıı	
Freon 113	tr.	11	tt .		0.500	ND	IF	
 Methylene chloride 	ft	ц	#		0.500	ND	,	
1,1,2,2-Tetrachloroethane	**	u	1f		0.500	ND	н	
Tetrachloroethene	ŧı	H	**		0.500	4.10	#1	
1,1,2-Trichloroethane	**	10	**		0.500	ND	"	
1,1,1-Trichloroethane	et	**	n		0.500	ND	11	
Trichloroethene	Ħ	н	11		0.500	ND	II .	•
Trichlorofluoromethane	1 1	П	II		0.500	ND	It .	
Vinyl chloride	11	и .	11		0.500	ND	n	
Surrogate: Bromochloromethane	jr .	п	11	65.0-135		101	%	
Surrogate: 1,4-Dichlorobutane	u	Ħ	#	65.0-135		108	tt .	

Lequoia Analytical - Petaluma







Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99

Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-2-7.5			P90848	24_04			Water	
Bromodichloromethane	9080565	8/23/99	8/23/99	<u> </u>	5.00	ND	ug/l	
Bromoform	11	11	0/23/97		5.00	ND	11	
Bromomethane	11:	#1	**		5.00	ND	D.	
Carbon tetrachloride	D	**	41		5.00	ND	· n	
Chlorobenzene	u .	"	**		5.00	ND	u	
Chloroethane	ı)	91	**		5.00	ND	· it	1
2-Chloroethylvinyl ether	It .	п	91		50.0	ND	н	
Chloroform	p	11	11		5.00	ND	te.	
Chloromethane	U	11	**		5.00	ND	n	
Dibromochloromethane	10	n	n .		5.00	ND	et .	· ·
1,2-Dibromoethane (EDB)	10	11	TE		5.00	ND	**	
1,2-Dichlorobenzene	н	. 11	11		5.00	ND	**	
1,3-Dichlorobenzene	17	п	44		5.00	ND	57	į
1.4-Dichlorobenzene	10	п	**		5.00	ND	ŧŧ	
lorodifluoromethane	16	11	19		5.00	ND	er	1
1,1-Dichloroethane	19		**		5.00	ND	**	
1,2-Dichloroethane	it.	11	•		5.00	ND	ti	'
1,1-Dichloroethene	I#	11	11		5.00	ND	#	
cis-1,2-Dichloroethene	IF.	11	**		5.00	ND	11	
trans-1,2-Dichloroethene	10	41	If		5.00	ND	11	į
1,2-Dichloropropane	u	11	*1		5.00	ND	11	
cis-1,3-Dichloropropene	19	и .	\$1		5.00	ND	19	1
trans-1,3-Dichloropropene	10	11	11		5:00	ND	**	
Freon 113	10	*11	D		5.00	ND	**	
Methylene chloride		11	**		5.00	ND	H	
1,1,2,2-Tetrachloroethane	I#	11	11		5.00	ND	**	
Tetrachloroethene	l)	п	tr		5.00	102	#	į
1,1,2-Trichloroethane	U	*1	11		5.00	ND	**	
1,1,1-Trichloroethane	11	**	H		5.00	ND		ı
Trichloroethene	10	11	31		5.00	ND	77	
Trichlorofluoromethane	If	11	11		5.00	ND	11	,
Vinyl chloride		*1			5.00	ND	.,	
Surrogate: Bromochloromethane		ıı .	"	65.0-135		100	%	
Surrogate: 1,4-Dichlorobutane	u	n	"	65.0-135		103	Ħ	
								•



Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

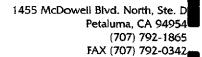
Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

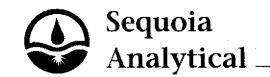
Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting		·	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D 2 11 5			P9084	DE AZ			Water	
B-3-11.5 Bromodichloromethane	0000565	P/22/00	8/23/99	<u>55-00</u>	0.500	ND	ug/l	
Bromodicinoromethane	9080565	8/23/99	8/23/99		0.500	ND	ug) t	
	II:	11	u.		0.500	ND	u	
Bromomethane	"	10	**		0.500	ND	11	
Carbon tetrachloride		n'	H		0.500	ND	17	
Chlorobenzene			**		0.500	ND	**	
Chloroethane		"				ND ND	11	
2-Chloroethylvinyl ether			"		5.00		•1	
Chloroform					0.500	ND	11	
Chloromethane	*1	**			0.500	ND	,,	
Dibromochloromethane	*1	*1	н		0.500	ND		
1,2-Dibromoethane (EDB)	Ц	11	Ħ		0.500	ND		
1,2-Dichlorobenzene	10	15	н		0.500	ND	Pt .	
1,3-Dichlorobenzene	H	10	**		0.500	ND	"	
1.4-Dichlorobenzene	17	н	11		0.500	ND	•1	•
lorodifluoromethane	**	H	11	*	0.500	ND	49	
1,1-Dichloroethane	**	**	II .		0.500	ND	n	
1,2-Dichloroethane	b 5	**	li .		0.500	ND		
■ 1,1-Dichloroethene	*1	Ħ	If		0.500	ND	н	
cis-1,2-Dichloroethene	11	Ħ	н		0.500	ND	n	
trans-1,2-Dichloroethene	16	11	**		0.500	ND	II	
1,2-Dichloropropane	n .	18	19		0.500	ND	n	
cis-1,3-Dichloropropene		н "	н		0.500	ND	н	
trans-1,3-Dichloropropene	· ·	н	#		0.500	ND	**	
Freon 113	91	tt	11		0.500	ND	*1	•
Methylene chloride	*1	n	п		0.500	· ND	"	
1,1,2,2-Tetrachloroethane	u	tu .	H		0.500	ND	91	
Tetrachloroethene	Ir	91	н		0.500	ND	II	
1,1,2-Trichloroethane	H	41	ur .		0.500	ND	Ħ	
1,1,1-Trichloroethane	н	11	19		0.500	ND	н	
Trichloroethene	er	н	**		0.500	ND	n	
Trichlorofluoromethane	**	н	•		0.500	ND	tt	
Vinyl chloride	**	*1	п		0.500	ND	**	
Surrogate: Bromochloromethane				65.0-135		105	%	
Surrogate: Bromochioromethane Surrogate: 1,4-Dichlorobutane	n	11	и	65.0-135		109	"	
Surrogaie: 1,4-Dichiorodulane				0.0-155		• • • •		

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Project:

Project Manager:

Cargill Salt Project Number: CRA101 Robert Langdon

Sampled: Received: 8/20/99

8/16/99 to 8/18/99

Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D 4 11 5								
B-2-11.5	0000566	0.100.100	P9084	<u>85-07</u>			<u>Water</u>	1
Bromodichloromethane	9080566	8/23/99	8/23/99		1.00	ND	ug/l	:
Bromoform			H		1.00	ND	li .	,
Bromomethane	11	11	lt .		1.00	ND	и .	
Carbon tetrachloride	н	41	···		1.00	ND	II	
Chlorobenzene	10		11		1.00	ND	ji	
Chloroethane	н	11	H		1.00	ND	11	,
2-Chloroethylvinyl ether	н	11	n		10.0	ND	п .	
Chloroform	н	11	**		1.00	ND	ti	
Chloromethane	н	II	••		1.00	ND	11	
Dibromochloromethane	н	II	••		1.00	ND	и	
I,2-Dibromoethane (EDB)	lŧ.	It	н .		1.00	ND	IF.	
1,2-Dichlorobenzene	H	ш	"		1.00	ND	н	
1,3-Dichlorobenzene	н	II .	n		1.00	NĐ	#	l
1,4-Dichlorobenzene	l1	И	••		1.00	ND	II .	
hlorodifluoromethane	f#	н	•		1.00	ND	t t	!
Dichloroethane	н	11	u		1.00	ND	H.	
1,2-Dichloroethane	10	ш	**		1.00	ND	tr .	•
1,1-Dichloroethene	11	и	н		1.00	ND	• н	
cis-1,2-Dichloroethene	н	41	u		1.00	ND	tt .	
trans-1,2-Dichloroethene	10	u	u-		1.00	ND	u	
1,2-Dichloropropane	10	41	IF.		1.00	ND	11	
cis-1,3-Dichloropropene	It	11	IF		1.00	ND	If	1
trans-1,3-Dichloropropene	it	11	н		1.00	ND	u	
Freon 113	(+	ш	н		1.00	ND	u	
Methylene chloride	19	11	n		1.00	ND	ıı .	
1,1,2,2-Tetrachloroethane	н	1t	æ		1.00	ND	II	1
Tetrachloroethene	11	11	u		1.00	25.5	п	
1,1,2-Trichloroethane	H	11	u		1.00	ND	p.	'
1,1,1-Trichloroethane	н	н	,,		1.00	ND	n .	
Trichloroethene	ít	ц	t+		1.00	ND	II	
Trichlorofluoromethane	10	-11	n,		1.00	ND	п	į
Vinyl chloride	19	41	rr .		1.00	ND ND	11	
Surrogate: Bromochloromethane	"			65.0-135	1.00	98.7	%	
Surrogate: 1,4-Dichlorobutane	#	ji	ır	65.0-135		98.7 96.0	% "	
om roguie. 1,4-Dichiorovuiane			•	03.0-133		90.0		(



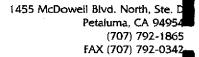
Conor Pacific / EFWProject:Cargill SaltSampled:8/16/99 to 8/18/992650 East Bayshore Rd.Project Number:CRA101Received:8/20/99Palo Alto, CA 94303Project Manager:Robert LangdonReported:8/31/99

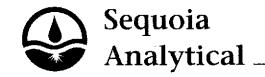
Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

2	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-3-16.5</u>			P9084	95 AQ	•		<u>Water</u>	
Bromodichloromethane	9080566	8/23/99	8/23/99	<u>53-00</u>	0.500	ND	ug/l	
Bromoform	900000	0/23/99 н	0/23/33		0.500	ND	ug/i	
Bromomethane	u ·	11-	**		0.500	ND	W	
Carbon tetrachloride	10	If	**		0.500	ND	н	
Chlorobenzene	н	μ	**		0.500	ND		
Chloroethane	.,		"		0.500	ND	11	
2-Chloroethylvinyl ether	**	H	91		5.00	ND	п	
Chloroform	. "	•	11		0.500	ND	tr	
Chloromethane	11	**	11		0.500	ND ND	et .	
Dibromochloromethane	19	•	ji		0.500	ND	10	
1,2-Dibromoethane (EDB)	н	**	II.		0.500	ND	п	
1,2-Dichlorobenzene	n	11	ıŧ		0.500	ND		
1,3-Dichlorobenzene	. 11	n	It		0.500	ND	*	
1.4-Dichlorobenzene	11	91	H		0.500	ND	Ħ	
lorodifluoromethane	11	\$1	н		0.500	ND	н	
1,1-Dichloroethane	11	п	"		0.500	ND	16	
1,2-Dichloroethane	· 11	п	11		0.500	ND	**	
1,1-Dichloroethene	11	п	11		0.500	ND	,,	
cis-1,2-Dichloroethene	16	п	11		0.500	ND	**	
trans-1,2-Dichloroethene	н	te	n		0.500	ND	31	
1,2-Dichloropropane	H	10	н		0.500	ND	**	
cis-1,3-Dichloropropene	н		н		0.500	ND	11	
trans-1,3-Dichloropropene	н	PF .	#1		0.500	ND	n	
Freon 113	. 11	u.	31		0.500	ND	н	
Methylene chloride	10	**	п		0.500	ND	#	
1,1,2,2-Tetrachloroethane	19	**	It		0.500	ND	H	
Tetrachloroethene	н	H	It.	•	0.500	ND	"	
1,1,2-Trichloroethane	**	*1	19		0.500	ND	н	
1,1,1-Trichloroethane	e 1	*1	11		0.500	ND	Ħ	
Trichloroethene	п	11	н		0.500	ND	**	
Trichlorofluoromethane	п	ti	11		0.500	ND		
Vinyl chloride	n	tı	11		0.500	ND	•	
Surrogate: Bromochloromethane	"	n	<i>n</i>	65.0-135		95.7	%	
Surrogate: 1,4-Dichlorobutane	u	n	#	65.0-135		92.7	11	
o ,								

S.-quoia Analytical - Petaluma







Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-2-16.5</u>			P9084	85-09			Water	
Bromodichloromethane	9080566	8/23/99	8/23/99	<u> </u>	0.500	ND	ug/l	
Bromoform	"	11	11		0.500	ND	и	
Bromomethane	Ħ	i P	tt		0.500	ND	3 1	1
Carbon tetrachloride	it	0	Н		0.500	ND	Ħ	
Chlorobenzene	**	11	*1		0.500	ND	**	
Chloroethane	17	н	#1		0.500	ND	II.	
2-Chloroethylvinyl ether	11		H.		5.00	ND		
Chloroform	**	11	11		0.500	ND	#	
Chloromethane	#	er .	t i		0.500	ND	**	
Dibromochloromethane	н	11	t i		0.500	ND	••	,
1,2-Dibromoethane (EDB)	н	at	11		0.500	ND	н	
1,2-Dichlorobenzene	н	m ·	11		0.500	ND	•	
1,3-Dichlorobenzene	*1	46	ŧı.		0.500	ND	,,	
1.4-Dichlorobenzene	•1	11	1 1		0.500	ND ND	11	
hlorodifluoromethane	н		11		0.500	ND	#	
,,:-Dichloroethane	. #1	11	11		0.500	ND	11	
1,2-Dichloroethane	н	**	11		0.500	ND ND	11	+
1,1-Dichloroethene	**	11	jt.		0.500	ND	п	
cis-1,2-Dichloroethene		**	11		0.500	ND	ц	
trans-1,2-Dichloroethene	"	10	11		0.500	ND	п	
1,2-Dichloropropane	,,	TT.	11		0.500	ND	11	,
cis-1,3-Dichloropropene	*1	10	11		0.500	ND	II .	
trans-1,3-Dichloropropene	11	16	11		0.500	ND ND	ц	
Freon 113		. 11			0.500	ND ND	и	
Methylene chloride	11	n . ··	" II		0.500	ND ND	u u	
1,1,2,2-Tetrachloroethane	31	и	 II			ND ND	n .	,
Tetrachloroethene	"	н .	 II		0.500	0.532		
1,1,2-Trichloroethane	11				0.500			'
		 M	 II		0.500	ND		
1,1,1-Trichloroethane		"	п	٠	0.500	ND		. [
Trichloroethene		" "	"		0.500	ND	" 11	
Trichlorofluoromethane	" . H	"	"		0.500	ND	"	
Vinyl chloride					0.500	ND		
Surrogate: Bromochloromethane	n	#	"	65.0-135		96.0	%	
Surrogate: 1,4-Dichlorobutane	н	n	n '	65.0-135		96.7	rr .	

Cuquoia Analytical - Petaluma





Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99

8/31/99

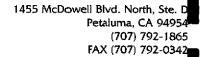
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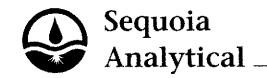
Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D 0 00 5			macc 4:	05 40			33 7-4	
<u>B-2-22.5</u>	0000566	6100 (00	P9084	<u>85-10</u>	0.500) III	<u>Water</u>	
Bromodichloromethane	9080566	8/23/99	8/23/99		0.500	ND	ug/l "	
Bromoform	u	**	"		0.500	ND	" "	
Bromomethane	11	"	" D		0.500	ND		
Carbon tetrachloride	"	**), D		0.500	ND	н	
Chlorobenzene	"	**	0		0.500	ND	 H	
Chloroethane	N N	#	. "		0.500	ND	"	
2-Chloroethylvinyl ether	ri 10	**	и		5.00	ND	"	
Chloroform	**	** **			0.500	ND	"	
Chloromethane					0.500	ND	#	
Dibromochloromethane	**	11			0.500	ND	" H	•
1,2-Dibromoethane (EDB)		11	10		0.500	ND	"	
1,2-Dichlorobenzene	**	II	11		0.500	ND	"	
1,3-Dichlorobenzene	**	II .	11		0.500	ND	**	
1,4-Dichlorobenzene	**	li	Ħ		0.500	ND	11	
ilorodifluoromethane	11	Iŧ	Ħ		0.500	ND	** **	
.,Dichloroethane	**	· D	н		0.500	ND	,,	
1,2-Dichloroethane	**	н	11		0.500	ND	**	
1,1-Dichloroethene	11	и	11		0.500	ND	11	
cis-1,2-Dichloroethene	*1	н	11		0.500	ND	11	
trans-1,2-Dichloroethene	11	**	II.		0.500	ND	ч	
1,2-Dichloropropane	"		н		0.500	ND	11	
cis-1,3-Dichloropropene	II .	77	17		0.500	ND	н	
trans-1,3-Dichloropropene	11	н	te .		0.500	ND	II .	
Freon 113	"	**	и		0.500	ND	*	
Methylene chloride	**	41	•		0.500	ND	41	
1,1,2,2-Tetrachloroethane	tr .	11	n		0.500	ND	**	
Tetrachloroethene	*1	II	11		0.500	0.613		
1,1,2-Trichloroethane	**	11	**		0.500	ND	ŋ	
1,1,1-Trichloroethane	H	It	н		0.500	ND	ч	
Trichloroethene	•	11	Ħ		0.500	ND	li .	•
Trichlorofluoromethane	n	IJ	11		0.500	ND	п	
Vinyl chloride	H	н	11		0.500	ND)ı	
Surrogate: Bromochloromethane	H	"	II .	65.0-135		103	%	
Surrogate: 1,4-Dichlorobutane	11	"	rt	65.0-135		98.3	H	

.-quoia Analytical - Petaluma







Project: Cargill Salt
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Project Manager: Robert Langdon

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Page		Batch	Date	Date	Surrogate	Reporting			
Bromodichloromethane 9080566 8/24/99 8/24/99 0.500 ND ug/1	Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
Bromodichloromethane 9080566 8/24/99 8/24/99 0.500 ND ug/1	B-3-22.5			Panga	Q.511			Woter	
Bromoform		9080566	8/24/99		<u> </u>	0.500	ND		
Bromomethane									
Carbon tetrachloride Chlorobenzene Chlorocethane Chlorocethylvinyl ether Chlorocethylvinyl ether Chloromethylvinyl ether Chloromethyl ether Chloromethylvinyl ether Chounds Chloromethylvinyl ether Chloromethyl Chloromethyl Chloromethylvinyl ether Chloromethyl Chloromethy		н	n .	*1				n	
Chlorobenzene		н	u.	*1				п	1
Chloroethane		**		tı				п	
2-Chloroethylvinyl ether		. 4	0	•				п	
Chloroform Chloromethane Chlor		tt	It					п	
Chloromethane		н	11					D .	1
Dibromochloromethane		()	n.	H				11	
1,2-Dibromoethane (EDB)		ti	II.	rt .				н	•
1,2-Dichlorobenzene		н	II.	н .				н	
1,3-Dichlorobenzene " " " " 0,500 ND " 1,4-Dichlorobenzene " " " 0,500 ND " 1,4-Dichlorobenzene " " " 0,500 ND " 1,2-Dichloroethane " " " 0,500 ND " 1,1-Dichloroethane " " " 0,500 ND " 1,2-Dichloroethane " " " 0,500 ND " 0,500 ND " 1,2-Dichloroethane " " " 0,500 ND " 1,2-Dichloroethane " " " 0,500 ND " 0,500 ND " 1,2-Dichloroethene " " " 0,500 ND " 1,2-Dichloroptopene " " " 0,500 ND " 1,2-Dichloroptopene " " " 0,500 ND " 1,2-Dichloroptopene " " 0,500 ND " 1,2-Z-Tetrachloroethane " " 0,500 ND " 1,1,2,2-Tetrachloroethane " " " 0,500 ND " 1,1,2,2-Tichloroethane " " " 0,500 ND " 1,1,1,1-Trichloroethane " " " 0,500 ND " Trichloroethane " " 0,500 ND " Trichloroethane " " " 0,500 ND " " 0,500 ND " 0,500 N	. ,	U	11					п	
1,4-Dichlorobenzene		it	и					11	
hlorodifluoromethane		0 .	п	H				н	
1,1-Dichloroethane	-	u-	n					н	· 1
1,2-Dichloroethane " " " " " " " " " " " " " " " " " " "		D.	11					11	
1,1-Dichloroethene	· ·	If	u	II.				11	1
cis-1,2-Dichloroethene " " " " " " " " " " " " " " " " " " "	·	u	11	R				44	
trans-1,2-Dichloropethene " " " " " 0.500 ND " 1,2-Dichloropropane " " " " 0.500 ND " cis-1,3-Dichloropropene " " " " 0.500 ND " trans-1,3-Dichloropropene " " " 0.500 ND " Trans-1,3-Dichloropropene " 0.500 ND		If	u .					11	
1,2-Dichloropropane " " " " " " 0.500 ND " cis-1,3-Dichloropropene " " " " 0.500 ND " trans-1,3-Dichloropropene " " " 0.500 ND " Freon 113 " " " 0.500 ND " Methylene chloride " " 0.500 ND " 1,1,2,2-Tetrachloroethane " " 0.500 ND " Tetrachloroethene " " 0.500 ND " 1,1,2-Trichloroethane " " 0.500 ND " 1,1,1-Trichloroethane " " 0.500 ND " Trichloroethene " " 0.500 ND " Trichlorofluoromethane " " 0.500 ND " Vinyl chloride " " 0.500 ND "	•	11	*1	п				11	į
cis-1,3-Dichloropropene " " " " 0.500 ND " trans-1,3-Dichloropropene " " " 0.500 ND " ND " ND " ND " ND	· ·	n .	H	ń ,	•			**	
trans-1,3-Dichloropropene " " " " 0.500 ND " Freon 113 " " 0.500 ND " Methylene chloride " " " 0.500 ND " 1,1,2,2-Tetrachloroethane " " " 0.500 ND " Tetrachloroethane " " " 0.500 ND " 1,1,2-Trichloroethane " " " 0.500 ND " 1,1,1-Trichloroethane " " " 0.500 ND " Trichloroethane " " " 0.500 ND " Trichloroethane " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " " 0.500 ND "		n	п	п					1
Freon 113 " " " " " " " " " " " " " " " " " " "		11	n	п				•	
Methylene chloride " " " " " " 0.500 ND " " 1,1,2,2-Tetrachloroethane " " " 0.500 ND " " Tetrachloroethene " " " 0.500 ND " 0.500 N		41	н	h					1
1,1,2,2-Tetrachloroethane " " " 0.500 ND " Tetrachloroethene " " " 0.500 2.16 " 1,1,2-Trichloroethane " " " 0.500 ND " 1,1,1-Trichloroethane " " " 0.500 ND " Trichloroethene " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " " 0.500 ND "	Methylene chloride	11	н	*1				**	
Tetrachloroethene " " " " 0.500 2.16 " " 1,1,2-Trichloroethane " " " 0.500 ND " " 1,1,1-Trichloroethane 1,1,1-Trichloroethane " " " 0.500 ND " " " 0.500 ND " " 0.500 ND "		11	44	91				**	-
1,1,2-Trichloroethane " " " " 0.500 ND " 1,1,1-Trichloroethane " " " 0.500 ND " Trichloroethene " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " 0.500 ND "	Tetrachloroethene	11	**	•				н	į
1,1,1-Trichloroethane " " " 0.500 ND " Trichloroethene " " 0.500 ND " Trichlorofluoromethane " " 0.500 ND " Vinyl chloride " " 0.500 ND "	1,1,2-Trichloroethane	11	**	*1				H	
Trichloroethene " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " 0.500 ND "	1,1,1-Trichloroethane	41	71	11				tı	(
Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " 0.500 ND "		Ħ	**	n				*1	
Vinyl chloride " " " 0.500 ND "	Trichlorofluoromethane	H	••	ų				**	(
	Vinyl chloride	*	**	•				**	
0J.U-13J 9J.3 %	Surrogate: Bromochloromethane	"	"	"	65.0-135		93.3	%	
Surrogate: 1,4-Dichlorobutane " " " 65.0-135 95.7 "	Surrogate: 1,4-Dichlorobutane	#	"	#					



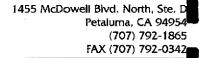
Conor Pacific / EFWProject:Cargill SaltSampled:8/16/99 to 8/18/992650 East Bayshore Rd.Project Number:CRA101Received:8/20/99Palo Alto, CA 94303Project Manager:Robert LangdonReported:8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

B4-11.5		Batch	Date	Date	Surrogate	Reporting			
Bromodichloromethane 9080565 8/23/99 8/23/99 0.500 ND ug/l	Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
Bromoform								447	
Bromoform			- 4 4		<u>85-12</u>				
Stromotorm Str					•				
Carbon tetrachloride									
Chlorobenzene	— · · · · · · · · · · · · · · · · · · ·								
Chloroethane	1	,-							
Chloroethylivinyl ether		"		•					
Chloroform Chloromethane Dibromochloromethane Dibro		11	*	**					
Chloromethane Dibromochloromethane 1,2-Dibromochloromethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorotenane 1,4-Dichlorotenane 1,4-Dichlorotenane 1,1-Dichlorotenane 1,	2-Chloroethylvinyl ether	. 11	*1	H					
Chioromethane	Chloroform	II.	11	"					
1,2-Dibromoethane (EDB)	Chloromethane	н	*1	"		0.500	ND	**	
1,2-Dichlorobenzene	Dibromochloromethane	н	11	11		0.500	ND		
1,3-Dichlorobenzene	1,2-Dibromoethane (EDB)	bž	11	11		0.500	ND	11	
1,4-Dichlorobenzene	1,2-Dichlorobenzene	••	14	П		0.500	ND	11	
Altoridifluoromethane	1,3-Dichlorobenzene	**	I†	ш		0.500	ND	*1	
No No No No No No No No	1,4-Dichlorobenzene	11	10	ц		0.500	ND	41	
1,1-Dichloroethane	hlorodifluoromethane	н	R	If		0.500	ND	11	
1,2-Dichloroethane " " " " 0.500 ND " 1,1-Dichloroethene " " " 0.500 ND " cis-1,2-Dichloroethene " " " 0.500 ND " trans-1,2-Dichloropthene " " " 0.500 ND " 1,2-Dichloropropane " " " 0.500 ND " cis-1,3-Dichloropropene " " " 0.500 ND " trans-1,3-Dichloropropene " " " 0.500 ND " Freon 113 " " " 0.500 ND " Methylene chloride " " " 0.500 ND " 1,1,2-Tetrachloroethane " " 0.500 ND " Tetrachloroethene " " 0.500 ND " 1,1,1-Trichloroethane " " 0.500 ND " Trichloroethane " " " 0.500 ND " Trichloroethene " " 0.500 ND " Trichloroethane " " 0.500 ND " Trichloroethane " " 0.500 ND " Trichloroethane " " 0.500 ND " Trichlorofluoromethane " " 0.500 ND " Vinyl chloride " " 0.500 ND "	,,,-Dichloroethane	en	57	H		0.500	ND	D	
1,1-Dichloroethene """"""""""""""""""""""""""""""""""""		H	P	#		0.500	ND	10	
cis-1,2-Dichloroethene """"""""""""""""""""""""""""""""""""	•		u,	R		0.500	ND	10	
trans-1,2-Dichloroethene " " " " 0.500 ND " 1,2-Dichloropropane " " " 0.500 ND " cis-1,3-Dichloropropene " " " 0.500 ND " trans-1,3-Dichloropropene " " " 0.500 ND " Freon 113 " " " 0.500 ND " Methylene chloride " " " 0.500 ND " 1,1,2,2-Tetrachloroethane " " " 0.500 ND " Tetrachloroethene " " " 0.500 ND " 1,1,2-Trichloroethane " " " 0.500 ND " 1,1,1-Trichloroethane " " " 0.500 ND " Trichloroethene " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " " 0.500 ND "		11	**			0.500	ND	17	
1,2-Dichloropropane " " " " " " 0.500 ND " cis-1,3-Dichloropropene " " " 0.500 ND " trans-1,3-Dichloropropene " " " 0.500 ND " Freon 113 " " " 0.500 ND " Methylene chloride " " 0.500 ND " 1,1,2,2-Tetrachloroethane " " " 0.500 ND " 1,1,2-Trichloroethane " " " 0.500 ND " 1,1,1-Trichloroethane " " " 0.500 ND " 1,1,1-Trichloroethane " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " " 0.500 ND "	•	11.	**	**		0.500	ND	н	
cis-1,3-Dichloropropene " " " " " " " " " " " " " " " " " " "		P	**	η .		0.500	ND	19	
trans-1,3-Dichloropropene " " " " " 0.500 ND " Freon 113 " " " " 0.500 ND " Methylene chloride " " " 0.500 ND " 1,1,2,2-Tetrachloroethane " " " 0.500 ND " Tetrachloroethene " " " 0.500 ND " 1,1,2-Trichloroethane " " " 0.500 ND " 1,1,1-Trichloroethane " " " 0.500 ND " Trichloroethene " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " " 0.500 ND "		19	u	**		0.500	ND	R .	
Freon 113 " " " " 0.500 ND " Methylene chloride " " 0.500 ND " 1,1,2,2-Tetrachloroethane " " 0.500 ND " Tetrachloroethene " " 0.500 ND " 1,1,2-Trichloroethane " " 0.500 ND " 1,1,1-Trichloroethane " " 0.500 ND " Trichloroethene " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " " 0.500 ND "		10	41	••		0.500	ND	"	
Methylene chloride " " " " 0.500 ND " 1,1,2,2-Tetrachloroethane " " " 0.500 ND " Tetrachloroethene " " " 0.500 ND " 1,1,2-Trichloroethane " " " 0.500 ND " 1,1,1-Trichloroethane " " " 0.500 ND " Trichloroethene " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " " 0.500 ND "	• • •	н	11	11		0.500	ND	н	
1,1,2,2-Tetrachloroethane " " " " 0.500 ND " Tetrachloroethene " " " 0.500 ND " 1,1,2-Trichloroethane " " " 0.500 ND " 1,1,1-Trichloroethane " " " 0.500 ND " Trichloroethene " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " " 0.500 ND "		H	u	II.	•	0.500	ND	*1	
Tetrachloroethene " " " " 0.500 1.86 " 1,1,2-Trichloroethane " " 0.500 ND " 1,1,1-Trichloroethane " " 0.500 ND " Trichloroethene " " 0.500 ND " Trichlorofluoromethane " " 0.500 ND " Vinyl chloride " " 0.500 ND "		D	Iŧ	II .				11	
1,1,2-Trichloroethane " " " " 0.500 ND " 1,1,1-Trichloroethane " " " 0.500 ND " Trichloroethene " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " " 0.500 ND "		•	u .	и				D.	
1,1,1-Trichloroethane " " " 0.500 ND " Trichloroethene " " " 0.500 ND " Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " 0.500 ND "		**	n	If				"	
Trichloroethene " " " 0.500 ND " Trichlorofluoromethane " " 0.500 ND " Vinyl chloride " " 0.500 ND "		*1	Ħ	н				н	
Trichlorofluoromethane " " " 0.500 ND " Vinyl chloride " " " 0.500 ND "		Ħ		n .				Ħ	
Vinyl chloride " " " 0.500 ND "	1	u		**				11	
* Bij * ********************************		*1	**	**				**	
Nurrogale: Kromochloromelhane """ D.U-15.1 94.0 70	Surrogate: Bromochloromethane	JI	n		65.0-135		94.0	%	
Surrogate: 1,4-Dichlorobutane " " " 65.0-135 101 "		rr .	,,	<i>n</i>					

uoia Analytical - Petaluma - Petaluma







Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

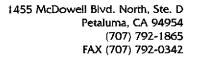
Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Lìmits	Limit	Result	Units ,	Notes*
B-4-22.5			P90848)5.12			<u>Water</u>	
Bromodichloromethane	9080566	8/23/99	8/24/99	9,3-1,3	0.500	ND	ug/l	ļ
Bromoform	9080300	0/23/99	0/24/99 II		0.500	ND	# #R\1	į
Bromomethane	t ı	#1	ш		0.500	ND	н ,	
Carbon tetrachloride		11	li .		0.500	ND	**	1
Chlorobenzene	**	Ш	It		0.500	ND	•	
Chloroethane	н	11	u	•	0.500	ND	91	•
2-Chloroethylvinyl ether	Ħ	ìi			5.00	ND	n '	
Chloroform	**	II	*		0.500	ND	11	•
Chloromethane		16			0.500	ND	11	
Dibromochloromethane		u	**		0.500	ND	п	,
1,2-Dibromoethane (EDB)	**	H			0.500	ND	IF.	ı
1,2-Dichlorobenzene	**	**	11		0.500	ND	t t	
1,3-Dichlorobenzene	#	t+	n		0.500	ND	*	
1.4-Dichlorobenzene	11	H	H		0.500	ND	н	
ilorodifluoromethane	*1	tt	11		0.500	ND	n	ł
1,1-Dichloroethane	4	**	11		0.500	ND	**	
1,2-Dichloroethane	"	н	**		0.500	ND	85	ţ
1,1-Dichloroethene	11	Ħ	н		0.500	ND	*1	ı
cis-1,2-Dichloroethene	11	•	**		0.500	ND	17	
trans-1,2-Dichloroethene	•	**	**		0.500	ND	**	
1,2-Dichloropropane	ŧı	91	**		0.500	ND	n	
cis-1,3-Dichloropropene	er e	•	**		0.500	ND	H	f
trans-1,3-Dichloropropene	11	N	н		0.500	ND	•	
Freon 113	•1	**	3 1		0.500	ND	••	l
Methylene chloride	11	467	n		0.500	ND	**	
1,1,2,2-Tetrachloroethane	11	**	41		0.500	ND	11	
Tetrachloroethene	н	, #I	11		0.500	ND	n n	. (
1,1,2-Trichloroethane	п	**	n	•	0.500	ND	11	
1,1,1-Trichloroethane	u	н	1 1		0.500	ND	**	i
Trichloroethene	í†	Ħ	п		0.500	ND	11	
Trichlorofluoromethane	14	•	и .		0.500	ND	н	. •
Vinyl chloride	H	**	П		0.500	ND	n	
Surrogate: Bromochloromethane	u	,r	. н	65.0-135		97.7	%	
Surrogate: 1,4-Dichlorobutane	и	n	и .	65.0-135		96.7	n _.	(

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Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-6-5			P9084	85-14			Water	
Bromodichloromethane	9080566	8/23/99	8/24/99		0.500	ND	ug/l	
Bromoform	11	"	"		0.500	ND	н	
Bromomethane	11	n	17		0.500	ND	lt .	
Carbon tetrachloride	11	: 91	#		0.500	ND	11	
Chlorobenzene	11	11	Ħ		0.500	ND	**	
Chloroethane	II .	п	n		0.500	ND	н	
2-Chloroethylvinyl ether		II .	**		5.00	ND	•1	
Chloroform	. #	11	et		0.500	ND	11	
Chloromethane	**	п	11		0.500	ND	11	
Dibromochloromethane	H	п	μ		0.500	ND	п	
1,2-Dibromoethane (EDB)	U	Ħ	п		0.500	ND	It	
1,2-Dichlorobenzene	11	i r	п		0.500	ND	ц	
1,3-Dichlorobenzene	"		и		0.500	ND	н	
1.4-Dichlorobenzene		•	п		0.500	ND	н	
'ilorodifluoromethane	**	,,	п		0.500	ND	н	
1,1-Dichloroethane	**	n	Ħ		0.500	ND	It	
1,2-Dichloroethane	•	**	**		0.500	ND	17	
1,1-Dichloroethene	u	**			0.500	ND	ff.	
cis-1,2-Dichloroethene	ч	#1	n		0.500	0.870	11	
trans-1,2-Dichloroethene	u		•		0.500	ND	**	
1,2-Dichloropropane	11	11	**		0.500	ND	**	·
cis-1,3-Dichloropropene	п	11	#1		0.500	ND	**	
trans-1,3-Dichloropropene	. п	п	rt		0.500	ND	#1	
Freon 113	н	n .	н		0.500	ND	ц	•
Methylene chloride	**	ш	**		0.500	ND	u	
1,1,2,2-Tetrachloroethane	H	н .	#		0.500	ND	IF.	
Tetrachloroethene	U	n	п		0.500	1.09	H	
1,1,2-Trichloroethane	41	•	и.		0.500	ND	н	
1,1,1-Trichloroethane	44	*	II		0.500	ND	TI	
Trichloroethene	er e	11	rr		0.500	11.6	19	
Trichlorofluoromethane	н	n	H		0.500	ND	•	
_ Vinyl chloride	**	11	n		0.500	ND	11	
Surrogate: Bromochloromethane	и	"	"	65.0-135		109	%	
Surrogate: 1,4-Dichlorobutane	н	H	tt .	65.0-135		106	n	

sequoia Analytical - Petaluma





Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			j
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-8-6.5			P9084	RS_1 S			Water	
Bromodichloromethane	9080566	8/23/99	8/24/99	<u> </u>	0.500	ND	ug/l	1
Bromoform	H	0/23/99	0/2 4 /99		0.500	ND	u ug€/1	
Bromomethane	19	н	Ħ		0.500	ND ND	11	•
Carbon tetrachloride	H	н	н		0.500	ND	II .	1
Chlorobenzene		*1	et .		0.500	ND	H	
Chloroethane	**		m ·		0.500	ND	н	(
2-Chloroethylvinyl ether	u	31	11		5.00	ND	ц	
Chloroform	11	31	11		0.500	ND	н	1
Chloromethane	11	41	11		0.500	ND	te .	
Dibromochloromethane	11	31	49		0.500	ND	**	•
1,2-Dibromoethane (EDB)	11	li .	11		0.500	ND	Ħ	_
1,2-Dichlorobenzene	11	н	te .		0.500	ND	Ħ	
1,3-Dichlorobenzene	11	ш	н		0.500	ND		
1.4-Dichlorobenzene	**	и	71		0.500	ND	**	
'ilorodifluoromethane	н	II.	н		0.500	ND ND	я	
1,1-Dichloroethane	11	11	11		0.500	ND	н	
1,2-Dichloroethane	**	lf.	*1	9	0.500	ND	а	ł
1,1-Dichloroethene	*1	11	#1		0.500	ND ND	17	
cis-1,2-Dichloroethene	11	lr.	•		0.500	ND	#1	1
trans-1,2-Dichloroethene	**	le .	n ·		0.500	ND ND	17	
1,2-Dichloropropane	14	10	*1		0.500	ND	"	•
cis-1,3-Dichloropropene	11	ш	н		0.500	ND ND	н	
trans-1,3-Dichloropropene	#1	D.	n		0.500	ND ND	B	
Freon 113	**	ш	*1		0.500	ND ND		į
Methylene chloride	11		"		0.500	ND ND	*	
1,1,2,2-Tetrachloroethane	н	16	11		0.500	ND ND	n	•
Tetrachloroethene	н	u.		·	0.500	20.5		
	•	10					*	•
1,1,2-Trichloroethane	н		11		0:500	ND	,,	
1,1,1-Trichloroethane	"	"	" 11		0.500	ND	"	9
Trichloroethene	"	"	11		0.500	0.867	"	
Trichlorofluoromethane	"	"	11		0.500	ND	*	_
Vinyl chloride	"	"			0.500	ND		
Surrogate: Bromochloromethane	n	" .	л	65.0-135		101	%	
Surrogate: 1,4-Dichlorobutane	71	,	н .	65.0-135	•	97.3	rr	

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Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

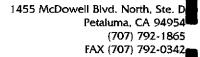
Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-9-6.5</u>	,		P9084	<u>85-16</u>			Water	
Bromodichloromethane	9080566	8/23/99	8/24/99		2.50	ND	ug/l "	
Bromoform	r9	ч	II.		2.50	ND		
Bromomethane	14	1)	H		2.50	ND	i)	
Carbon tetrachloride	16	n	le .		2.50	ND	II.	
Chlorobenzene	11	**	10		2.50	ND	" .	
Chloroethane	91	**	11		2.50	ND	17	
2-Chloroethylvinyl ether	**	e r	н		25.0	ND	Ħ	
Chloroform	н	**	н		2.50	ND	*1	
Chloromethane	91	н	n		2.50	ND	11	
Dibromochloromethane	+1	Ħ			2.50	ND	v	
1,2-Dibromoethane (EDB)	••	H	H		2.50	ND	R	
1,2-Dichlorobenzene	u	•1	91		2.50	ND	0	
1,3-Dichlorobenzene	#1	+1	**		2.50	ND	tr.	
1.4-Dichlorobenzene	11	*1	n		2.50	ND	41	
hlorodifluoromethane	u .	ęı	Ħ		2.50	ND	**	
1,1-Dichloroethane	ti .	*1	н		2.50	ND	41	
1,2-Dichloroethane	11	*1	**		2.50	ND	11	
1,1-Dichloroethene	41	41	**		2.50	ND	11	
cis-1,2-Dichloroethene	It	11	11		2.50	ND	н	
trans-1,2-Dichloroethene	tr	11	н .		2.50	ND	"	
1,2-Dichloropropane	ur i	11	*		2.50	ND	**	
cis-1,3-Dichloropropene	10	п	Ħ		2.50	ND	н .	
trans-1,3-Dichloropropene	n	н	н		2.50	ND	н .	
Freon 113	11	IF	41		2.50	ND	11	
Methylene chloride	H	rt.	11		2.50	ND	II .	·
1,1,2,2-Tetrachloroethane	н	H .	11		2.50	ND	н	
Tetrachloroethene	**	н	п	•	2.50	58.8	ц	
1,1,2-Trichloroethane		н	п		2.50	ND	n	
1,1,1-Trichloroethane	41	н	ıı		2.50	ND	н .	
Trichloroethene	•	н	II		2.50	3.21	н	
Trichlorofluoromethane	H	#	R		2.50	ND	н	
Vinyl chloride		**	IP.		2.50	ND	н	
Surrogate: Bromochloromethane	<i>n</i>		#	65.0-135	2.50	98.7	%	
Surrogate: 1,4-Dichlorobutane	n	"	n	65.0-135		96.3	"	
■ Surrogaie. 1,4-Dictiorobutane				05.0-155		70.5		

quoia Analytical - Petaluma







Project: Cargill Salt Project Number: CRA101

Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-7-6.5			P9084	R5-17			Water	•
Bromodichloromethane	9080566	8/23/99	8/25/99		1.00	ND	ug/l	1
Bromoform	11	u u	n		1.00	ND		
Bromomethane	ti	п	91		1.00	ND	ę.	
Carbon tetrachloride	11	п	ч		1.00	ND		1
Chlorobenzene	11		11		1.00	ND	**	1
Chloroethane	11	u ·	D.		1.00	ND	11	•
2-Chloroethylvinyl ether	п	**	н		10.0	ND	**	
Chloroform	п	**	**		1.00	ND	•	. (
Chloromethane	n .		11		1.00	ND	н .	
Dibromochloromethane	ш	H	11		1.00	ND	11	
1,2-Dibromoethane (EDB)	н		0 '		1.00	ND	44	•
1,2-Dichlorobenzene	11	**	н		1.00	ND	11	
1,3-Dichlorobenzene	u	•	*1		1.00	ND	н	
1 4-Dichlorobenzene	II	н	*1		1.00	ND	u ,	
ılorodifluoromethane	п	an .	н		1.00	ND	11	1
1,1-Dichloroethane	н		н		1.00	ND	n	
1,2-Dichloroethane	ft	17	*1		1.00	ND	*1	`
1,1-Dichloroethene	Ц	**	*1		1.00	ND	51	
cis-1,2-Dichloroethene	п	n	н		1.00	ND	11	
trans-1,2-Dichloroethene	II	**	34		1.00	ND	#1	
1,2-Dichloropropane	II .	"	н		1.00	ND	*1	
cis-1,3-Dichloropropene	n	**	P7		1.00	ND	91	1
trans-1,3-Dichloropropene	11	**	**		1.00	ND	11	
Freon 113	· II		**		1.00	ND	11	•
Methylene chloride	п	**	н		1.00	ND	н	
1,1,2,2-Tetrachloroethane	11	11	*1		1.00	ND	11	
Tetrachloroethene	ц	**	*1		1.00	29.8	11	1
1,1,2-Trichloroethane	li	**	*1		1.00	ND	11	
1,1,1-Trichloroethane	II	**	*1		1.00	ND	11	1
Trichloroethene	II	•	*1		1.00	2.66	п	
Trichlorofluoromethane	u	н	Ħ		1.00	ND	•1	•
Vinyl chloride	II	17	н .		1.00	ND	11	
Surrogate: Bromochloromethane	"	tt	H	65.0-135		107	%	
Surrogate: 1,4-Dichlorobutane	II	"	н	65.0-135		102	n	ı

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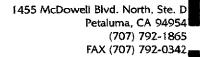
2650 East Bayshore Rd. Project Number: CRA101 Received: 8/20/99 Palo Alto, CA 94303 Project Manager: Robert Langdon Reported: 8/31/99	Conor Pacific / EFW	Project:	Cargill Salt	Sampled:	8/16/99 to 8/18/99
Palo Alto, CA 94303 Project Manager: Robert Langdon Reported: 8/31/99	2650 East Bayshore Rd.	Project Number:	CRA101	Received:	8/20/99
	Palo Alto, CA 94303	Project Manager:	Robert Langdon	Reported:	8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-6-10</u>			DOOG 41	05 10			<u>Water</u>	
Bromodichloromethane	9080566	8/24/99	<u>P9084</u> 3 8/24/99	55-18	0.500	ND	ug/l	
Bromoform	9000300	8/24/99 II	0/44/33 #		0.500	ND ND	ng/i	
Bromomethane	f r		**		0.500	ND	н	
Carbon tetrachloride	96	н	**		0.500	ND		
Chlorobenzene	er e	**	11		0.500	ND	91	
Chloroethane	**	**	n		0.500	ND	Ħ	
2-Chloroethylvinyl ether	**	**	н		5.00	ND	•	
Chloroform	#	0	п		0.500	ND	11	
Chloromethane		79	h		0.500	ND	п	
Dibromochloromethane	••	n	н		0.500	ND	и .	
1,2-Dibromoethane (EDB)	•1	11	н .		0.500	ND	н	
1,2-Dichlorobenzene		н	н		0.500	ND	D	
1,3-Dichlorobenzene	*1	n	n		0.500	ND	P	
1,4-Dichlorobenzene	*1	*1	п		0.500	ND	R	
hlorodifluoromethane	11	•	U		0.500	ND	II.	
1.1-Dichloroethane	11	n ,	It		0.500	ND	lt.	
1,2-Dichloroethane	11	**	11		0.500	ND	ш	
1,1-Dichloroethene	11	11	10		0.500	ND	· H	
cis-1,2-Dichloroethene	11	11	**		0.500	ND	tr	
trans-1,2-Dichloroethene	п	9 1	H	•	0.500	ND	H	
1,2-Dichloropropane	и .	n	**		0.500	ND	н	
cis-1,3-Dichloropropene	п	н	*		0.500	ND	**	
trans-1,3-Dichloropropene	Ц	11	•		0.500	ND	H	
Freon 113	f#	п	.н		0.500	ND	н	
Methylene chloride	11	17	н		0.500	ND	**	
1,1,2,2-Tetrachloroethane	**	18	**		0.500	ND	**	
Tetrachloroethene	t i	le .	и		0.500	ND	18	
1,1,2-Trichloroethane	н .	IF	H		0.500	ND	**	
1,1,1-Trichloroethane	••	"	ET		0.500	ND	*	
Trichloroethene	*1	H	**		0.500	ND	*1	
Trichlorofluoromethane	41	н	**		0.500	ND	н	
Vinyl chloride	**	n	H		0.500	ND	0	
Surrogate: Bromochloromethane	"	"	,,	65.0-135		93.0	%	
Surrogate: 1,4-Dichlorobutane	n	"	#	65.0-135		95.0	ii .	

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Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

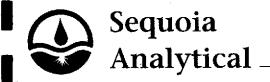
Received:
Langdon Reported:

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99

8/31/99

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-6-15			P9084	05 10			Water	
Bromodichloromethane	9080566	8/24/99	8/24/99	33-19	0.500	ND	`	1
Bromoform	9060300	8/24/99	8/24/99		0.500	ND ND	ug/l	
Bromomethane	41	tt	n -		0.500	ND ND		•
Carbon tetrachloride	41	п	**		0.500	ND	**	
Chlorobenzene	11	н	**		0.500	ND ND	n	
Chloroethane	11	п			*		tt .	
2-Chloroethylvinyl ether	11	11			0.500	ND	b .	
Chloroform		., H	**		5.00	ND	**	•
Chloromethane	11	rr rr	**		0.500	ND	" #	
	" "	"	· #		0.500	ND		
Dibromochloromethane	11				0.500	ND	Iţ.	
1,2-Dibromoethane (EDB)		П	Ħ		0.500	ND	"	1
1,2-Dichlorobenzene	41	п	**		0.500	ND	#1	•
1,3-Dichlorobenzene	11	ш	nt .		0.500	ND	* .	•
1,4-Dichlorobenzene	n	п	11		0.500	ND	#	
hlorodifluoromethane	H ·	II	11		0.500	ND	IF	
Dichloroethane	17	ц	11		0.500	ND	**	
1,2-Dichloroethane	11	11	11		0.500	ND	**	_
1,1-Dichloroethene	H	1)	*1		0.500	ND	41	
cis-1,2-Dichloroethene	1f	11	Ħ		0.500	ND	ŧı	
trans-1,2-Dichloroethene	ft	11	PT	-	0.500	ND	**	ı
1,2-Dichloropropane	m ·	11	tt		0.500	ND	ri .	
cis-1,3-Dichloropropene	*	41	**		0.500	ND	Ħ	1
trans-1,3-Dichloropropene	H	11	19	4	0.500	ND	н	•
Freon 113	н	•	te.		0.500	ND	π	
Methylene chloride	n	*1	**		0.500	ND	н	
1,1,2,2-Tetrachloroethane	Ħ	и	o o		0.500	ND	Ħ	·
Tetrachloroethene	•	**	10		0.500	ND	н	
1,1,2-Trichloroethane	n	**	te		0.500	ND	1 1	
1,1,1-Trichloroethane	#	**	0		0.500	ND	11	
Trichloroethene	14	**	II .		0.500	ND	я	
Trichlorofluoromethane	н	**	п		0.500	ND		į
Vinyl chloride	**		n		0.500	ND	**	
Surrogate: Bromochloromethane			"	65.0-135	0.500	97.0	%	
Surrogate: 1,4-Dichlorobutane	и	"	н	65.0-135		97.0 97.0	70 # ·	
Dan Ogaici 1,4"Dicinoi oonidhe				03.0-133		97,0		•





Conor Pacific / EFW	Project:	Cargill Salt	Sampled:	8/16/99 to 8/18/99
2650 East Bayshore Rd.	Project Number:	CRA101	Received:	8/20/99
Palo Alto, CA 94303	Project Manager:	Robert Langdon	Reported:	8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-11-6.5			P9084	85_70			<u>Water</u>	
Bromodichloromethane	9080566	8/24/99	8/24/99	35-20	1 2 .5	ND	ug/l	
Bromoform	H	H	N		12.5	ND	"	
Bromomethane	. 11	••			12.5	ND	•1	
Carbon tetrachloride	н	н			12.5	ND	#1	
Chlorobenzene	**	Ħ	**		12.5	ND	н	
Chloroethane	11	**	**		12.5	ND	u	
2-Chloroethylvinyl ether	•	1t	*1		125	ND	41	•
Chloroform	tt	**	11		12.5	ND	ir .	
Chloromethane	**	**	п	•	12.5	ND	Ц	
Dibromochloromethane	•	n	II		12.5	ND	n	
■ 1,2-Dibromoethane (EDB)	н	n ·	tr.		12.5	ND	н	
1,2-Dichlorobenzene	н	n	ц		12.5	ND	*	
1,3-Dichlorobenzene	91	**	11		12.5	ND	H	
1,4-Dichlorobenzene	11	*1			12.5	ND	n '	
hlorodifluoromethane	11	11	н		12.5	ND	н	
1,1-Dichloroethane	п	11			12.5	ND	19	
1,2-Dichloroethane	ш	li .	**		12.5	ND	9 7	
1,1-Dichloroethene	It	II .	н .	-	12.5	ND	**	
cis-1,2-Dichloroethene	μ	ш	**		12.5	ND	**	
trans-1,2-Dichloroethene	н	н :	н		12.5	ИD	##	
1,2-Dichloropropane	0	н	**		12.5	ND	. "	
cis-1,3-Dichloropropene	**	fr	**		12.5	ND	**	
trans-1,3-Dichloropropene	H	Ħ	н		12.5	ND	**	
Freon 113	¥I.	H	**		12.5	ND	ū	
Methylene chloride	ur .	••	11		12.5	ND	11	
1,1,2,2-Tetrachloroethane	10	er .	*11		12.5	ND	11	
Tetrachloroethene	**	11	п		12.5	574	íi .	
1,1,2-Trichloroethane	н	**	и		12.5	ND	н	
1,1,1-Trichloroethane	M	,	п		12.5	ND	P	
Trichloroethene	n	n	lt .		12.5	44.0	**	
Trichlorofluoromethane	H	Ħ	R		12.5	ND	•	
Vinyl chloride	11	1)	U		12.5	ND	4	
Surrogate: Bromochloromethane	n .	II .	"	65.0-135		93.0	%	
Surrogate: 1,4-Dichlorobutane	п	n	#	65.0-135		96.0	,	

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Project: Cargill Salt

Project Manager:

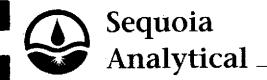
Project Number: CRA101 Robert Langdon Sampled:

8/16/99 to 8/18/99

Received: 8/20/99 8/31/99 Reported:

ch	Date	Date	Surrogate	Reporting			
nber	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
		B0004				¥\$74	
0566	0.15.4.10.0	P90848	<u>3-21</u>	0.500	» ITS	<u>Water</u>	
0566	8/24/99	8/24/99		0.500	ND	ug/l	
	,,	11		0.500	ND	11	
	"	11 11		0.500	ND	11	
				0.500	ND		
	11	11		0.500	ND	It	
	*1	н		0.500	ND		
	16	11		5.00	ND	It ·	
	11	II		0.500	ND	11	
	"	П		0.500	ND	16	
	**	н		0.500	ND	н	
	н	П		0.500	ND	н	
		П		0.500	ND	11	
	n	п		0.500	ND	#	
	H	П		0.500	ND	н	
	H	u			ND	H	
	и	Ц		0.500	ND	**	
	n	п		0.500	ND	11	
	H	II		0.500	ND	11	
	н	П		0.500	ND	ŧI	
	**	n		0.500	ND	11	
	**	П		0.500	ND	tf	
	н	п		0.500	ND	ķ ī	
	н	li ,		0.500	ND	67	
		Н		0.500	ND	t)	
	"	н		0.500	ND	٠.	
	91	II		0.500	ND	*	,
	11	II		0.500	ND	н	
	**	II		0.500	ND	**	
	11	II		0.500	ND	н	
	**	II		0.500	ND	н	
	"	П		0.500	ND	**	
	н	п		0.500	ND	11	
	"	II	65.0-135	0.500	ND 98.7	%	μ
		11 11 11 11 11 11 11 11 11 11 11 11 11	H H H H H H H H H H H H H H H H H H H		0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500	" " 0.500 ND	" " 0.500 ND " 0.500 N





Project: Cargill Salt Project Number: CRA101 Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 8/20/99 Received: 8/31/99

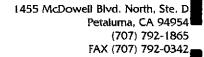
Reported:

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-12-6.5</u>			P9084	85-22			Water	
Bromodichloromethane	9080566	8/24/99	8/24/99	<u></u>	5.00	ND	ug/l	
Bromoform	11	11	11		5.00	ND	11	
Bromomethane	91	11	Ц		5.00	ND	н	
Carbon tetrachloride	11	" ,			5.00	ND	н	
Chlorobenzene	11	н .	ti		5.00	ND	11	
Chloroethane	11	*1	11		5.00	ND	II	
2-Chloroethylvinyl ether	11	11	**		50.0	ND	li .	
Chloroform	ц	11	Ħ		5.00	ND	μ	
Chloromethane	u .	11	91		5.00	ND	н	
Dibromochloromethane	11	It	ŧr		5.00	ND	н	
1,2-Dibromoethane (EDB)	•	D	**		5.00	ND	H	
1,2-Dichlorobenzene	11	u	**		5.00	ND	n ,	
1,3-Dichlorobenzene	n	н	**		5.00	ND	**	
1,4-Dichlorobenzene	**	н	н		5.00	ND	ti	
'ilorodifluoromethane	0	н	**		5.00	ND	н	
Dichloroethane	31	FP	н		5.00	NĎ	**	
1,2-Dichloroethane	78	Ħ	*1		5.00	ND	н	
1,1-Dichloroethene	25	11	Ħ		5.00	ND	11	
cis-1,2-Dichloroethene	ts	n	11		5.00	ND	н	
trans-1,2-Dichloroethene	11	**	11		5.00	ND	n	
1,2-Dichloropropane	**	н	II .		5.00	ND	11	
cis-1,3-Dichloropropene	11	•1	It		5.00	ND	11	
trans-1,3-Dichloropropene	П	11	IP.		5.00	ND	п	
Freon 113	II .	11	"		5.00	ND	D ·	
Methylene chloride	H .	ir	n		5.00	ND	н	
1,1,2,2-Tetrachloroethane		If	н		5.00	ND	н	
Tetrachloroethene	H	11	H		5.00	147	19	
1,1,2-Trichloroethane	**	+	н		5.00	ND	** .	
1,1,1-Trichloroethane	**	н	"		5.00	ND	н .	
Trichloroethene	19	н	n		5.00	6.80	**	
Trichlorofluoromethane	н	Ħ	n		5.00	ND	11	
Vinyl chloride	H	†1	11		5.00	ND		
Surrogate: Bromochloromethane	"	"	11	65.0-135		93.7	%	
Surrogate: 1,4-Dichlorobutane	"	"	н	<i>65.0-135</i>		98.3	n	

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Project: Cargill Salt Project Number: CRA101

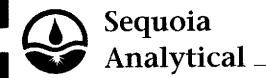
Project Manager: Robert Langdon

8/16/99 to 8/18/99 Sampled: 8/20/99 Received:

Reported:

8/31/99

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D 10 6 5			70004	05.00			Water	
B-10-6.5 Bromodichloromethane	0000566	9/24/00	P9084	<u>83-23</u>	10.0	ND	Water	
Bromoform	9080566	8/24/99	8/24/99			=	ug/l	
		"			10.0	ND	#	
Bromomethane	**				10.0	ND		
Carbon tetrachloride	**	н	11		10.0	ND	••	
Chlorobenzene	•				10.0	ND	"	
Chloroethane	Ħ	u <u>.</u>	tt		10.0	ND		
2-Chloroethylvinyl ether	1)	If	н		100	ND	**	
Chloroform	11	11	••		10.0	ND	"	
Chloromethane	11	t+	**		10.0	ND	"	
Dibromochloromethane	11	**	**		10.0	ND	*1	
1,2-Dibromoethane (EDB)	, 11	н	₹1		10.0	ND	1)	
1,2-Dichlorobenzene	11	"	**		10.0	ND	"	
1,3-Dichlorobenzene	п	**	**		10.0	ND	и	
1.4-Dichlorobenzene	11		н		10.0	ND	11	
hlorodifluoromethane	11	**	Ħ		10.0	ND	11	
1,1-Dichloroethane	11	11	**		10.0	ND	11	
1,2-Dichloroethane	II	*1	11		10.0	ND	· ti	
1,1-Dichloroethene	· 11	11	o o		10.0	ND	11	
cis-1,2-Dichloroethene	и .	11	11		10.0	ND	п	
trans-1,2-Dichloroethene	п	11	**		10.0	ND	н	
1,2-Dichloropropane	и .	**	ur .		10.0	ND	II	
cis-1,3-Dichloropropene	п	11	Ħ		10.0	ND	и	
trans-1,3-Dichloropropene	п	11	er e		10.0	ND	is.	
Freon 113	п	11	17		10.0	ND	tt.	
Methylene chloride	П	Ħ	78		10.0	ND		
1,1,2,2-Tetrachloroethane	u	**	tt		10.0	ND	*	
Tetrachloroethene	Iţ	31	н		10.0	386	H	
1,1,2-Trichloroethane	H	11	**		10.0	ND		
1,1,1-Trichloroethane	t t	re .	**		10.0	ND	r	
Trichloroethene	п	19	11		10.0	34.4	H	
Trichlorofluoromethane	it ·	H			10.0	ND	**	•
Vinyl chloride	#	ti	11		10.0	ND		
Surrogate: Bromochloromethane		<i>n</i>	<u>n</u>	65.0-135		90.0	%	
Surrogate: 1,4-Dichlorobutane	ff.	n	n	65.0-135		98.0	#	
Sur Oguic. 1,7 Dichiol Coulding				00.0-133		20.0		



Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99

8/31/99

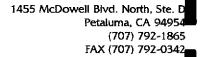
Reported:

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D 2 4 8			P9084	DE 74			Water	
B-3-6.5 Bromodichloromethane	9080566	8/24/99	8/25/99	03-44	2.50	ND	ug/l	
Bromodichioromethane	9080300	8/24/99	8123199 "		2.50 2.50	ND ND	ug/I	
			11		2.50	ND ND	ır	
Bromomethane Carbon tetrachloride	. "		71		2.50	ND	D.	-
Chlorobenzene	"	11	*1	•	2.50 2.50	ND	tf	
		11	н		2.50	ND ND	n	
Chloroethane					25.0	ND ND	IT.	•
2-Chloroethylvinyl ether	*1				25.0	ND	"	
Chlorosophana	11	,	R		2.50 2.50	ND	**	
Chloromethane	 H .				2.50	ND ND	**	
Dibromochloromethane					2.50 2.50	ND ND		
1,2-Dibromoethane (EDB)			н		2.50 2.50	ND ND	**	
1,2-Dichlorobenzene			n					
1,3-Dichlorobenzene		**		•	2.50	ND		
1.4-Dichlorobenzene	**	"	и		2.50	ND	41	
ılorodifluoromethane	"				2.50	ND		
1,1-Dichloroethane	11		"		2.50	ND	"	
1,2-Dichloroethane	"		"		2.50	ND	11	
1,1-Dichloroethene			-		2.50	ND	ir	
cis-1,2-Dichloroethene		"			2.50	ND ·	н .	
trans-1,2-Dichloroethene		11	**		2.50	ND	,	
1,2-Dichloropropane					2.50	ND	 H	
cis-1,3-Dichloropropene					2.50	ND	" "	
trans-1,3-Dichloropropene			"		2.50	ND	"	
Freon 113	•••	"	11		2.50	ND	"	
Methylene chloride	••		11		2.50	ND	**	
1,1,2,2-Tetrachloroethane	##	н	14		2.50	ND	.,	
Tetrachloroethene	**	**	н		2.50	59.6		
1,1,2-Trichloroethane	11	"	"		2.50	ND	11	
1,1,1-Trichloroethane	11		"	4	2.50	ND	II	
Trichloroethene	n	11	"		2.50	ND		
Trichlorofluoromethane	ц ′	н	11		2.50	ND	#	
Vinyl chloride	If	**	11		2.50	ND		
Surrogate: Bromochloromethane	н	11	И	65.0-135		108	%	•
Surrogate: 1,4-Dichlorobutane	**	И	n	65.0-135		96.7	"	

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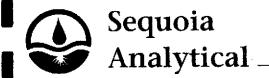
Project: Cargill Salt Project Number: CRA101

Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99

Received: 8/20/99 Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting	 		
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-5-11.5</u>			D 0004		-		***	
Bromodichloromethane	0000566	0/04/00	P90843	<u>85-25</u>	0.500	ND	<u>Water</u>	1
Bromoform	9080566	8/24/99	8/25/99		0.500	ND	ug/l	j
Bromomethane	u.	 Л	. "		0.500	ND	n	•
	"	"	**		0.500	ND		_
Carbon tetrachloride	,,	"	,,		0.500	ND	If	
Chlorobenzene	"	 II	••		0.500	ND	н	
Chloroethane	•		n		0.500	ND	t4	
2-Chloroethylvinyl ether	If .	П	N		5.00	ND	н .	
Chloroform	и .	и	HI .		0.500	ND	н	
Chloromethane	II .	11	**		0.500	ND	н	Į
Dibromochloromethane	Ц	11	н		0.500	ND	H	
1,2-Dibromoethane (EDB)	н	11	н		0.500	ND	н	
1,2-Dichlorobenzene	, 10	11	IP.		0.500	ND	u .	
1,3-Dichlorobenzene	II	11 .	H		0.500	ND	tt	
1.4-Dichlorobenzene	μ	*1	IF.		0.500	ND	18	
nlorodifluoromethane	п	•	It		0.500	ND	17	1
1,1-Dichloroethane	11	**	R		0.500	ND	11	
1,2-Dichloroethane	μ	**	п		0.500	ND	11	•
1,1-Dichloroethene	er e	ti	ш		0.500	ND	п	_
cis-1,2-Dichloroethene	†1	71	п		0.500	ND	11	
trans-1,2-Dichloroethene	*1	18	п		0.500	ND	п	
1,2-Dichloropropane	n	n	п	•	0.500	ND	11	
cis-1,3-Dichloropropene	н	97	41		0.500	ND.	41	
trans-1,3-Dichloropropene	н	#1	11		0.500	ND	н	
Freon 113	19		11		0.500	ND	11	
Methylene chloride			н		0.500	ND ND	11	
1,1,2,2-Tetrachloroethane	11	19	o o		0.500	ND ND	#1	1
Tetrachloroethene	н		61		0.500		11	j
1,1,2-Trichloroethane	to .					ND	**	•
1,1,1-Trichloroethane	в		a		0.500	ND	 H	_
Trichloroethene	11				0.500	ND	и	
Trichlorofluoromethane		,. H	"		0.500	ND	"	
	,	"			0.500	ND		
Vinyl chloride					0.500	ND		
Surrogate: Bromochloromethane	"		n	65.0-135		96.7	%	
Surrogate: 1,4-Dichlorobutane	"	н	"	65.0-135		95.7	"	



Project: Cargili Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99

8/31/99

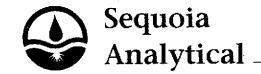
Reported:

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			-
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-4-16.5</u>			P9084	<u>85-26</u>			<u>Water</u>	
Bromodichloromethane	9080566	8/24/99	8/25/99		0.500	ND	ug/l "	
Bromoform	H	**	19		0.500	ND		•
Bromomethane	H	Ħ	**		0.500	ND	H	
Carbon tetrachloride	1 1	11	H		0.500	ND	H	
Chlorobenzene	"	IP.	"		0.500	ND	"	
Chloroethane	**	II .	11		0.500	ND	e T	
 2-Chloroethylvinyl ether 	**	11	11		5.00	ND	11	
Chloroform	Ħ	l t	1t		0.500	ND	19	
Chloromethane	•1	**	IF		0.500	ND	11	
Dibromochloromethane	11	**	R		0.500	ND	**	
1,2-Dibromoethane (EDB)	11	11	II.		0.500	ND	11	
1,2-Dichlorobenzene	ti .	11	19		0.500	ND	u .	
1,3-Dichlorobenzene		H	н		0.500	ND	41	
1,4-Dichlorobenzene	II .	н	H		0.500	ND	11	
hlorodifluoromethane	И	H	n		0.500	ND	н	
.,Dichloroethane	10	Ħ	**		0.500	ND	u	
1,2-Dichloroethane	u	Ħ	tt		0.500	ND	н	
1,1-Dichloroethene	M	11	Tİ		0.500	ND	H	
cis-1,2-Dichloroethene	Ħ	11	n		0.500	ND	H	
trans-1,2-Dichloroethene	+1	н	**		0.500	ND	*	
1,2-Dichloropropane	•	IP	q.		0.500	ND		
cis-1,3-Dichloropropene	**	11	п		0.500	ND	11	
trans-1,3-Dichloropropene	71	н	11		0.500	ND	Ħ	
Freon 113	H	H	10		0.500	ND	"	
Methylene chloride	11	11	· 14		0.500	ND	••	
1,1,2,2-Tetrachloroethane	ii .	11	n		0.500	ND	. 11	
Tetrachloroethene	Ir	н	11		0.500	ND	II	
1,1,2-Trichloroethane	lt .	H	**		0.500	ND		
1,1,1-Trichloroethane	μ	1 1	**		0.500	ND	u .	
Trichloroethene	, н	11	11		0.500	ND	н	
Trichlorofluoromethane	"	II .	H		0.500	ND	tt	
Vinyl chloride	**	It	**		0.500	ND	**	
Surrogate: Bromochloromethane	"	"	n n	65.0-135		99.3	%	
Surrogate: 1,4-Dichlorobutane	o T	rı .	n	65.0-135		99.7	"	
				-				

quoia Analytical - Petaluma





Project: Cargill Salt

Project Number: CRA101 Project Manager: Robert Langdon Sampled:

8/16/99 to 8/18/99

Received: 8/20/99 8/31/99 Reported:

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-4-6.5</u>			P9084	R5-27			Water	
Bromodichloromethane	9080566	8/24/99	8/25/99	33-21	2.50	ND	ug/l	
Bromoform	"	"	11		2.50	ND	n	
Bromomethane	n	11	H		2.50	ND	IJ	
Carbon tetrachloride	•	11	*1		2.50	ND	μ	
Chlorobenzene	11	11	m .		2.50	ND	li .	*
Chloroethane	п	**	n		2.50	ND	п	
2-Chloroethylvinyl ether	п	11	ir .		25.0	ND	Ħ	
Chloroform	n	11	1*		2.50	ND	· H	
Chloromethane	11	н	10		2.50	ND		
Dibromochloromethane	н	Iŧ	н		2.50	ND		
1,2-Dibromoethane (EDB)		Į4			2.50	ND	'n	
1,2-Dichlorobenzene	31	n	**		2.50	ND	Ħ	
1,3-Dichlorobenzene	11	**	11		2.50	ND	**	
1,4-Dichlorobenzene	н	"	**	•	2.50	ND	**	
hlorodifluoromethane	71	••	*1		2.50	ND	u	•
.,i-Dichloroethane	Ħ	**	N		2.50	ND	**	
1,2-Dichloroethane	41	**	*1		2.50	ND	11	
1,1-Dichloroethene	11	Ħ	11		2.50	ND	11	
cis-1,2-Dichloroethene	11	H	11		2.50	ND	п	
trans-1,2-Dichloroethene	n .	**	#1		2.50	ND	II	
1,2-Dichloropropane	п	*1	h		2.50	ND	U	
cis-1,3-Dichloropropene	и	*1	п		2.50	ND	н	
trans-1,3-Dichloropropene	н	п			2.50	ND		
Freon 113	19	11	10		2.50	ND	n	
Methylene chloride	н	н .	fa.		2.50	ND	tr	
1,1,2,2-Tetrachloroethane	Ħ	H	11		2.50	ND	h	
Tetrachloroethene	**	н			2.50	73.1		
1,1,2-Trichloroethane	**	**	**		2.50	ND	17	
1,1,1-Trichloroethane	#	v	11		2.50	ND	**	
Trichloroethene	Ħ	**	D		2.50	ND	n	
Trichlorofluoromethane	*1	II.	n		2.50	ND		
Vinyl chloride	11	H	n		2.50	ND	**	
Surrogate: Bromochloromethane	H	<i>II</i>	11	65.0-135		94.0	%	
Surrogate: 1,4-Dichlorobutane	If	"	"	65.0-135		93.3	ŧı	1

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Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

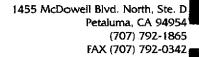
Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-5-16.5			P90848	15-28			Water	
Bromodichloromethane	9080607	8/24/99	8/24/99	<u> </u>	0.500	ND	ug/l	
Bromoform	11	11	11		0.500	ND	"	
Bromomethane	10	н	16		0.500	ND	ш	
Carbon tetrachloride	11	н	Ħ		0.500	ND	п	
Chlorobenzene	н	н	•1		0.500	ND	tt .	
Chloroethane	ır	н	11		0.500	ND	H	
2-Chloroethylvinyl ether	II .	II	u		5.00	ND	"	
Chloroform	11	R	11		0.500	ND	**	
Chloroform Chloromethane	11	10	II		0.500	ND	11	
Dibromochloromethane	н	н	II		0.500	ND		
1,2-Dibromoethane (EDB)	n	н	Iŧ		0.500	ND	11	
1,2-Dichlorobenzene	•	\$	н		0.500	ND	11	
1,3-Dichlorobenzene	**	"	*		0.500	ND	I)	
1,4-Dichlorobenzene	41	47	11		0.500	ND	' п	
hlorodifluoromethane	ìr	19	**		0.500	ND	П	
.,:-Dichloroethane	10	н	**		0.500	ND	íl .	
1,2-Dichloroethane	19	•	н		0.500	ND	Ħ	
1 1 Diehlanasthana	IT	II .			0.500	ND	11	
cis-1,2-Dichloroethene	н	1 I	đ		0.500	ND	R	
trans-1,2-Dichloroethene	**	11	1 1		0.500	ND	11	
1,2-Dichloropropane	17	II.	п		0.500	ND	"	
cis-1,3-Dichloropropene	41	IP	li .		0.500	ND	Ħ	
trans-1,3-Dichloropropene	Ħ	Ħ	R .		0.500	ND	"	
Freon 113	41	H	11	-	0.500	ND	H.	
Methylene chloride	. я	**	ti		0.500	ND	11	
1,1,2,2-Tetrachloroethane	li.	u .	tr .		0.500	ND	п	
Tetrachloroethene	10	tt	**		0.500	ND	н	
1,1,2-Trichloroethane	19	н	11		0.500	ND	II	
1,1,1-Trichloroethane	**	*1	н		0.500	ND	**	
Trichloroethene	**	41	u		0.500	ND	#	
Trichlorofluoromethane		11	11		0.500	ND	N	
Vinyl chloride	**	It	11		0.500	ND		
Surrogate: Bromochloromethane	"	"	н	65.0-135		93.0	%	
Surrogate: 1,4-Dichlorobutane	n	11	tr	65.0-135		91.3	"	

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Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99

Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-5-6.5 P908485-29					•		Water	
Bromodichloromethane	9080607	8/24/99	8/25/99	03-47	0.500	ND	ug/l	
Bromoform	9080007	0/24/99	0/43/99 II		0.500	ND	ug/i	
Bromomethane	If	н	II.		0.500	ND ND	#	
Carbon tetrachloride	lf .	11	11		0.500	ND		
Chlorobenzene	D	11	10					
Chloroethane	u u	11	H		0.500	ND	PF	
			.,		0.500	ND		
2-Chloroethylvinyl ether	н	"	,,		5.00	ND		
Chloroform	, ,	" It	,,		0.500	ND		
Chloromethane	**	"	"		0.500	ND		
Dibromochloromethane			Ÿ		0.500	ND		
1,2-Dibromoethane (EDB)	**	(1	17		0.500	ND	11	
1,2-Dichlorobenzene	**	t t	18		0.500	ND	4	
1,3-Dichlorobenzene	**	te .	**		0.500	ND	14	'
1.4-Dichlorobenzene	**	19			0.500	ND	* 1	
hlorodifluoromethane	**	r i			0.500	ND	" .	
1,1-Dichloroethane	**		11		0.500	ND	#	
1,2-Dichloroethane	**	H	10		0.500	ND	Ħ	
1,1-Dichloroethene	**	н	*1		0.500	ND	ħ	
cis-1,2-Dichloroethene	- 11	н	**		0.500	ND	н	·
trans-1,2-Dichloroethene	11	14	*1		0.500	ND	#	•
1,2-Dichloropropane	**	*	11		0.500	ND	11	
cis-1,3-Dichloropropene	11	н	**		0.500	ND	н	1
trans-1,3-Dichloropropene	11	н	н		0.500	ND	**	
Freon 113	11	n	n		0.500	ND	**	'
Methylene chloride	**	11	m		0.500	ND		
1,1,2,2-Tetrachloroethane	n	11	н		0.500	ND	18	
Tetrachloroethene	11	"	н		0.500	0.723	11	
1,1,2-Trichloroethane	H	11	*1		0.500	ND	**	
1,1,1-Trichloroethane	н	**	et		0.500	ND	u	,
Trichloroethene	n	**	n		0.500	3.90	**	
Trichlorofluoromethane	н	rt	н		0.500	ND	**	•
Vinyl chloride	*1	••	H		0.500	ND	n .	•
Surrogate: Bromochloromethane	·	,,		65.0-135	0.300	100	%	
Surrogate: 1,4-Dichlorobutane	н	,,	n	65.0-135	•	101	/0 #	
ourroguie. 1,4-Dichioroguiane				03.0-133		101		,



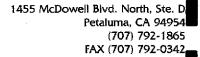
Conor Pacific / EFW	Project:	Cargill Salt	Sampled:	8/16/99 to 8/18/99
2650 East Bayshore Rd.	Project Number:	CRA101	Received:	8/20/99
Palo Alto, CA 94303	Project Manager:	Robert Langdon	Reported:	8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-5-22.5			P9084	85_30			Water	
Bromodichloromethane	9080607	8/24/99	8/25/99	55-50	0.500	ND	ug/l	
Bromoform	"	"	"		0.500	ND	11	
Bromomethane	11	u	11		0.500	ND	11	
Carbon tetrachloride	11	11			0.500	ND	IF	
Chlorobenzene	It	п	н		0.500	ND	H	
Chloroethane	ır	п	11		0.500	ND	n	
2-Chloroethylvinyl ether	D.	n	11		5.00	ND	**	
Chloroform	10	п	n		0.500	ND	11	
Chloromethane	e	H	И		0.500	ND	n	
Dibromochloromethane	11	It	11		0.500	ND	**	
1,2-Dibromoethane (EDB)	n	II.	ц		0.500	ND		
1,2-Dichlorobenzene	Ħ	· n	н		0.500	ND	**	
1,3-Dichlorobenzene	**	н	It		0.500	ND	**	
1,4-Dichlorobenzene	н	++	н		0.500	ND	**	
hlorodifluoromethane	17	ы	It.		0.500	ND	bj	
Dichloroethane	Ħ	71	н		0.500	ND	*1	
1,2-Dichloroethane	**	*1	r		0.500	ND	**	
1,1-Dichloroethene	11	**	r		0.500	ND	**	
cis-1,2-Dichloroethene	н	0	n		0.500	ND	· .	
trans-1,2-Dichloroethene	H	11	н .		0.500	ND	ŧI	
1,2-Dichloropropane	••	**	н		0.500	ND	п	
cis-1,3-Dichloropropene	11	11	ır		0.500	ND	II .	
trans-1,3-Dichloropropene	. 11	*1	11		0.500	ND	II .	
Freon 113	н	н	tt .		0.500	ND	H .	
Methylene chloride	П	н	н		0.500	ND	n	
1,1,2,2-Tetrachloroethane	П	11	••		0.500	ND	н	
Tetrachloroethene	O.	п	11		0.500	ND	11	
1,1,2-Trichloroethane		P	11		0.500	ND	11	
1,1,1-Trichloroethane	н	H	11		0.500	ND	**	
Trichloroethene	н	н	И		0.500	ND	11	
Trichlorofluoromethane	**	н	II		0.500	ND	•	
Vinyl chloride	11	t)	· · · · · · · · · · · · · · · · · · ·		0.500	ND	H	
Surrogate: Bromochloromethane	"	rt .	"	65.0-135		100	%	
Surrogate: 1,4-Dichlorobutane	"	· #	II .	65.0-135		98.0	μ	

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Project: Project Number: CRA101

Project Manager: Robert Langdon

Cargill Salt

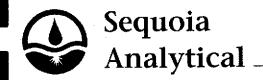
Sampled:

8/16/99 to 8/18/99

Received: 8/20/99

Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting	•		
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
N # 44 4								
<u>B-7-22.5</u>			P9084	<u>85-31</u>			<u>Water</u>	1
Bromodichloromethane	9080605	8/24/99	8/24/99		0.500	ND	ug/l	
Bromoform		19	**		0.500	ND	• .	1
Bromomethane	18 "	U	н		0.500	ND	"	
Carbon tetrachloride	. "	19	н		0.500	ND		1
Chlorobenzene	10	**	71		0.500	ND	#	
Chloroethane	11	H*	**		0.500	ND	"	,
2-Chloroethylvinyl ether	н	И	H		5.00	ND	H	
Chloroform	н	u	*1		0.500	ND	**	
Chloromethane	н	н	**		0.500	ND	*	
Dibromochloromethane	ti	17	H		0.500	ND	**	
1,2-Dibromoethane (EDB)	el	n	н		0.500	ND	**	
1,2-Dichlorobenzene	н	н			0.500	ND	н	
1,3-Dichlorobenzene	11	н	**		0.500	ND		
1.4-Dichlorobenzene	19	н	**		0.500	ND	tr	
hlorodifluoromethane	п	U	n		0.500	ND		!
1,1-Dichloroethane	n	19	**		0.500	ND	н .	
1,2-Dichloroethane	H	*	м		0.500	ND		,
1,1-Dichloroethene	н	19	79		0.500	ND	н	
cis-1,2-Dichloroethene .	11	19	11		0.500	ND	в	
trans-1,2-Dichloroethene	ur .	10	17		0.500	ND	"	į
1,2-Dichloropropane	**	10	11		0.500	ND	**	
cis-1,3-Dichloropropene	57	μ	IE		0.500	ND	u ·	1
trans-1,3-Dichloropropene	11	ır	u		0.500	ND	t ı	
Freon 113	**	It.	tr		0.500	ND		
Methylene chloride	"	п	10	•	0.500	ND		
1,1,2,2-Tetrachloroethane	**	It	H		0.500	ND	*1	i
Tetrachloroethene	41	If	**		0.500	ND	н	
1,1,2-Trichloroethane	.,		4		0.500	ND	"	
1,1,1-Trichloroethane	41	19	**		0.500	ND		
Trichloroethene	51:	It	11		0.500	ND	te	
Trichlorofluoromethane		TF.	*1		0.500	ND	e e	
Vinyl chloride	**	п	n		0.500	ND ND	н	
Surrogate: Bromochloromethane	"			65.0-135	0.00	99.0		
Surrogate: 1,4-Dichlorobutane	tt.	,,	r/			103	70 n	j
Surrogale. 1,4-Dictiorobiliane				65.0-135		103		1



Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes
<u>B-8-11.5</u>		4	P9084	85-32			Water	
Bromodichloromethane	9080565	8/24/99	8/24/99		0.500	ND	ug/l	
Bromoform	11	11	**		0.500	ND	"	
Bromomethane	11	₽.,	n		0.500	ND	H	
Carbon tetrachloride	ır	м :	•11		0.500	ND	н	
Chlorobenzene	10	H			0.500	ND	Ħ	
Chloroethane	16	10	11		0.500	ND	e r	
2-Chloroethylvinyl ether	If	15	п		5.00	ND	21	
Chloroform	**	*1	н		0.500	ND	и	
Chloromethane	н :	o o	n		0.500	ND	11	
Dibromochloromethane	**	u	**		0.500	ND	If .	
1,2-Dibromoethane (EDB)	*1	11	H		0.500	ND	It	
1,2-Dichlorobenzene	41	μ	ŧI		0.500	NĎ	н	
1,3-Dichlorobenzene	n .	11	97		0.500	ND	"	
1,4-Dichlorobenzene	11	I+	**		0.500	ND	41	
llorodifluoromethane	11	н	a		0.500	ND	**	
.,ı-Dichloroethane	D.	н	11		0.500	ND		
1,2-Dichloroethane	10	н	н		0.500	ND	н	
1,1-Dichloroethene	н	n	μ	•	0.500	ND	н	
cis-1,2-Dichloroethene	н	11	п		0.500	ND	11	
trans-1,2-Dichloroethene	lt.	**	11		0.500	ND	11	
1,2-Dichloropropane	79	n	и		0.500	ND	п	
cis-1,3-Dichloropropene	n	1 1	t?		0.500	ND	н	
trans-1,3-Dichloropropene	n	п	н		0.500	ND	Ħ	
Freon 113	11	11-	ti		0.500	ND	**	
Methylene chloride	11	19	w		0.500	ND	\$1	
1,1,2,2-Tetrachloroethane	P	tŧ	39		0.500	ND	H	
Tetrachloroethene	н	н.	1)		0.500	90.5	"	1,E
1,1,2-Trichloroethane	*	**	п		0.500	ND	11	
1,1,1-Trichloroethane	u	**	II		0.500	0.664	11	2
Trichloroethene	**	Ħ	· u		0.500	12.5	II.	
Trichlorofluoromethane	n	ŧŧ	lt.		0.500	ND	P	
Vinyl chloride	н .	11	H		0.500	ND	,,	
Surrogate: Bromochloromethane	н		"	65.0-135		96.0	%	
Surrogate: 1,4-Dichlorobutane	п	н .	**	65.0-135		105	#	

uoia Analytical - Petaluma - Petaluma







Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-9-22.5			P9084	85-33			Water	
Bromodichloromethane	9080565	8/24/99	8/24/99		0.500	ND	ug/l	
Bromoform	+1	n	Ħ		0.500	ND	#	
Bromomethane	•1	**	н		0.500	ND	11	
Carbon tetrachloride	н	н	**		0.500	ND	и .	
Chlorobenzene	n	11	n		0.500	ND		
Chloroethane	н	н			0.500	ND		
2-Chloroethylvinyl ether	Ħ	It.	11		5.00	ND	H	
Chloroform	11	10	10		0.500	ND	**	**
Chloromethane	31	41	11		0.500	ND	#L	
Dibromochloromethane	11	II.	10		0.500	ND	41	
1,2-Dibromoethane (EDB)	16	ır	11		0.500	ND	n .	
1,2-Dichlorobenzene	"	11			0.500	ND	**	
1,3-Dichlorobenzene	tr .	II.	**		0.500	ND	"	
1,4-Dichlorobenzene	tr	11	er		0.500	ND	н	
alorodifluoromethane	en .	п	Ħ		0.500	ND	11	•
.,Dichloroethane	ti.	11	м		0.500	ND	**	
1,2-Dichloroethane		*1	10		0.500	ND	н	
1,1-Dichloroethene	10	41	10		0.500	ND	н	
cis-1,2-Dichloroethene	11-	11	u.		0.500	ND	II.	
trans-1,2-Dichloroethene	11	**	10		0.500	ND	, u	
1,2-Dichloropropane	11	**	п		0.500	ND	tt	
cis-1,3-Dichloropropene	ai .	H	li .		0.500	ND	u	
trans-1,3-Dichloropropene	11	¥	п		0.500	ND	n	
Freon 113	11	**	н		0.500	ND	IT	
Methylene chloride	u	Ħ	11		0.500	ND	н	
1,1,2,2-Tetrachloroethane	11	11	Ħ		0.500	ND	н .	
Tetrachloroethene	*1	**	11		0.500	0.672	н	
1,1,2-Trichloroethane	11	17	ti .		0.500	ND	п	
1,1,1-Trichloroethane	91	#1	11		0.500	ND	ш	
Trichloroethene	H	f I	11 · ·		0.500	ND	п	
Trichlorofluoromethane	11	н	Ħ		0.500	ND	п	
Vinyl chloride	11	*	н		0.500	ND	ti	
Surrogate: Bromochloromethane	<i>H</i> .	"	"	65.0-135	2 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 200 × 20	96.3	%	
Surrogate: 1,4-Dichlorobutane	n	н	n	65.0-135		99.0	"	



Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 : Received: 8/20/99

Reported:

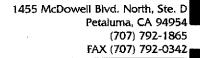
8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-9-16.5			BOAG 41	05 24			Water	
Bromodichloromethane	9080565	8/24/99	<u>P90849</u> 8/24/99	33*34	25.0	ND	ug/l	
Bromodicinoromethane	# #	8/24/99	8/2 4 /99	•	25.0 25.0	ND ND	ug/i	
Bromomethane	n	11	II .		25.0 25.0	ND ND	**	•
Carbon tetrachloride	11	11	10		25.0	ND	**	
Chlorobenzene	н				25.0	ND ND	11	
Chloroethane	H	**			25.0 25.0	ND	II.	
	11	"	и		25.0 250	ND ND	п	
2-Chloroethylvinyl ether	 11		H		25.0	ND ND	ff.	
Chloroform		11			25.0 25.0	ND ND	- H	
Chloromethane Dibromochloromethane		" II			25.0 25.0	ND ND	17	
	" II	"			25.0 25.0	ND	**	
1,2-Dibromoethane (EDB)	 D	" II			25.0 25.0	ND ND	*1	
1,2-Dichlorobenzene		"	н				N	
1,3-Dichlorobenzene	,, It	" "	 H		25.0	ND	ŧ	
1,4-Dichlorobenzene		" "			25.0	ND	**	
hlorodifluoromethane	**	W	"		25.0	ND		
,,1-Dichloroethane	,,, M		"		25.0 25.0	ND		
1,2-Dichloroethane	17 M	и	"		25.0 25.0	ND	n	
1,1-Dichloroethene	**	. ,,	11 If		25.0	ND	11	
cis-1,2-Dichloroethene	11	"	11		25.0	ND		
trans-1,2-Dichloroethene	**	**	II IR		25.0	ND		
1,2-Dichloropropane	**		!! !!		25.0	ND		
cis-1,3-Dichloropropene	11	**	"		25.0	ND	"	
trans-1,3-Dichloropropene	"	*1	"		25.0	ND		
Freon 113	**	*1			25.0	ND		
Methylene chloride	11				25.0	ND.		
1,1,2,2-Tetrachloroethane	11				25.0	ND		
Tetrachloroethene	Л	11	*1		25.0	1100	"	
1,1,2-Trichloroethane	D	11	н		25.0	ND		•
1,1,1-Trichloroethane	10	10			25.0	ND		
Trichloroethene	0	11			25.0	227	,,	
Trichlorofluoromethane	H	11	11	•	25.0	ND		
Vinyl chloride		(1	11		25.0	ND		
Surrogate: Bromochloromethane	"	n	II .	65.0-135		102	%	
Surrogate: 1,4-Dichlorobutane	"	"	11	65.0-135		106	. и	

quoia Analytical - Petaluma







Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-8-16.5</u>			P90848	85-35			Water	
Bromodichloromethane	9080565	8/24/99	8/24/99		10.0	ND	ug/l	
Bromoform	11	11	•		10.0	ND	"	
Bromomethane	e e	"	41		10.0	ND	H	
Carbon tetrachloride	11	,,			10.0	ND	Ħ	
Chlorobenzene	11	**	*1		10.0	ND	**	
Chloroethane	11	**	•1		10.0	ND	ч	
2-Chloroethylvinyl ether	11	17	11		100	ND	Ħ	
Chloroform	и	19	71		10.0	ND	11	
Chloromethane	IT	н	н		10.0	ND -	п	
Dibromochloromethane	п	м	п		10.0	ND	11	
1,2-Dibromoethane (EDB)	II	н	П		10.0	ND	u	
1,2-Dichlorobenzene	10	**	11	•	10.0	ND	11	
1,3-Dichlorobenzene	n	**	11		10.0	ND	#	
1,4-Dichlorobenzene	n	M	11		10.0	ND	#1	
hlorodifluoromethane	. 0	10	11		10.0	ND	п	
.,1-Dichloroethane	11	11	11		10.0	ND	*1	
1,2-Dichloroethane	11	ıt	*1		10.0	ND	31	
1,1-Dichloroethene	11	11	*1		10.0	ND	11	
cis-1,2-Dichloroethene	11	**	71		10.0	ND	11	
trans-1,2-Dichloroethene	41	и	11		10.0	ND	п	
1,2-Dichloropropane	11	47	41		10.0	ND	ш	
cis-1,3-Dichloropropene	H	н	*1		10.0	ND	н	
trans-1,3-Dichloropropene	u · .	n	*1		10.0	ND	ш	
Freon 113	и	"	11		10.0	ND	п	
Methylene chloride	41	14	11		10.0	ND	ш	
1,1,2,2-Tetrachloroethane	11	H.	ŧı		10.0	ND	п	
Tetrachloroethene	1f	n	11		10.0	503	u	
1,1,2-Trichloroethane	11		н		10.0	ND	н	
1,1,1-Trichloroethane	11	**	11		10.0	ND	III	
Trichloroethene	17	н	11		10.0	75.6	D	
Trichlorofluoromethane	lt.	t.	11		10.0	ND	u	
Vinyl chloride	16	11	*1		10.0	ND	п	
Surrogate: Bromochloromethane		<i>H</i>	n	65.0-135		94.3	%	
Surrogate: 1,4-Dichlorobutane	н	n	n	65.0-135		106	ır.	



Project: Cargill Salt Project Number: CRA101 Project Manager: Robert Langdon

Sampled: Received:

Reported:

8/16/99 to 8/18/99 8/20/99

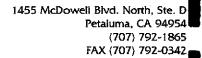
8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-9-11.5			P90848	15-36			Water	
Bromodichloromethane	9080565	8/25/99	8/25/99	<u> </u>	10.0	ND	ug/l	
Bromoform	"	"	11		10.0	ND	"	
Bromomethane	IF	IF	п		10.0	ND	н	
Carbon tetrachloride	10	ír	н .		10.0	ND	**	
Chlorobenzene	11	0	Ħ		10.0	ND		
Chloroethane	17	н	н		10.0	ND	n	
2-Chloroethylvinyl ether	***	t+	II		100	ND	n	
Chloroform	11	97	R		10.0	ND	11	
Chloromethane	•	**	II.		10.0	ND	II .	
Dibromochloromethane	**	11	Į)		10.0	ND	H	
1,2-Dibromoethane (EDB)	н	н .	н		10.0	ND		
1,2-Dichlorobenzene	ŧŧ	*1	*		10.0	ND	•	
1,3-Dichlorobenzene	H	n	**		10.0	ND	н	
1,4-Dichlorobenzene	#	11	,		10.0	ND	ที่	
hlorodifluoromethane	u .	ti .	**		10.0	ND	H	
1,1-Dichloroethane	ii.	n	10		10.0	ND	H	•
1,2-Dichloroethane	н	11	**		10.0	ND	. 11	
1,1-Dichloroethene	D	п	#1 .		10.0	ND	••	
cis-1,2-Dichloroethene	II.	11	н		10.0	ND	•	
trans-1,2-Dichloroethene	lt.	Ħ	*1		10.0	ND	*1	
1,2-Dichloropropane	H	11	31		10.0	ND	п	
cis-1,3-Dichloropropene	Ħ	H	II		10.0	ND	II	
trans-1,3-Dichloropropene	If	**	1¢		10.0	ND	п	
Freon 113	11	11	re .		10.0	ND	II	
Methylene chloride	н	11	ti .		10.0	ND	"	
1,1,2,2-Tetrachloroethane	*1	н	н		10.0	ND	19	
Tetrachloroethene	a a	tt	**		10.0	327	**	
1,1,2-Trichloroethane	11	11	11		10.0	ND	11	
1,1,1-Trichloroethane	II	н	H		10.0	ND	п	•
Trichloroethene	II	II	II .		10.0	47.4	н	
Trichlorofluoromethane	0	(r	*1		10.0	ND	11	
Vinyl chloride	n	D	11		10.0	ND	n 	
Surrogate: Bromochloromethane	tt .	"	11	65.0-135		96.3	%	
Surrogate: 1,4-Dichlorobutane	tt .	"	11	65.0-135		106	rr ·	

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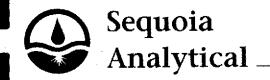




Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting	· · · · · · · · · · · · · · · · · · ·		
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-8-22.5			<u>P9084</u>	DE 27			Water	•
Bromodichloromethane	9080565	8/24/99	8/25/99	· · · · · · · · · · · · · · · · · · ·	5.00	ND	ug/l	1
Bromoform	700000	U/24/33	0/23/93		5.00	ND	ug/i	
Bromomethane	ŧı	,	19		5.00	ND ND	19	
Carbon tetrachloride	ts.	п	**		5.00	ND ND		
Chlorobenzene	н	и .	10		5.00	ND ND	,,	
Chloroethane	**	п	**		5.00	ND ND	*	Į
2-Chloroethylvinyl ether	n	11			50.0	ND	H	
Chloroform	H	п			5.00	ND	10	1
Chloromethane	н	n						1
Dibromochloromethane	,,	*11			5.00	ND	17	,
1,2-Dibromoethane (EDB)		 ai	 N		5.00	ND	14	
1,2-Dipromoetnane (EDB)			u ·		5.00	ND	"	1
· ·	.,	" H			5.00	ND		
1,3-Dichlorobenzene	•				5.00	ND	*1	•
I,4-Dichlorobenzene	u	*1	II		5.00	ND		_
hlorodifluoromethane	"	n	u		5.00	ND		1
.,1-Dichloroethane	П		ji		5.00	ND	н	
1,2-Dichloroethane	н	**	п		5.00	ND	**	
1,1-Dichloroethene	II	**	н	•	5.00	ND	**	
cis-1,2-Dichloroethene	11	11	11		5.00	ND	H	
trans-1,2-Dichloroethene	11	**	1)		5.00	ND	н	- 1
1,2-Dichloropropane	41	**	*1		5.00	ND	н	
cis-1,3-Dichloropropene	Ħ	H	ti .		5.00	ND	п .	
trans-1,3-Dichloropropene	*1	e	*1		5.00	ND	н	
Freon 113	**	н	**		5.00	ND	It.	
Methylene chloride	**	n	++		5.00	ND	11	
1,1,2,2-Tetrachloroethane	н	н	+ 3		5.00	ND	It.	9
Tetrachloroethene	n	ti	**		5.00	278	II .	1
1,1,2-Trichloroethane	ti		e t		5.00	ND	It	•
1,1,1-Trichloroethane	н	tt	er		5.00	ND	п	
Trichloroethene	17	I)	**		5.00	51.2	п	
Trichlorofluoromethane	**	10	11		5.00	ND	п	
Vinyl chloride	11	It.	71		5.00	ND	п	
Surrogate: Bromochloromethane	<i>n</i>			65.0-135	3.00	98.0		
Surrogate: 1,4-Dichlorobutane	e	11					%	
Burogaie: 1,4-Dichiorooulane	*		**	<i>65.0-135</i>		104	••	



Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

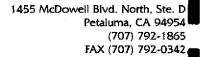
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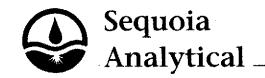
Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-7-11.5			P9084	R 5_ 38			Water	
Bromodichloromethane	9080565	8/24/99	8/25/99	50.00	2.50	ND	ug/l	
Bromoform	"	"	11		2.50	ND	"	
Bromomethane	**	H	te .		2.50	ND	H	
Carbon tetrachloride	71	*1	u.		2.50	ND	**	
Chlorobenzene	n	н ,	n		2.50	ND	"	
Chloroethane	11	**	n		2.50	ND	11	
_ 2-Chloroethylvinyl ether	11	. 11	н		25.0	ND	. U	
Chloroform	п	11	11		2.50	ND	U	
Chloromethane	п	ц	**		2.50	ND	н	
Dibromochloromethane	п	It	#1		2.50	ND	tr	
1,2-Dibromoethane (EDB)	10	it ,	н		2.50	ND	**	
1,2-Dichlorobenzene	H	10	Ħ		2.50	ND	*1	
1,3-Dichlorobenzene	**				2.50	ND	11	
1,4-Dichlorobenzene	tt	н	u		2.50	ND	Ħ	
hlorodifluoromethane	H	н	*11		2.50	ND	n	
.,ı-Dichloroethane	11	Ħ	11		2.50	ND		
1,2-Dichloroethane	u	**	п		2.50	ND	*	
1,1-Dichloroethene	**	**	1f		2.50	ND	"	
cis-1,2-Dichloroethene	н .	**	п		2.50	ND	**	
trans-1,2-Dichloroethene	н	**	It		2.50	ND	11	
1,2-Dichloropropane	н	r i			2.50	ND	D	
cis-1,3-Dichloropropene	n	91	н		2.50	ND	и .	
trans-1,3-Dichloropropene	ŧi.	11	H		2.50	ND	и	
Freon 113	п	*1	**		2.50	ND	н	
Methylene chloride	lf .	li .	**		2.50	ND	H	
1,1,2,2-Tetrachloroethane	0	11	51		2.50	ND	"	
Tetrachloroethene	н	н	4		5.00	177	**	
1,1,2-Trichloroethane	69	н	11		2.50	ND	11	•
1,1,1-Trichloroethane	R	**	a a		2.50	ND	*	
Trichloroethene	TT.	*1	II		2.50	19.1	11	
Trichlorofluoromethane	ti .	17	II		2.50	ND	п	
Vinyl chloride	"	16			2.50	ND	n	
Surrogate: Bromochloromethane	"	"	11	65.0-135		98.3	%	
Surrogate: 1,4-Dichlorobutane	H	n	"	65.0-135		101	"	

...quoia Analytical - Petaluma







Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting		·····	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-10-11.5			P9084	R5_30			Water	
Bromodichloromethane	9080565	8/24/99	8/25/99	<u> </u>	50.0	ND	ug/l	1
Bromoform	"	0/2 -1 /27	0123133 H	•	50.0	ND	ug/i	
Bromomethane	ft '	11	u		50.0	ND	P	
Carbon tetrachloride	и	•	ш		50.0	ND	,,	•
Chlorobenzene	IF.	*1	n'		50.0	ND	H	
Chloroethane	п	11	H		50.0	ND	If	•
2-Chloroethylvinyl ether	п	11	II		500	ND	#	
Chloroform	п	in	п		50.0	ND	н .	1
Chloromethane	ш	*1	ш		50.0	ND	H	
Dibromochloromethane	п	ij	II		50.0	ND	n	-
1,2-Dibromoethane (EDB)	If	Ħ	II		50.0	ND	H	
1,2-Dichlorobenzene	ш	"	п		50.0	ND	**	
1,3-Dichlorobenzene	It	**	n		50.0	ND	II.	Ī
1,4-Dichlorobenzene	п	**	n	•	50.0	ND	н	
hlorodifluoromethane	11		#		50.0	ND	ш	
.,ı-Dichloroethane	11	н			50.0	ND		
1,2-Dichloroethane	n	**	11		50.0	ND	ш	•
1,1-Dichloroethene	п	**	**		50.0	ND	п	
cis-1,2-Dichloroethene	11	u .	н		50.0	ND	п	
trans-1,2-Dichloroethene	•1	**	**		50.0	ND	ш	Į
1,2-Dichloropropane	*1	"	H		50.0	ND	n	
cis-1,3-Dichloropropene	*1	н	11		50.0	ND	11	•
trans-1,3-Dichloropropene	н	н	n		50.0	ND	ш	
Freon 113	**	н	re		50.0	ND	IF	•
Methylene chloride	#	er	+r		50.0	ND	ш	
1,1,2,2-Tetrachloroethane	Ħ	er .	ŦÍ		50.0	ND	II	
Tetrachloroethene	**	N	11		50.0	1600	и	Į
1,1,2-Trichloroethane	*	**	11		50.0	ND	ш	
1,1,1-Trichloroethane	**	*	11		50.0	ND	if	•
Trichloroethene	**	Ħ	11		50.0	266	п	
Trichlorofluoromethane	10	н	"		50.0	ND	11	•
Vinyl chloride	11	16	II.	•	50.0	ND	11	
Surrogate: Bromochloromethane	<i>n</i>	II	tt .	65.0-135		92.3		
Surrogate: 1,4-Dichlorobutane	· u	rt .	#	65.0-135		100	"	
3				0-10-10				•



Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

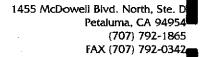
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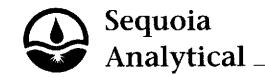
Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>B-7-16.5</u>			P90848	35-40			<u>Water</u>	
Bromodichloromethane	9080565	8/24/99	8/25/99		10.0	ND	ug/l	
Bromoform	* H	н	1 1		10.0	ND	n	
Bromomethane	H	H	1 1		10.0	ND	m	
Carbon tetrachloride	н	D.	11		10.0	ND	11	
Chlorobenzene	**	"	D		10.0	ND	**	
Chloroethane	11	"	o		10.0	ND	*1	
2-Chloroethylvinyl ether	11	n	н		100	ND	11	
Chloroform	11	н	н		10.0	ND	11	
Chloromethane	II .	*1	н		10.0	ND	ш	
Dibromochloromethane	It	11	**		10.0	ND	u	
1,2-Dibromoethane (EDB)	10	11	**		10.0	ND	П	
1,2-Dichlorobenzene	п	11	*1		10.0	ND	tt	*
1,3-Dichlorobenzene	17	п	11		10.0	ND	**	
1,4-Dichlorobenzene	H	и	11		10.0	ND	*1	
ilorodifluoromethane	ņ	II .	Ħ	•	10.0	ND	Ħ	
Dichloroethane	. н	H	н	4	10.0	ND	11	
1,2-Dichloroethane	1+	u .	•		10.0	ND	•	
1,1-Dichloroethene	t t	rt	11		10.0	ND	"	
cis-1,2-Dichloroethene	**	н	11	a.	10.0	ND	•	
trans-1,2-Dichloroethene	14	н	11		10.0	ND	41	
1,2-Dichloropropane	85	•1	It		10.0	ND	41	
cis-1,3-Dichloropropene	61	tt	II		10.0	ND	II .	
trans-1,3-Dichloropropene	II	н '	n		10.0	ND	· II	
Freon 113	, п	H	н		10.0	ND	II .	
Methylene chloride	If	11	11		10.0	ND	"	
1,1,2,2-Tetrachloroethane	H	11	11		10.0	ND	fr	
Tetrachloroethene	•	11	· ·		10.0	406	" ,	
1,1,2-Trichloroethane	**	н	**		10.0	ND	**	
1,1,1-Trichloroethane	**	IF.	н		10.0	ND	**	
Trichloroethene	"	H	п		10.0	41.2	W	
Trichlorofluoromethane	"	#	11		10.0	ND	n	
Vinyl chloride		н	11		10.0	ND	*1	
Surrogate: Bromochloromethane	D.	"	īf	65.0-135		100	%	
Surrogate: 1,4-Dichlorobutane	μ	n	"	65.0-135		108	tr	

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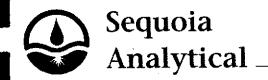


Project: Cargill Salt Project Number: CRA101 Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 8/31/99

Reported:

	Batch	Date	Date	Surrogate	Reporting		•	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-12-22.5			P9084	85-41			Water	
Bromodichloromethane	9080565	8/24/99	8/25/99		0.500	ND	ug/I	
Bromoform	fr ·	11	tt.		0.500	ND	, ~	
Bromomethane	н	*1	It		0.500	ND	II	
Carbon tetrachloride	п	0	н		0.500	ND	п	
Chlorobenzene	п	·	ц		0,500	ND	ıı .	
Chloroethane	н	••	п		0.500	ND	ıı .	
2-Chloroethylvinyl ether	п	**	R		5.00	ND	п	
Chloroform	п	**	н		0.500	ND	и	
Chloromethane	и		R		0.500	ND	n .	
Dibromochloromethane	It	11	10		0.500	ND	п	•
1,2-Dibromoethane (EDB)	D	11	tr		0.500	ND	п	
1,2-Dichlorobenzene	ц	11	IF		0.500	ND	п	
1,3-Dichlorobenzene	п	*1	iė.		0.500	ND	u	
1,4-Dichlorobenzene	п	41	It		0.500	ND	u	
hlorodifluoromethane	ц		п		0.500	ND	п	
., t-Dichloroethane	п	**	п		0.500	ND	п	
1,2-Dichloroethane	11	tr	п		0.500	ND	II .	
1,1-Dichloroethene	11	H	п		0.500	ND	ii	
cis-1,2-Dichloroethene	11	H.	п		0.500	ND	II.	
trans-1,2-Dichloroethene	91	rr	41		0.500	ND	II .	
1,2-Dichloropropane	•	н	11		0.500	ND	п	
cis-1,3-Dichloropropene	11	19	1)		0.500	ND	U	
trans-1,3-Dichloropropene	Ħ	H	11		0.500	ND	u	
Freon 113	91	ti i	91		0.500	ND	п	
Methylene chloride	**	H	n ·		0.500	ND	ıı.	
1,1,2,2-Tetrachloroethane	n	н	91		0.500	ND	u	
Tetrachloroethene	#1	n	11		0.500	0.575	п	
1,1,2-Trichloroethane	н	l¥	+1		0.500	ND	n	
1,1,1-Trichloroethane		u	•1		0.500	ND	ш	
Trichloroethene	#	н	n		0.500	ND ND	n	
Trichlorofluoromethane	ri .	и	11		0.500	ND	н	
Vinyl chloride	н	11	**		0.500	ND	II .	
Surrogate: Bromochloromethane	"		"	65.0-135	0.000	97.7	%	
Surrogate: 1,4-Dichlorobutane	"	11	u	65.0-135		103	"	



Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

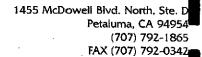
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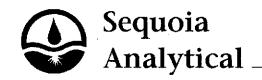
Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D 10 16 5			P9084	DE 43			Water	
B-10-16.5 Bromodichloromethane	9080605	8/25/99	8/25/99	03-42	25.0	ND	ug/l	
	9080003	6/23/99 #	0/23/99		25.0	ND	n GR/1	
Bromoform	**				25.0 25.0	ND	ti-	
Bromomethane	**	" H	"		25.0 25.0	ND ND	h	
Carbon tetrachloride					25.0 25.0	ND	11	
Chlorobenzene	"	"				ND ND	U	
Chloroethane	"				25.0			
2-Chloroethylvinyl ether		"			250	ND		•
Chloroform		"			25.0	ND		
Chloromethane	14	II .	11		25.0	ND	rr H	
Dibromochloromethane	н	н	11		25.0	ND		
1,2-Dibromoethane (EDB)	n	H			25.0	ND		
1,2-Dichlorobenzene	11	н	н		25.0	ND		
1,3-Dichlorobenzene	**	**	**		25.0	ND	et	
1,4-Dichlorobenzene	II.	1 1	31		25.0	ND	11	
hlorodifluoromethane	ti	11	II		25.0	ND	ii	
.,ı-Dichloroethane		11	n		25.0	ND	**	
1,2-Dichloroethane	H ·	n	п		25.0	ND	***	
1,1-Dichloroethene	. "	Ħ	If		25.0	ND	11	
cis-1,2-Dichloroethene	91	н	, tt		25.0	ND	н	
trans-1,2-Dichloroethene	11	"	U.		25.0	ND	п	
1,2-Dichloropropane	п	II	н		25.0	ND	п	
cis-1,3-Dichloropropene	ii .	II	*		25.0	ND	II .	
trans-1,3-Dichloropropene	11	п	11		25.0	ND	•	
Freon 113	H	tt.			25.0	ND	**	
Methylene chloride	Ħ		*1		25.0	ND	**	
1,1,2,2-Tetrachloroethane	47	11	11		25.0	ND	11	
Tetrachloroethene	**	If	11		25.0	823	н	
1,1,2-Trichloroethane	11	**	It		25.0	ND	11	
1,1,1-Trichloroethane	п	41	D.	٠	25.0	ND	п	
Trichloroethene	п	Ħ	H		25.0	178	п	
Trichlorofluoromethane		li .	н		25.0	ND	IP	
Vinyl chloride	ıı .	н	H		25.0	ND		
Surrogate: Bromochloromethane		tt	<i>H</i>	65.0-135		98.3	%	
Surrogate: 1,4-Dichlorobutane	u	#	#	65.0-135		101	r,	

-quoia Analytical - Petaluma



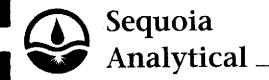




Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

Amelia	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-11-11.5			P9084	R5_43			Water	
Bromodichloromethane	9080605	8/25/99	8/25/99	0015	10.0	ND	ug/l	
Bromoform	"	11	11		10.0	ND	ug/i	
Bromomethane	и	**			10.0	ND ND	n	
Carbon tetrachloride	п	41	н		10.0	ND ND		
Chlorobenzene	11	**	ıı.		10.0	ND	17	
Chloroethane	*	ar .	п		10.0	ND	Ft	
2-Chloroethylvinyl ether	*	Ħ	*1		100	ND ND	"	
Chloroform	14	п	•		10.0	ND ND	и	
Chloromethane	71	и	**		10.0			
Dibromochloromethane	11	it	н			ND		
1,2-Dibromoethane (EDB)	"	*1			10.0	ND		
1,2-Dichlorobenzene	10		••		10.0	ND		
1,3-Dichlorobenzene	u .	•	**		10.0	ND		
1,4-Dichlorobenzene		#1)1		10.0	ND	**	
		"			10.0	ND	41	
hlorodifluoromethane	"		l)		10.0	ND	n	
.,1-Dichloroethane	,	••	п		10.0	ND	**	I
1,2-Dichloroethane	ŧı	Ħ	IF		10.0	ND	16	
1,1-Dichloroethene		H	11		10.0	10.9	н	
cis-1,2-Dichloroethene	н	ít.	•1		10.0	ND	tt .	1
trans-1,2-Dichloroethene	**	IF	н		10.0	ND	II	
1,2-Dichloropropane	**	U	10		10.0	ND	II .	
cis-1,3-Dichloropropene	Ħ	er e	**		10.0	ND	н	
trans-1,3-Dichloropropene	**	11	TI .		10.0	ND	н	
Freon 113	II	Ħ	n		10.0	ND	н	
Methylene chloride	н	n	ii		10.0	ND	н	
1,1,2,2-Tetrachloroethane	п	н	U		10.0	ND	**	
Tetrachloroethene	n	н .	8/26/99		12.5	576	U	·
1,1,2-Trichloroethane	11	**	8/25/99		10.0	ND	tt	
1,1,1-Trichloroethane	n	H	11		10.0	ND	н	
Trichloroethene		н	n		10.0	152	н	
Trichlorofluoromethane	19	n ,	н		10.0	ND		- 1
Vinyl chloride	**	п	11		10.0	ND	н	
Surrogate: Bromochloromethane	и	<u>ii</u>		65.0-135	10.0	96.7	%	
Surrogate: 1,4-Dichlorobutane	u	n	"	65.0-135	•	90.7 105	7a "	
- G				05.0-155		705		•



Project: Cargill Salt
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Project Manager: Robert Langdon

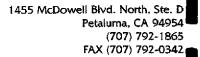
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Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-11-16.5			P9084	85-44			Water	
Bromodichloromethane	9080605	8/25/99	8/25/99		5.00	ND	ug/l	
Bromoform	и	11	"		5.00	ND	, ~	
Bromomethane	п	и	**		5.00	ND	**	
Carbon tetrachloride	II	l t	н		5.00	ND	**	
Chlorobenzene	н	14	**		5.00	ND	**	
Chloroethane		le .	*		5.00	ND	11	
2-Chloroethylvinyl ether	n	Ħ	н		50.0	ND	U	
Chloroform	rı		.,		5.00	ND	II .	
Chloromethane	**	м	•		5.00	ND	II.	
Dibromochloromethane	н	11	**		5.00	ND	IF.	
1,2-Dibromoethane (EDB)	н	+1	н		5.00	ND	H	
1,2-Dichlorobenzene	•	**	11		5.00	ND	n	
1,3-Dichlorobenzene	u	**	**		5.00	ND	н	
1,4-Dichlorobenzene	**	11	n		5.00	ND	н	
hlorodifluoromethane	u	+1	п		5.00	ND	11	
.,i-Dichloroethane	n	17	11		5.00	ND	n	
1,2-Dichloroethane	11	10	II		5.00	ND	†1	
1,1-Dichloroethene		**	II		5.00	6.04	**	
cis-1,2-Dichloroethene	n	n	и		-5.00	ND	91	
trans-1,2-Dichloroethene	**	н	, II		5.00	ND	n	
1,2-Dichloropropane	**	**	и		5.00	ND	**	
cis-1,3-Dichloropropene	H.	•1	н		5.00	ND	•	
trans-1,3-Dichloropropene	ŧı	II .	If		5.00	ND	"	
Freon 113	*11	II .	r		5.00	ND		
Methylene chloride	31	II	H		5.00	ND	*1	
1,1,2,2-Tetrachloroethane	II	Ц	n		5.00	ND	11	
Tetrachloroethene	It	ц	8/26/99		10.0	316	II .	
1,1,2-Trichloroethane	It	· n	8/25/99		5.00	ND	n .	
1,1,1-Trichloroethane	f+		11		5.00	ND	III	
Trichloroethene	H	**	н		5.00	64.4	п	
Trichlorofluoromethane	н	н	11		5.00	ND	u	
Vinyl chloride	н	**	*1		5.00	ND	P	
Surrogate: Bromochloromethane	"	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<i>n</i>	65.0-135		101	%	
Surrogate: 1,4-Dichlorobutane	"	n	n	65.0-135		106	#	

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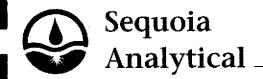


Project: Project Number: CRA101

Cargill Salt Project Manager: Robert Längdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-12-16.5			P90848	DE 4E			Water	
Bromodichloromethane	9080605	8/25/99	8/25/99)3-43	10.0	ND	ug/l	
Bromoform	9000000	# #	0143177 It		10.0	ND	ugn u	
Bromomethane	•1	н	н		10.0	ND	II;	
Carbon tetrachloride	•1	н	н		10.0	ND	II;	1
Chlorobenzene	•	**	"		10.0	ND	tt .	
Chloroethane	#	**	**		10.0	ND	H	
2-Chloroethylvinyl ether	ii	. "	14		100	ND		
Chloroform	It	**	**		10.0	ND		1
Chloromethane	II .	11	**		10.0	ND	••	
Dibromochloromethane	Iŧ	п	*11		10.0	ND	en .	
1,2-Dibromoethane (EDB)	u .		**		10.0	ND	*1	
1,2-Dichlorobenzene		n	•		10.0	ND	**	
1,3-Dichlorobenzene	H	п		÷	10.0	ND	16	ŧ
1,4-Dichlorobenzene	н	ij	**		10.0	ND	н	
hlorodifluoromethane	н	и	н		10.0	ND	н	1
, i-Dichloroethane	**	II.			10.0	ND	н	
1,2-Dichloroethane	**	u	*11		10.0	ND		
1,1-Dichloroethene	e	u .	**		10.0	ND		
cis-1,2-Dichloroethene	tr	н	11		10.0	ND	91	
trans-1,2-Dichloroethene	••		*1		10.0	ND	**	4
1,2-Dichloropropane	**	n	11		10.0	ND	**	
cis-1,3-Dichloropropene	79	u ·	11		10.0	ND	11	
trans-1,3-Dichloropropene	н	+	11		10.0	ND	11 .	
Freon 113	н .	**	п		10.0	ND	II	•
Methylene chloride	•	11	п		10.0	ND	н	
1,1,2,2-Tetrachloroethane	n	11	п		10.0	ND	п	
Tetrachloroethene	11	III.	п		10.0	411	tt.	
1,1,2-Trichloroethane	11	17	п		10.0	ND	u	•
1,1,1-Trichloroethane	#I	#1	ii .		10.0	ND	**	1
Trichloroethene	41	tt	II		10.0	84.8	н	•
Trichlorofluoromethane	41	11	Ц		10.0	ND	Ħ	•
Vinyl chloride	11	11	II		10.0	ND		
Surrogate: Bromochloromethane	11	<i>"</i>	11	65.0-135		97.0	%	
Surrogate: 1,4-Dichlorobutane	и	n	u	65.0~135		104	H	



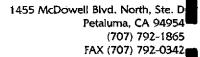
Conor Pacific / EFWProject:Cargill SaltSampled:8/16/99 to 8/18/992650 East Bayshore Rd.Project Number:CRA101Received:8/20/99Palo Alto, CA 94303Project Manager:Robert LangdonReported:8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-12-11.5			P90848	R5_46			Water	
	9080607	8/25/99	8/25/99	<u>12-40</u>	5.00	ND	ug/l	•
	н	н	11		5.00	ND	н	
	••		н	•	5.00	ND	ц	
	14	н	#1		5.00	ND	п	
	n	tt	11		5.00	ND	н	
	•	F +	11		5.00	ND	11	
2-Chloroethylvinyl ether	•	•	41		50.0	ND	•	
	11	•1	11		5.00	ND	ч	
Chloroform Chloromethane	í,	••	li .		5.00	ND		
Dibromochloromethane	н		II		5.00	ND	11	
1,2-Dibromoethane (EDB)	н	**	II.		5.00	ND	#	
1,2-Dichlorobenzene	н	10	II		5.00	ND	ь	
1,3-Dichlorobenzene	н	**	IF		5.00	NĎ	15	
•	"	19	п		5.00	ND	Ħ	
hlorodifluoromethane	н	**	п		5.00	ND	Ħ	
hlorodifluoromethane -Dichloroethane	н	et .	u		5.00	ND	n .	
1,2-Dichloroethane	н	*	н		5.00	ND		
1,1-Dichloroethene	н,	н	n .		5.00	ND	"	
cis-1,2-Dichloroethene	н	n	H		5.00	ND	ŧı	
trans-1,2-Dichloroethene	ч	ŧi	**		5.00	ND	Ħ	
1,2-Dichloropropane	11	Ħ	14		5.00	ND	"	
cis-1,3-Dichloropropene	11	*1	**		5.00	ND	11	
trans-1,3-Dichloropropene	11	+I	*1		5.00	ND	п	
Freon 113	nt .	11	н .		5.00	ND	п	
Methylene chloride	ır	11	н		5.00	ND	Ш	•
1,1,2,2-Tetrachloroethane	l#		19		5.00	ND	п	
Tetrachloroethene	19	11	н		5.00	275	н	
1,1,2-Trichloroethane	l †		n		5.00	ND	н	
1,1,1-Trichloroethane	u	11	**		5.00	ND	n	
Trichloroethene	н	н	11		5.00	46.7	H .	
Trichlorofluoromethane	+	Ħ	11		5.00	ND	D	
Vinyl chloride	1 1	0	11		5.00	ND	**	
burroguie. Dromochioromethane	"	r .	11	65.0-135		93.7	%	
Surrogate: 1,4-Dichlorobutane	"	"	Tf.	65.0-135		96.3	rr .	

uoia Analytical - Peraluma







Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-11-22.5			P9084	85-47			Water	
Bromodichloromethane	9080607	8/25/99	8/25/99		0.500	ND	ug/l	
Bromoform	**	H.	11		0.500	ND	"	
Bromomethane	**	11	11		0.500	ND	11	
Carbon tetrachloride	16	п	11		0.500	ND	10	
Chlorobenzene	5 †	п	•1		0.500	ND	11	
Chloroethane	11	n,	п		0.500	ND	Я	,
2-Chloroethylvinyl ether	18	Ir	11		5.00	ND	19	
Chloroform	**	It.	17		0.500	ND	И	
Chloromethane	•	Jt.	It		0.500	ND	н	
Dibromochloromethane	**	' н	n		0.500	ND	n	
1,2-Dibromoethane (EDB)	#	U	n		0.500	ND	n	
1,2-Dichlorobenzene	н	11	10		0.500	ND	н	
1,3-Dichlorobenzene	+	19	10		0.500	ND	11	
1,4-Dichlorobenzene	н	11	lt.		0.500	ND	ш	
hlorodifluoromethane	**	н	n		0.500	ND	11	
1,1-Dichloroethane	**	10	lt.		0.500	ND	11	
1,2-Dichloroethane	F†	u `	10		0.500	ND	11	
1,1-Dichloroethene	п	D .	10		0.500	ND	ш	
cis-1,2-Dichloroethene	н	н	11		0.500	ND	11	
trans-1,2-Dichloroethene	н :	**	It.		0.500	ND	н	i
1,2-Dichloropropane	4	11	D		0.500	ND	'n	
cis-1,3-Dichloropropene	11	н	. Ir		0.500	ND	Н	
trans-1,3-Dichloropropene	*1	19	11		0.500	ND	п	
Freon 113	n	IF	11		0.500	ND	n	
Methylene chloride	*1	**			0.500	ND	n	
1,1,2,2-Tetrachloroethane	*1	H	11		0.500	ND	П	
Tetrachloroethene	11	H	19		0.500	1.02	н	(
1,1,2-Trichloroethane	*1	н	14		0.500	ND	п	
1,1,1-Trichloroethane	11	11	H		0.500	ND	II	
Trichloroethene		11	t f		0.500	ND	II ·	
Trichlorofluoromethane	**	н	11		0.500	ND	Ji .	,
Vinyl chloride	•	11	16		0.500	ND	п	
Surrogate: Bromochloromethane	"	"	"	65.0-135		102	%	
Surrogate: 1,4-Dichlorobutane	n	**	H	65.0-135		97.3	n	



Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

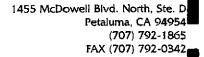
Sampled: 8/16/99 to 8/18/99 Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
B-10-22.5			P9084	85_4 <u>8</u>	•		Water	•
Bromodichloromethane	9080607	8/25/99	8/25/99	33-40	0.500	ND	ug/l	
Bromoform	"	11	11		0.500	ND	#	
Bromomethane	11	н	IF		0.500	ND	11	
Carbon tetrachloride	11	n	n		0.500	ND	ŧŧ	
Chlorobenzene	11	*1	n		0.500	ND	**	
Chloroethane	п	11	**		0.500	ND	н	
2-Chloroethylvinyl ether	п	п	11		5.00	ND	**	
Chloroform	11	11	11		0.500	ND	11	
Chloromethane	· · · ·	. 11	**		0.500	ND	41	
Dibromochloromethane	H	ц	#1		0.500	ND	п	
1,2-Dibromoethane (EDB)	h	D	11		0.500	ND	n ·	
1,2-Dichlorobenzene	ii.	Iŧ.	**		0.500	ND	Ħ	
1,3-Dichlorobenzene	н	IF.	**		0.500	ND	, н	
1,4-Dichlorobenzene	H	rr .	**		0.500	ND	н	
hlorodifluoromethane	H	Ħ	•		0.500	ND	н	
1,1-Dichloroethane	"	**	**		0.500	ND	, H	
1,2-Dichloroethane		17	н		0.500	ND		
1,1-Dichloroethene	н .		#		0.500	ND	et	
cis-1,2-Dichloroethene		n	n ·		0.500	ND	Ħ	
trans-1,2-Dichloroethene	**	u	*1		0.500	ND	91	
1,2-Dichloropropane	11	f1	U		0.500	ND	"	
cis-1,3-Dichloropropene	11	91	n		0.500	ND	**	
trans-1,3-Dichloropropene	11	Iŧ	П		0.500	ND	**	
Freon 113	н	н	ш		0.500	ND	11	
Methylene chloride	•	**	tr		0.500	ND	.,	
1,1,2,2-Tetrachloroethane	H	**	u		0.500	ND	11	
Tetrachloroethene	II	11	н		0.500	1.91	Ħ	
1,1,2-Trichloroethane	п	11	. "		0.500	ND	II	
1,1,1-Trichloroethane	п	ц	н		0.500	ND		
Trichloroethene	ſŧ	и	tt		0.500	ND	II	
Trichlorofluoromethane	ш	li .	11		0.500	ND	lt.	
Vinyl chloride					0.500	ND		
Surrogate: Bromochloromethane	н	n.	n .	65.0-135		103	%	
Surrogate: 1,4-Dichlorobutane	и	"	"	65.0-135		104	H	

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Project: Cargill Salt Project Number: CRA101

Project Manager: Robert Langdon

111 Salt 101 Sampled:

8/16/99 to 8/18/99

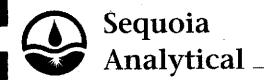
Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit I	Recov. R	PD]	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	% Li	mit	%	Notes
Batch: 9080565	Date Prepa		<u>9</u>		<u>Extra</u>	ction Method: EPA	5030 water	<u>'S</u>		1
Blank	<u>9080565-BI</u>	<u>LK1</u>								
Bromodichloromethane	8/23/99			ND	ug/l	0.500				
Bromoform	. "			ND	It	0.500				
Bromomethane	II .			ND	И	0.500				1
Carbon tetrachloride	. 11			ND	"	0.500				
Chlorobenzene	и			ND	II .	0.500				•
Chloroethane)1			ND	II	0.500				
2-Chloroethylvinyl ether	н			ND	11	5.00				
Chloroform	II .			ND	11	0.500				l
Chloromethane	If			ND	P.	0.500				
Dibromochloromethane	111			ND	II .	0.500				•
1,2-Dibromoethane (EDB)	н			ND	11	0.500				
1,2-Dichlorobenzene	u			ND	I+	0.500				•
1,3-Dichlorobenzene	n			ND	11	0.500				
Dichlorobenzene	и			ND	It	0.500				1
hlorodifluoromethane	II .			ND	P	0.500				i
1,1-Dichloroethane	It			ND	11	0.500				•
1,2-Dichloroethane	I+			ND	п	0.500				_
1,1-Dichloroethene	H.			. ND	It	0.500				
cis-1,2-Dichloroethene	tt			ND	IP.	0.500				l
trans-1,2-Dichloroethene	н			ND	17	0.500				
1,2-Dichloropropane	п			ND	It	0.500				
cis-1,3-Dichloropropene	(r		·	ND	IF	0.500				
trans-1,3-Dichloropropene	H			ND		0.500				ı
Freon 113	11			ND ND	.,	0.500				
Methylene chloride	ít.			ND		0.500				1
1,1,2,2-Tetrachloroethane	I I			ND	**	0.500				1
Tetrachloroethene	н .			ND	н	0.500				•
I,1,2-Trichloroethane	**			ND	11	0.500				
1,1,1-Trichloroethane	н				н	0.500				
Trichloroethene	n			ND	н					Į
Trichlorofluoromethane				ND	.,	0.500		•		
				ND	"	0.500				•
Vinyl chloride	# H	10.0		ND		0.500	103			
Surrogate: Bromochloromethane	u u	30.0		30.9		65.0-135	103			•
Surrogate: 1,4-Dichlorobutane	rr	30.0		32.3	**	65.0-135	108			
Blank	9080565-BI	LK2								1
Bromodichloromethane	8/24/99			ND	ug/l	0.500				
Bromoform	"			ND	п П	0.500				
Bromomethane	н .			ND	п	0.500				•
Carbon tetrachloride	If			ND	н	0.500				

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Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

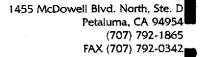
Sampled: 8/16/99 to 8/18/99 Received: 8/20/99

Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Note
Blank (continued)	9080565-BI	JK2						,		
Chlorobenzene	8/24/99			ND	ug/l	0.500				
Chloroethane	0			ND	11	0.500				
2-Chloroethylvinyl ether	16			ND	#1	5.00				
Chloroform	t+			ND	H	0.500				
Chloromethane	19			ND	**	0.500				
Dibromochloromethane	87			ND	*1	0.500				
1,2-Dibromoethane (EDB)	н			ND	*1	0.500				
1,2-Dichlorobenzene	н			ND	41	0.500				
1,3-Dichlorobenzene				ND	11	0.500				
1,4-Dichlorobenzene	u			ND	11	0.500				
Dichlorodifluoromethane	11			ND	11	0.500				
1,1-Dichloroethane	11			ND	11	0.500				
1,2-Dichloroethane	. "			ND	11	0.500				
1,1-Dichloroethene	ės –			ND	li	0.500				
1,2-Dichloroethene	11			ND	11	0.500				
uans-1,2-Dichloroethene	51			ND	ır	0.500				
1,2-Dichloropropane	н			ND	n .	0.500				
cis-1,3-Dichloropropene	lf .			ND	· II	0.500				
trans-1,3-Dichloropropene	11			ND	II	0.500				
Freon 113	**			ND	II.	0.500				
Methylene chloride	н			ND	11	0.500				
1,1,2,2-Tetrachloroethane	*1			ND ND	(t	0.500				
Tetrachloroethene	n			ND	IP.	0.500				
1,1,2-Trichloroethane	••			ND	11	0.500				
1,1,1-Trichloroethane	,,			ND ND	ts.	0.500				
Trichloroethene	ч			ND ND	11	0.500				
Trichlorofluoromethane	н				,,	0.500				
	п			ND ND	••	0.500				
Vinyl chloride		20.0		ND 20.2	**	65.0-135	97.3			
Surrogate: Bromochloromethane	n.	30.0		29.2	ņ	65.0-135	97.3 101			
Surrogate: 1,4-Dichlorobutane	. "	30.0		30.4		05.0-135	101			
Blank	9080565-BI	LK3								
Bromodichloromethane	8/25/99			ND	ug/l	0.500				
Bromoform	ш			ND	11	0.500				
Bromomethane	П			ND	н	0.500				
Carbon tetrachloride	н			ND	n	0.500				
Chlorobenzene	μ			ND	ы	0.500			-	
Chloroethane	III			ND	**	0.500				
2-Chloroethylvinyl ether	lt .			ND	н	5.00				
Chloroform	П			ND	n	0.500				
Chloromethane	Ir			ND	Ħ	0.500				

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Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: Received: 8/16/99 to 8/18/99

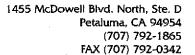
Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

Analyze	Recov.			RPD	RPD	
Dibromochloromethane 8/25/99 ND ug/l 0.500 1,2-Dibromochtane (EDB) "	%	9	<u>%</u>]	Limit	%	Notes?
Dibromochloromethane 8/25/99 ND ug/l 0.500 1,2-Dibromochtane (EDB) "						
1,2-Dibromoethane (EDB)						·]
1,2-Dichlorobenzene						
1,3-Dichlorobenzene						
1,4-Dichlorobenzene "	•					1
Dichlorodifluoromethane						
1,1-Dichloroethane						1
1,2-Dichloroethane						
1,1-Dichloroethene						1
cis-1,2-Dichloroethene " 0.500 trans-1,2-Dichloroethene " 0.500 1,2-Dichloropropane " 0.500 cis-1,3-Dichloropropene " ND " 0.500 cis-1,3-Dichloropropene " ND " 0.500 cis-1,3-Dichloropropene " ND " 0.500 on 113 " ND " 0.500 sichylene chloride " ND " 0.500 1,1,2,2-Tetrachloroethane " ND " 0.500 1,1,2-Trichloroethane " ND " 0.500 1,1,2-Trichloroethane " ND " 0.500 1,1-Trichloroethane " ND " 0.500 Trichloroethene " ND " 0.500 Trichloroethene " ND " 0.500 Surrogate: Bromochloromethane " 30.0 27.8 " 65.0-135 LCS 9080565-BS1						
trans-1,2-Dichloroethene " ND " 0.500 1,2-Dichloropropane " ND " 0.500 cis-1,3-Dichloropropene " ND " 0.500 cis-1,3-Dichloropropene " ND " 0.500 trans-1,3-Dichloropropene " ND " 0.500 on 113 " ND " 0.500tethylene chloride " ND " 0.500 1,1,2,2-Tetrachloroethane " ND " 0.500 1,1,2,2-Tetrachloroethane " ND " 0.500 1,1,2-Trichloroethane " ND " 0.500 1,1,1-Trichloroethane " ND " 0.500 1,1,1-Trichloroethane " ND " 0.500 1,1,1-Trichloroethane " ND " 0.500 Trichlorofluoromethane " ND " 0.500 Trichloroethene " 30.0 27.8 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 9.81 ug/l 65.0-135 Trichloroethene " 10.0 9.67 " 65.0-135 Surrogate: Bromochloromethane " 30.0 27.3 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 27.3 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 28.6 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 28.6 " 65.0-135 Trichloroethene " 10.0 9.07 " 65.0-135						•
1,2-Dichloropropene						
cis-1,3-Dichloropropene " 0.500 trans-1,3-Dichloropropene " ND " 0.500 on 113 " ND " 0.500 ethylene chloride " ND " 0.500 .1,1,2-Tetrachloroethane " ND " 0.500 Tetrachloroethane " ND " 0.500 1,1,2-Trichloroethane " ND " 0.500 1,1,1-Trichloroethane " ND " 0.500 Trichloroethane " ND " 0.500 Trichloroethane " ND " 0.500 Surrogate: Bromochloromethane " 30.0 27.8 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 29.4 " 65.0-135 Trichloroethene " 10.0 9.72 " 65.0-135 Surrogate: Bromochloromethane " 30.0 27.3 " 65.0-135 Surrogate: I,						
trans-1,3-Dichloropropene " ND " 0.500 on 113 " ND " 0.500						ļ
on 113 " ND " 0.500 .nethylene chloride " ND " 0.500 1,1,2,2-Tetrachloroethane " ND " 0.500 1,1,2-Trichloroethane " ND " 0.500 1,1,1-Trichloroethane " ND " 0.500 1,1,1-Trichloroethane " ND " 0.500 Trichlorofluoromethane " ND " 0.500 Trichlorofluoromethane " ND " 0.500 Vinyl chloride " ND " 0.500 Surrogate: Bromochloromethane " 30.0 27.8 " 65.0-135 Surrogate: I,4-Dichlorobutane " 30.0 27.8 " 65.0-135 Trichloroethene " 10.0 9.81 ug/l 65.0-135 Trichloroethene " 10.0 9.67 " 65.0-135 Surrogate: Bromochloromethane " 30.0 28.6 "						
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1,1,2,2-Tetrachloroethane						
Tetrachloroethene						,
1,1,2-Trichloroethane " ND " 0.500 1,1,1-Trichloroethane " ND " 0.500 Trichloroethene " ND " 0.500 Trichlorofluoromethane " ND " 0.500 Vinyl chloride " ND " 0.500 Surrogate: Bromochloromethane " 30.0 27.8 " 65.0-135 Surrogate: I,4-Dichlorobutane " 30.0 27.8 " 65.0-135 Chlorobenzene 8/23/99 10.0 9.81 ug/l 65.0-135 Trichloroethene " 10.0 9.72 " 65.0-135 Surrogate: Bromochloromethane " 30.0 27.3 " 65.0-135 Surrogate: I,4-Dichlorobutane " 30.0 27.3 " 65.0-135 LCS 9080565-BS2 " 65.0-135 Chlorobenzene 8/24/99 10.0 11.8 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.07 " 65.0-135 Trichloroethene <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
1,1,1-Trichloroethane						- 1
Trichloroethene " ND " 0.500 Trichlorofluoromethane " ND " 0.500 Vinyl chloride " ND " 0.500 Surrogate: Bromochloromethane " 30.0 27.8 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 29.4 " 65.0-135 LCS 9080565-BS1 ** ** 65.0-135 Chlorobenzene 8/23/99 10.0 9.81 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.72 " 65.0-135 Surrogate: Bromochloromethane " 30.0 27.3 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 28.6 " 65.0-135 LCS 9080565-BS2 ** ** 65.0-135 Chlorobenzene 8/24/99 10.0 11.8 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.07 " 65.0-135						
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LCS 9080565-BS1 Chlorobenzene 8/23/99 10.0 9.81 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.72 " 65.0-135 Trichloroethene " 10.0 9.67 " 65.0-135 Surrogate: Bromochloromethane " 30.0 27.3 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 28.6 " 65.0-135 LCS 9080565-BS2 Chlorobenzene 8/24/99 10.0 11.8 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.07 " 65.0-135 Trichloroethene " 10.0 9.36 " 65.0-135	03.7	0.7				
LCS 9080565-BS1 Chlorobenzene 8/23/99 10.0 9.81 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.72 " 65.0-135 Trichloroethene " 10.0 9.67 " 65.0-135 Surrogate: Bromochloromethane " 30.0 27.3 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 28.6 " 65.0-135 LCS 9080565-BS2 Chlorobenzene 8/24/99 10.0 11.8 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.07 " 65.0-135 Trichloroethene " 10.0 9.36 " 65.0-135	92.7					
Chlorobenzene 8/23/99 10.0 9.81 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.72 " 65.0-135 Trichloroethene " 10.0 9.67 " 65.0-135 Surrogate: Bromochloromethane " 30.0 27.3 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 28.6 " 65.0-135 LCS 9080565-BS2 Chlorobenzene 8/24/99 10.0 11.8 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.07 " 65.0-135 Trichloroethene " 10.0 9.36 " 65,0-135	98.0	98.4	i. <i>0</i>			
Chlorobenzene 8/23/99 10.0 9.81 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.72 " 65.0-135 Trichloroethene " 10.0 9.67 " 65.0-135 Surrogate: Bromochloromethane " 30.0 27.3 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 28.6 " 65.0-135 LCS 9080565-BS2 Chlorobenzene 8/24/99 10.0 11.8 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.07 " 65.0-135 Trichloroethene " 10.0 9.36 " 65,0-135						- 1
1,1-Dichloroethene " 10.0 9.72 " 65.0-135 Trichloroethene " 10.0 9.67 " 65.0-135 Surrogate: Bromochloromethane " 30.0 27.3 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 28.6 " 65.0-135 LCS 9080565-BS2 Chlorobenzene 8/24/99 10.0 11.8 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.07 " 65.0-135 Trichloroethene " 10.0 9.36 " 65,0-135	98.1	98.	3.1			
Trichloroethene " 10.0 9.67 " 65.0-135 Surrogate: Bromochloromethane " 30.0 27.3 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 28.6 " 65.0-135 LCS 9080565-BS2 Secondary Secondary 11.8 ug/l 65.0-135 Chlorobenzene 8/24/99 10.0 9.07 " 65.0-135 1,1-Dichloroethene " 10.0 9.36 " 65.0-135	97.2			•		1
Surrogate: Bromochloromethane " 30.0 27.3 " 65.0-135 Surrogate: 1,4-Dichlorobutane " 30.0 28.6 " 65.0-135 LCS 9080565-BS2 Section of the control of the c	96.7					
Surrogate: 1,4-Dichlorobutane " 30.0 28.6 " 65.0-135 LCS 9080565-BS2 Section 1.1-Dichlorobutane 10.0 11.8 ug/l 65.0-135 1,1-Dichlorobutane " 10.0 9.07 " 65.0-135 Trichlorobutane " 10.0 9.36 " 65,0-135	91.0					
Chlorobenzene 8/24/99 10.0 11.8 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.07 " 65.0-135 Trichloroethene " 10.0 9.36 " 65,0-135	95.3					
Chlorobenzene 8/24/99 10.0 11.8 ug/l 65.0-135 1,1-Dichloroethene " 10.0 9.07 " 65.0-135 Trichloroethene " 10.0 9.36 " 65,0-135						
1,1-Dichloroethene " 10.0 9.07 " 65.0-135 Trichloroethene " 10.0 9.36 " 65,0-135	=					- 1
Trichloroethene " 10.0 9.36 " 65,0-135	118					•
	90.7					1
	93.6					
Surrogate: Bromochloromethane " 30.0 27.5 " 65.0-135	91.7					•
Surrogate: 1,4-Dichlorobutane " 30.0 28.9 " 65.0-135	96.3	96	.3			

equoia Analytical - Petaluma







Conor Pacific / EFWProject:Cargill SaltSampled:8/16/99 to 8/18/992650 East Bayshore Rd.Project Number:CRA101Received:8/20/99Palo Alto, CA 94303Project Manager:Robert LangdonReported:8/31/99

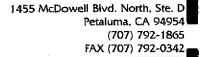
Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

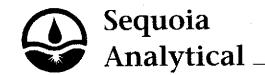
	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
LCS	9080565-B	23								
Chlorobenzene	8/25/99	10.0		11.4	ug/l	65.0-135	114			
1,1-Dichloroethene	U/ 23/ 3/3	10.0		9.48	ug/1	65.0-135	94.8			
Trichloroethene	11	10.0		9.74	11	65.0-135	97.4			
Surrogate: Bromochloromethane	n	30.0		28.3	***	65.0-135	94.3			
Surrogate: 1,4-Dichlorobutane	n ·	30.0		28.9	#	65.0-135	96.3			
Matrix Spike	9080565-M	S1 P9	908485-12							
Chlorobenzene	8/23/99		ND	10.4	ug/l	65.0-135	104			
1.1-Dichloroethene	11	10.0	ND	8.99	H	65.0-135	89.9			
Trichloroethene	11	10.0	ND	8.78	H	65.0-135	87.8			
Surrogate: Bromochloromethane	н	30.0		24.8		65.0-135	82.7	*****		
Surrogate: 1,4-Dichlorobutane	# -	30.0		26.4	n	65.0-135	88.0			
Matrix Spike Dup	9080565-M	SD1 PS	908485-12							
orobenzene	8/23/99	10.0	ND	9.72	ug/l	65.0-135	97.2	20.0	6.76	
1,1-Dichloroethene	н	10.0	ND	9.13	u Č	65.0-135	91.3	20.0	1.55	
Trichloroethene	II .	10.0	ND	8.89	. 0	65.0-135	88.9	20.0	1.25	
Surrogate: Bromochloromethane	. "	30.0		26.9	11	65.0-135	89.7			•
Surrogate: 1,4-Dichlorobutane	н	30.0		28.2	n	65.0-135	94.0			
Batch: 9080566	Date Prepa	red: 8/23/9	<u> 19</u>		Extra	ction Method: EP.	A 5030 w	aters	4	
<u>Blank</u>	9080566-B	LK1	_							
Bromodichloromethane	8/23/99			ND	ug/l	0.500				
Bromoform	11			ND	11	0.500				
Bromomethane				· ND	11	0.500				
Carbon tetrachloride	*1			ND	11	0.500				
Chlorobenzene	11			ND	п	0.500				
Chloroethane	ti .			ND	IF	0.500				
2-Chloroethylvinyl ether	"			ND	11	5.00				
Chloroform	H			ND	н	0.500				
Chloromethane	*			ND	te	0.500				
Dibromochloromethane	н			ND	r	0.500				
1,2-Dibromoethane (EDB)				ND	н	0.500				
1,2-Dichlorobenzene	**			ND	Ħ	0.500				
1,3-Dichlorobenzene	11			ND	ţs.	0.500				
1,4-Dichlorobenzene	н			ND	н	0.500	٠			
Dichlorodifluoromethane	**			ND	**	0.500				
1,1-Dichloroethane	U			ND	IE	0.500				
1,2-Dichloroethane	n			ND	l#	0.500				
I,1-Dichloroethene	**			ND	14	0.500				
cis-1,2-Dichloroethene	**			ND		0.500				

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^{*}Refer to end of report for text of notes and definitions.





Conor Pacific / EFW

Project: Cargill Salt

Sampled:

8/16/99 to 8/18/99

2650 East Bayshore Rd. Palo Alto, CA 94303

Project Number: CRA101

Project Manager: Robert Langdon

Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
		·····				-				
Blank (continued)	9080566-BI	<u>LK1</u>								•
trans-1,2-Dichloroethene	8/23/99			ND	ug/l	0.500				
1,2-Dichloropropane	U			· ND	"	0.500				
cis-1,3-Dichloropropene	If			ND	11	0.500				
trans-1,3-Dichloropropene	Ħ			ND	**	0.500				
Freon 113	**			ND	"	0.500				į
Methylene chloride	79			ND	**	0.500				_
1,1,2,2-Tetrachloroethane	11			, ND	N .	0.500				_
Tetrachloroethene	#			ND	Ħ	0.500				
1,1,2-Trichloroethane	•			ND	••	0.500				
1,1,1-Trichloroethane	4			ND	*1	0.500			•	
Trichloroethene	tı			ND	#1	0.500				
Trichlorofluoromethane	11			ND	41	0.500				
Vinyl chloride	41			ND	#1	0.500				
Surrogate: Bromochloromethane		30.0		28.0	11	65.0-135	93.3			
rogate: 1,4-Dichlorobutane	II .	30.0		28.4	tt .	65.0-135	94.7			1
\						•				1
Blank	9080566-BI	LK2								_
Bromodichloromethane	8/24/99			ND	ug/l	0.500				_
Bromoform	It.			ND	"	0.500				
Bromomethane	R			ND	*	0.500				
Carbon tetrachloride	14			ND	н	0.500				
Chlorobenzene	lt.			ND	н	0.500				•
Chloroethane	н		=	ND	"	0.500				
2-Chloroethylvinyl ether	. •			ND	• ••	5.00				
Chloroform	**			ND	41	0.500				_
Chloromethane	lt.			ND	н	0.500				
Dibromochloromethane	11			ND	н	0.500				a l
1,2-Dibromoethane (EDB)	11			ND	н	0.500				
1.2-Dichlorobenzene	**			ND	"	0.500				_
1,3-Dichlorobenzene	B			ND	н	0.500				
1.4-Dichlorobenzene	н			ND	a a	0.500				-
Dichlorodifluoromethane	н			ND	11	0.500				
1,1-Dichloroethane	0			ND	11	0.500				1
1,2-Dichloroethane	н			ND	*1	0.500				
1,1-Dichloroethene				ND	11	0.500				_
cis-1,2-Dichloroethene	*1			ND	*1	0.500				_
trans-1,2-Dichloroethene	**			ND	*1	0.500				
1,2-Dichloropropane	"			ND	31	0.500				
cis-1,3-Dichloropropene	NJ			· ND	11	0.500				
trans-1,3-Dichloropropene	11			ND	н	0.500				-
Freon 113	41			ND	11	0.500				
G100H 143				NU		0.500				

Juoia Analytical - Petaluma



Project: Cargill Salt Project Number: CRA101

Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99

Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Notes*
Blank (continued)	9080566-Bl	LK2						•	
Methylene chloride	8/24/99			ND	ug/l	0.500			
1,1,2,2-Tetrachloroethane	"			ND	#	0.500			
Tetrachloroethene	41			ND	11	0.500			
1,1,2-Trichloroethane	n .			ND	**	0.500			
1,1,1-Trichloroethane	II			ND	**	0.500			
Trichloroethene	п			ND	••	0.500			
Trichlorofluoromethane	II .			ND	•1	0.500			
Vinyl chloride	it.			ND	ŧı	0.500			
Surrogate: Bromochloromethane	ıı	30.0		26.1	11	65.0-135	87.0		
Surrogate: 1,4-Dichlorobutane	#	30.0		26.5	n.	65.0-135	88.3		
LCS	9080566-B3	S 1							
Chlorobenzene	8/23/99	10.0		9.57	ug/l	65.0-135	95.7		
1.1-Dichloroethene	11	10.0		9.43	μ	65.0-135	94.3		•
hloroethene	15	10.0		8.73	n	65.0-135	87.3		
rrogate: Bromochloromethane	#	30.0		25.7	ff	65.0-135	85.7		
Surrogate: 1,4-Dichlorobutane	H	30.0		26.6	"	65.0-135	88.7		
LCS	9080566-B	<u>S2</u>							
Chlorobenzene	8/24/99	10.0		9.58	ug/l	65.0-135	95.8		
1,1-Dichloroethene	н .	10.0		9.54	н	65.0-135	95.4		
Trichloroethene	H	10.0		9.03	tt.	65.0-135	90.3		
Surrogate: Bromochloromethane	n ,	30.0		26.6	"	65.0-135	88.7		
Surrogate: 1,4-Dichlorobutane	Л	30.0		25.1	"	65.0-135	83.7		
Matrix Spike	9080566-M	<u>IS1 P</u>	908485-10						
Chlorobenzene	8/23/99	10.0	ND	9.72	ug/l	65.0-135	97.2		
1,1-Dichloroethene	II.	10.0	ND	9.88	#	65.0-135	98.8		
Trichloroethene	IF.	10.0	ND	9.62	11	65.0-135	96.2		
Surrogate: Bromochloromethane	"	30.0		29.3	JΓ	65.0-135	97.7		
Surrogate: 1,4-Dichlorobutane	tt	30.0		27.0	11	65.0-135	90.0		
Matrix Spike Dup	9080566-M	ISD1 P	908485-10					•	•
Chlorobenzene	8/23/99	10.0	ND	9.61	ug/l	65.0-135	96.1	20.0	1.14
1,1-Dichloroethene	ŧi.	10.0	ND	9.38	11	65.0-135	93.8	20.0	5.19
Trichloroethene	n	10.0	ND	9.05	11	65.0-135	90.5	20.0	6.11
Surrogate: Bromochloromethane	"	30.0		27.3	11	65.0-135	91.0		
Surrogate: 1,4-Dichlorobutane	"	30.0		26.4	"	65.0-135	88. 0		
									•

.. juoia Analytical - Petaluma



Project: Project Number:

Cargill Salt

CRA101 Project Manager: Robert Langdon Sampled:

8/16/99 to 8/18/99

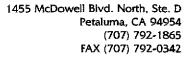
Received: 8/20/99 8/31/99 Reported:

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% l	Notes
Batch: 9080605	Date Prepa	wod. 9/24ff	ın		Eutwoo	tion Mathada EDA	E020 **	ia toma		
Blank	9080605-Bl		2		Extrac	tion Method: EPA	3030 W	aters		
Bromodichloromethane	8/24/99	<u>LKI</u>		NITS.		0.500				
Bromoform	0/24/77	•		ND	ug/l			•		
Bromomethane	Ħ			ND	,,	0.500				
Carbon tetrachloride				ND	,,	0.500				
Chlorobenzene				ND	11	0.500				
Chloroethane	н			ND		0.500				
				ND	,, ,,	0.500				
2-Chloroethylvinyl ether	**			ND		5.00				
Chloroform				ND	"	0.500				
Chloromethane	11			ND	"	0.500				
Dibromochloromethane	*1			ND	**	0.500				
1,2-Dibromoethane (EDB)	#I			ND	17	0.500				
1,2-Dichlorobenzene	н			ND	n	0.500				
1,3-Dichlorobenzene	n			ND	*1	0.500				
-Dichlorobenzene	**			ND	Ħ	0.500				
chlorodifluoromethane	Ħ	,		ND	H	0.500				
1,1-Dichloroethane	н			ND	11	0.500				
1,2-Dichloroethane	n			ND	н	0.500				
1,1-Dichloroethene	**			ND	н	0.500				
cis-1,2-Dichloroethene	n			ND	h	0.500				
trans-1,2-Dichloroethene	н			ND	Ħ	0.500				•
1,2-Dichloropropane	lt.			ND	н	0.500				
cis-1,3-Dichloropropene	H			ND	н	0.500				
trans-1,3-Dichloropropene	н			ND	. н	0.500				
Freon 113	**			ND	н	0.500				
Methylene chloride	n		4	ND	H	0.500				
1,1,2,2-Tetrachloroethane	tt			ND	н	0.500				
Tetrachloroethene	u	*		ND	H	0.500				
1,1,2-Trichloroethane	п			ND	н	0.500		•		
1,1,1-Trichloroethane	и									
Trichloroethene	ıt.			ND		0.500				
				ND		0.500				
Trichlorofluoromethane				ND	ļī	0.500				
Vinyl chloride				ND		. 0.500				
Surrogate: Bromochloromethane	"	30.0		29.2	"	<i>65.0-135</i>	97.3			
Surrogate: 1,4-Dichlorobutane	IJ	30.0		30.4	"	65.0-135	101			
Blank	9080605-BI	LK2								
Bromodichloromethane	8/25/99			ND	ug/l	0.500				
Bromoform	11		•	ND	n Evit	0.500				
Bromomethane	**			ND	*1	0.500				
Carbon tetrachloride	н .			ND	u	0.500				

Juoia Analytical - Petaluma







Conor Pacific / EFWProject:Cargill SaltSampled:8/16/99 to 8/18/992650 East Bayshore Rd.Project Number:CRA101Received:8/20/99Palo Alto, CA 94303Project Manager:Robert LangdonReported:8/31/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit		Notes*
									·	
Blank (continued)	9080605-BI	<u>.K2</u>								
Chlorobenzene	8/25/99			ND	ug/l	0.500				
Chloroethane	I t			ND	11	0.500				
2-Chloroethylvinyl ether	II .			ND	**	5.00				
Chloroform	O			ND	11	0.500				
Chloromethane	H			ND	11	0.500				
Dibromochloromethane	Ħ			ND	11	0.500			•	
1,2-Dibromoethane (EDB)	**			ND	п	0.500				
1,2-Dichlorobenzene	•			ND	11	0.500				
1,3-Dichlorobenzene				ND	п	0.500				
1,4-Dichlorobenzene	41			ND	п	0.500				
Dichlorodifluoromethane	**			ND	μ	0.500				
1,1-Dichloroethane	77			ND	II	0.500				
1,2-Dichloroethane	78			ND	II.	0.500				
1,1-Dichloroethene	n			ND	lt	0.500				
(1,2-Dichloroethene	н			ND	lt.	0.500				
ans-1,2-Dichloroethene	*1			ND	н	0.500				
1,2-Dichloropropane	*1			ND	**	0.500				
eis-1,3-Dichloropropene	**			ND	++	0.500				
trans-1,3-Dichloropropene	o o			ND	н	0.500				
Freon 113	11			ND	H	0.500				
Methylene chloride	11			ND	**	0.500				
1,1,2,2-Tetrachloroethane	11			ND	8	0.500				
Tetrachloroethene	11			ND	*1	0.500				
1,1,2-Trichloroethane	П			ND	•	0.500				
1,1,1-Trichloroethane	16			ND	0	0.500				
Trichloroethene	U			ND	H	0.500				
Trichlorofluoromethane	н			ND	Ð	0.500				
Vinyl chloride	и .			ND	*1	0.500				
Surrogate: Bromochloromethane	"	30.0		27.8	11	65.0-135	92.7			•
Surrogate: 1,4-Dichlorobutane	"	30.0		29.4	H	65.0-135	98. 0			
Blank	9080605-BI	L <u>K3</u>								
Bromodichloromethane	8/26/99	·		ND	ug/l	0.500				
Bromoform	u			NĐ	n Č	0.500				
Bromomethane	Þj			ND	н	0.500				
Carbon tetrachloride	n			ND	п	0.500				
Chlorobenzene	et .			ND	п	0.500				
Chloroethane	Ħ			ND	n	0.500				
2-Chloroethylvinyl ether	#1			ND	н	5.00				
Chloroform	85			ND	п	0.500				
Chloromethane	**			ND	п	0.500				
- (

--quoia Analytical - Petaluma



Project: Cargill Salt Project Number: CRA101

Project Manager: Robert Langdon

Sampled:

8/16/99 to 8/18/99

Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Plank (continued)	nnonzne Di	פענ								•
Blank (continued) Dibromochloromethane	9080605-B1 8/26/99	<u> </u>		ND	ug/l	0.500				1
1,2-Dibromoethane (EDB)	0/20/97			ND ND	n Evr	0.500				
1,2-Dichlorobenzene	11			ND	н	0.500				_
1,3-Dichlorobenzene	11			ND	ŧi	0.500				_
1,4-Dichlorobenzene				ND	11	0.500				
Dichlorodifluoromethane	ш			ND	п	0.500				•
1,1-Dichloroethane	II.			ND ND	ш	0.500				
1,1-Dichtoroethane				ND ND	11:	0.500				•
1,1-Dichloroethene	l.			ND	17	0.500				
					u .	0.500				•
cis-1,2-Dichloroethene				ND	10	0.500				
trans-1,2-Dichloroethene	,			ND	н	0.500				1
1,2-Dichloropropane	•			ND ND	н	0.500				
cis-1,3-Dichloropropene	**			ND ND	н	0.500				
trans-1,3-Dichloropropene	n				Ħ	0.500				
on 113	11			ND	**	0.500				
ethylene chloride				ND		0.500				•
1,1,2,2-Tetrachloroethane				ND	,,	0.500				
Tetrachloroethene 1,1,2-Trichloroethane				ND	,	0.500				1
				ND	**	0.500				1
1,1,1-Trichloroethane				ND	11	0.500				_
Trichloroethene Trichlorofluoromethane	11			ND	н	0.500				_
				ND	ы	0.500				
Vinyl chloride		20.0		ND 20.0	Jr	65.0-135	103			
Surrogate: Bromochloromethane	 n	30.0		30.8	11	65.0-135	103 108			
Surrogate: 1,4-Dichlorobutane	,	30.0		32.3		03.0-133	100			1
LCS	9080605-B	S1								
Chlorobenzene	8/24/99	10.0		11.8	ug/l	65.0-135	118			
1,1-Dichloroethene	(r	10.0		9.07	"	65.0-135	90.7			
Trichloroethene	tr	10.0		9.36	U	65.0-135	93.6			
Surrogate: Bromochloromethane	"	30.0		27.5	"	65.0-135	91.7			
Surrogate: 1,4-Dichlorobutane	"	30.0		28.9	"	65.0-135	96.3			_
LCS	ሰለየሰረሰድ ው	e -1								
Chlorobenzene	<u>9080605-B:</u> 8/25/99	<u>5.2</u> 10.0		11.4	ug/l	65.0-135	114			1
1.1-Dichloroethene	8/23/99	10.0		9,48	ug/I	65.0-135	94.8			
Trichloroethene	11	10.0			r	65.0-135	97.4			. [
Surrogate: Bromochloromethane	#	****		9.74 28.3		65.0-135	94.3			
•	"	30.0 30.0		28.9	"	65.0-135	96.3			_
Surrogate: 1,4-Dichlorobutane		30.0		∠a.y		05.0-155	70.3			

quoia Analytical - Petaluma



8/16/99 to 8/18/99



Conor Pacific / EFW 2650 East Bayshore Rd. Palo Alto, CA 94303 Project: Cargill Salt
Project Number: CRA101

Project Manager:

Sampled: Received:

Received: 8/20/99 Reported: 8/31/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequola Analytical - Petaluma

Robert Langdon

		Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
	Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit		Notes*
								.,		•	
_	LCS	9080605-BS	<u>53</u>								
	Chlorobenzene	8/26/99	10.0		11.6	ug/i	65.0-135	116			
	1,1-Dichloroethene	71	10.0		9.76	n	65.0-135	97.6			
	Trichloroethene	*1	10.0		10.1		65.0-135	101			
	Surrogate: Bromochloromethane	"	30.0		28.3	H	65.0-135	94.3			
	Surrogate: 1,4-Dichlorobutane	II .	30.0		29.0	ir	65.0-135	96.7			
	Matrix Spike	9080605-M	<u>S1</u> P	90848 <u>5-31</u>							
	Chlorobenzene	8/24/99	10.0	ND	10.9	ug/l	65.0-135	109			
	1,1-Dichloroethene	11	10.0	ND	9.22	P	65.0-135	92.2			
	Trichloroethene	н	10.0	ND	9.94	"	65.0-135	99.4			
_	Surrogate: Bromochloromethane	n n	30.0		28.1	"	65.0-135	93.7	,		
	Surrogate: 1,4-Dichlorobutane	n	30.0		27.4	"	65.0-135	91.3			
	Matrix Spike Dup	9080605-M	SD1 P	908485-31							
	orobenzene	8/24/99	10.0	ND	10.6	ug/l	65.0-135	106	20.0	2.79	
	,,,-Dichloroethene	п	10.0	ND	9.42	n .	65.0-135	94.2	20.0	2.15	
_	Trichloroethene	ŧı	10.0	ND	10.1	11	65.0-135	101	20.0	1.60	
_	Surrogate: Bromochloromethane	"	30.0		27.9	a .	65.0-135	93.0			
	Surrogate: 1,4-Dichlorobutane	"	30.0		27.9	"	65.0-135	93.0			
_	Batch: 9080607	Date Prepa	red: 8/24/9	99		Extra	ction Method: EP	A 5030 w	aters		
	Blank	9080607-BI		_		-					
	Bromodichloromethane	8/24/99			ND	ug/l	0.500				
	Bromoform	Ħ			ND	n	0.500				
_	Bromomethane	Ħ			ND	n	0.500				
	Carbon tetrachloride	11			ND	II .	0.500				
	Chlorobenzene	11			ND	. 11	0.500			- :	
	Chloroethane	tr			ND	п	0.500				
	2-Chloroethylvinyl ether	и			ND	ц	5.00				
	Chloroform ·	16		-	ND	п	0.500				
	Chloromethane	11			ND	н	0.500				
	Dibromochloromethane	Ħ			ND	H	0.500				
	1,2-Dibromoethane (EDB)	(+			ND	н	0.500				
	1,2-Dichlorobenzene	н			ND		0.500				
	1,3-Dichlorobenzene	Ħ			ND	**	0.500				
	1,4-Dichlorobenzene	n .			ND	**	0.500				
	Dichlorodifluoromethane	H			. ND	11	0.500				
	1,1-Dichloroethane	r			ND	11	0.500				
	1,2-Dichloroethane	ŧı			ND	н	0.500				
	1,1-Dichloroethene				ND	11	0.500				
	cis-1,2-Dichloroethene	"			ND	17	0.500				

Juoia Analytical - Petaluma





Project: Project Number:

Project Manager: Robert Langdon

Cargill Salt CRA101

Sampled:

8/16/99 to 8/18/99

Received: 8/20/99 Reported:

8/31/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes
Blank (continued)	9080607-BI	<u>_K1</u>								
trans-1,2-Dichloroethene	8/24/99			ND	ug/l	0.500				
1,2-Dichloropropane	и			ND	н	0.500				
cis-1,3-Dichloropropene	II .			ND	11	0.500				
trans-1,3-Dichloropropene	и			ND	П	0.500				
Freon 113	1)			ND	II	0.500				
Methylene chloride	11			ND	"	0.500				
1,1,2,2-Tetrachloroethane	п			ND	н	0.500				
Tetrachloroethene	п			ND	H .	0.500				
1,1,2-Trichloroethane	н .			ND	Iŧ	0.500				
1,1,1-Trichloroethane	ıı .			ND	17	0.500				
Trichloroethene	TH.			ND	11	0.500				
Trichlorofluoromethane	п			ND	H	0.500				
Vinyl chloride	п			ND	Iŧ.	0.500				
Surrogate: Bromochloromethane	11	30.0		26.1	"	65.0-135	87.0			
rogate: 1,4-Dichlorobutane	rr .	30.0		26.5	rr	65.0-135	88.3			
<u>Blank</u>	9080607-BI	LK2								
Bromodichloromethane	8/25/99		•	ND	ug/l	0.500				
Bromoform	U			ND	u	0.500				
Bromomethane	II			ND	It	0.500				
Carbon tetrachloride	II			ND	IP	0.500				
Chlorobenzene	ч			ND	It	0.500				
Chloroethane	11			ND	ч	0.500				
2-Chloroethylvinyl ether	11			ND	(r	5.00				
Chloroform	II			ND	H	0.500	,			
Chloromethane	· ·			ND	Ħ	0.500				
Dibromochloromethane	u			ND	n	0.500				
1,2-Dibromoethane (EDB)	It			ND	tt	0.500				
1,2-Dichlorobenzene	ır			ND	10	0.500				
1,3-Dichlorobenzene	II			ND	t+	0.500				
1,4-Dichlorobenzene	II .			ND	If	0.500				
Dichlorodifluoromethane	II .			ND	IP.	0.500				
1,1-Dichloroethane	II .			ND	11	0.500				
1,2-Dichloroethane	п .			ND	т.	0.500				
1,1-Dichloroethene	U			ND	н	0.500				
cis-1,2-Dichloroethene	п			ND	н	0.500				
trans-1,2-Dichloroethene	11			ND	11	0.500				
1,2-Dichloropropane	II			ND	11	0.500		-		
cis-1,3-Dichloropropene	11			ND	11	0.500				
trans-1,3-Dichloropropene	11			ND	n	0.500				
Freon 113	11				н					

Juoia Analytical - Petaluma





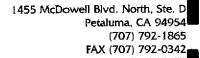
Conor Pacific / EFWProject:Cargill SaltSampled:8/16/99 to 8/18/992650 East Bayshore Rd.Project Number:CRA101Received:8/20/99Palo Alto, CA 94303Project Manager:Robert LangdonReported:8/31/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Blank (continued)	9080607-BI	LK2								
Methylene chloride	8/25/99			ND	ug/l	0.500				
1,1,2,2-Tetrachloroethane	11			ND	"	0.500				
Tetrachloroethene	11			ND	н	0.500	-			
1,1,2-Trichloroethane	п			ND	n	0.500				
1,1,1-Trichloroethane	IF			ND	17	0.500				
Trichloroethene	и			NĐ	n	0.500				
Trichlorofluoromethane	п			NĐ	**	0.500				
Vinyl chloride	lt .			ND	At .	0.500				
Surrogate: Bromochloromethane	<i>(r</i>	30.0		29.2	"	65.0-135	97.3			
Surrogate: 1,4-Dichlorobutane	н	30.0		28.5	"	65.0-135	95.0		•	
LCS	9080607-BS	<u>81</u>								
Chlorobenzene	8/24/99	10.0		9.58	ug/l	65.0-135	95.8			
1,1-Dichloroethene	n	10.0		9.54	н	65.0-135	95.4			
hloroethene	II.	10.0		9.03	н	65.0-135	90.3			
_arrogate: Bromochloromethane	#	30.0		26.6	n	65.0-135	88.7			
Surrogate: 1,4-Dichlorobutane	"	30.0	•	<i>25.1</i>	"	65.0-135	83.7			
LCS	9080607-BS	<u>82</u>		•						
Chlorobenzene	8/25/99	10.0		9.54	ug/l	65.0-135	95.4			
1,1-Dichloroethene	*1	10.0		9.62	*1	65.0-135	96.2			
Trichloroethene	17	10.0		9.01	11	65.0-135	90.1			
Surrogate: Bromochloromethane	"	30.0		27.0	, ,,	65.0-135	90.0			
Surrogate: 1,4-Dichlorobutane	,	30.0		26 .3	"	65.0-135	<i>87.7</i>			
Matrix Spike	9080607-M	<u>S1</u> <u>F</u>	908485-28							
Chlorobenzene	8/24/99	10.0	ND	9.41	ug/l	65.0-135	94.1			
1,1-Dichloroethene	ęi –	10.0	ND	8.75	II .	65.0-135	87.5			
Trichloroethene		10.0	ND	9.15	II .	65.0-135	91.5			
Surrogate: Bromochloromethane	ıı	30.0		26.6	T#	65.0-135	88.7			
Surrogate: 1,4-Dichlorobutane	IJ	30.0		25.4	"	65.0-135	84.7			
Matrix Spike Dup	9080607-M		908485-28							-
Chlorobenzene	8/24/99	10.0	ND	9.47	ug/l	65.0-135	94.7	20.0	0.636	
1,1-Dichloroethene	II	10.0	ND	9.17	11	65.0-135	91.7	20.0	4.69	
Trichloroethene	11	10.0	ND	9.54	lt	65.0-135	95.4	20.0	4.17	ananan meneranya kananan dalam dan ber
Surrogate: Bromochloromethane	n	30.0		26.8	rt	65.0-135	89.3			
Surrogate: 1,4-Dichlorobutane	li .	30.0		26.2	Ħ	<i>65.0-135</i>	87.3			

Juoia Analytical - Petaluma







Project: Cargill Salt
Project Number: CRA101

Project Number: CRAIOI

Project Manager: Robert Langdon

Sampled: 8/16/99 to 8/18/99

Received: 8/20/99 Reported: 8/31/99

Notes and Definitions

#	Note
Е	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
1	Due to insufficient sample availability, a dilution could not be analyzed on this sample.
2	Due to insufficient sample availability, a confirmation could not be analyzed on this sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
ر (مان	Relative Percent Difference

—	FOWLE	RSON R & W	/ATS	ON_		Н	lyd	iros	stra	tig	raph	ic P	rof	ile	Well No.	lo. <u>13-13</u> . <u>MW-1</u> ! of <u>1</u>		' F	Projec	t No	(12	<u>H 101</u>		ngolfu	Ng,	EN C			•	T.O.C Coord). Elev dinate	/ s; N E	<u>6.'</u> ≣: _5	03' MGL 75' MGL 039.7, 4980.8
4	ling Sumi 'to Z or det	2'		nd a	11	0x la	<u> </u> n	6" 0 non	dor	N.	to 1	11, 141;	(ax) 4e	e C	lovs co	ore from uction d	ia Graz	[Date(s Date(s	s) Drill s) Wel	ed: <u> /</u> I Insta	// <i>/&/</i> illed: _	190 11 •	1 8/99 Sen	910		- 		!	Boreł	nole T	otai D	Depth	(Fi): 22 (Ft): 0.21
_	Sample Desig.	FIZ	0	do Arn	S	ample Type	Blo	un In	Recovery	Sample	Wate Leve	r Dept			aphics y Structure	Name & Uni	t USCS	Color (Munsel	II) 2	ines (0 80 Grvl.	Fine: Plastic	71.7	Sand F M C		=	. اـ ا	v.poor	Hardn Dens (S)	ity (sup) jts	Clays ands) (sup.) jts./	Mois D N	sture VIW	Remarks
					5	B B					11/46					Silty Son Wilty Son Wilty Son Clayey Son Clayey Son Silty Son Wilchay Silty Son Wilchay	d sm d sm d sm	2.5 y 6/ 14. Oliver 2.5 y 5 14. Oliver 14. Oliver 15. Oliver 16. Oliver	12 14 bu 13 1/2 1/2		0 20												V V	Shell Fragments From Oxide Mattling 85' to 13.5'
L			_1_1		<u> </u>	·	1		1	<u>, i</u>	_!	<u> </u>						L.	Logo	ind b	. 7	7 / 6		BON		л 1	. 1		Cł	necke	ed by	<u>, .</u>	M	ank c Neeler

Drilling Summary: Hand ac From 4' to 18'	install 1" mo	graphic Profile	Boring No. 13-14 Well No. MW-2 Sheet I of I (ontinuous Core see (onstruction)	Date(s) Drilled: Date(s) Well Insta	11 Sult 11	Ground Elev. 10.00' MSL T.O.C. Elev. 9.81 MSL Coordinates; N E: 4550.8 4847. Drilling Method: Direct Push Borehole Total Depth (Ft): 18 Final Boreholoe Dia. (Ft): 0.21
	ample Blows/ 00 E	Water Depth Level (feet) Litholog	nphics Name & Unit USCS	Color (Munseil) Fines (%) 20 40 60 80 Sand & Grvi. 80 60 40 20	Plasticity	Hardness - Clays (Density - Sands) Moisture Remarks
	3	1 : :	Silty Sand Sm			
		11/8/60 6	Sand Clayer Sund Sc	2:54 5kg H. olive 2:54 6kg H. yell bkw		Pootlets, shell to a 6', Iron V exide mattling
		# 4 ····	7 1 2017 131 1 174 1 1 1 1 1 1 1 1 1	z.5y44		
		12	Clavey Sard Sc	1.5 y 44 1.5 y 44 1.5 y 611		
		16 11		He yell		

Logged by R. Lawe don't

Dr	FINA FOWLE illing Sum	mary: 식/ +	Han 10 18	da	- UGBY	W 1/ 1	6"	ac	ger	to	41, C	Well No. Sheet <u>l</u>	o. B-15 MW-3 of L yous co		Clin	ent: oject No te(s) D te(s) W	rilled: _	11 S 214 10 11 Se alled: 1 r: 7) (c) 1 199 11 5	199					T. C D B	.O.C. cordi rilling corehe	y Meth ole To	; N E: nod: _ otal De	4.9 72 epth (l	10'MSL 12'M9L 14992.9 5033 1401+ Pich F1): 18	3.4
	Sample Desig.		Oda		Sample Type	Blows/ Run	Recovery	Sample	Water Level	Depth (feet)		phics Structure	Name & Unit	uscs	Color (Munsell)	20 40 Sand	s (%) 60 80 & Gryl.	Fines Plastic	ity S		Grvl.	v.well or	boot pood	v.poor	Hardne (Density (s:) (s:)	y - Sa (sup) #s	lays (dus) (sup.)	Moist	ire W	Remark	s
							\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		11/8/64				Silty Sand Willy Sand Willy Sand Clayey Sand Clayey Sand Clayey Sand Silty Sand	5m 5m Su Su	2.5 y 6/3 H. yell. brod. 2.5 y 5/4 H. olive brod. 2.5 y 5/4 H. olive brod. 2.5 y 5/4 H. olive brod.		40 20									18 TS	A 24	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Fron Oxide 1 Fron Oxide 15'+0 17'	voltliwg.
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Logged by R. Langdon

Checked by Mark C. Wheeler



WELL CONSTRUCTION DETAILS

BORING DESIGNATION: B-13 WELL DESIGNATION INSTALLATION MW-1 BY: 12- Langdons DATE: 11 8 99 **DIMENSIONS** A Total Depth of Boring (ft.) 2.5 B Borehole Diameter (in.) DEPTH/HEIGHT (FT) C Well Casing Diameter (in.) ELEV. (FT MSL) D Well Casing Length (ft.) 18.57 E Well Casing Slotted Interval (ft.) F Well Casing End Cap or Sump (ft.) 0.1 G Annular Seal Interval (ft.), 0 7.03 H Annular Seal Interval (ft.) 2.0 0.3 6.75 I Sand Pack Interval (ft.) 13.1 6.0 J Bottom Material Interval (ft.) 33 K Protective Cover Diameter (in.) L Monument Footing Interval (ft.) Well Centralizer Depth(s) (ft.) NB 3.6 3.5 5.6 1.5 6.6 0.5 MATERIALS DATA Monument Footing Annular Seal 1506 -11.5 Annular Seal bentowite Pellets 18.7 -11.6 430 GOING Sand Pack 18:7 -11.6 Nutive Bottom Material 5 0.010" PNU Slotted Casing 22.0-14.9 I" PVU Well Casing ALLA Well Centralizers 400 Protective Cover SECTION VIEW (not to scale) NOTES: SITE: CARGELL SALT PROJ. NO: CRA 101 4980. T E.

WELL PERMIT NO:



WELL CONSTRUCTION DETAILS

BORING DESIGNATION: 13-14 WELL DESIGNATION INSTALLATION MW -2 DATE: 11/8/99 BY: To Langdow **DIMENSIONS** A Total Depth of Boring (ft.) B Borehole Diameter (in.) 2.5 **DEPTH/HEIGHT (FT)** C Well Casing Diameter (in.) ELEV. (FT MSL) D Well Casing Length (ft.) 17.1 E Well Casing Slotted Interval (ft.) 12 F Well Casing End Cap or Sump (ft.) O-1 G Annular Seal Interval (ft.), 1.2 10.00 //\\ H Annular Seal Interval (ft.) 2.0 0.2 4.81 I Sand Pack Interval (ft.) 14.0 1.0 9.0 J Bottom Material Interval (ft.) NA K Protective Cover Diameter (in.) L Monument Footing Interval (ft.) Well Centralizer Depth(s) (ft.) NA 2.1 500 4.2 60 <u>51 50</u> MATERIALS DATA Monument Footing Comen Annular Seal 4 17.2 -7.0 14 bentowite Pellets Annular Seal 12-3-21 Sand Pack #30 Gand 18-0 -8-0 **Bottom Material** AIIA 5 0.010" 700 Slotted Casing 18.0 -8.0 I" PVC Well Casing Well Centralizers NA Protective Cover SECTION VIEW (not to scale) CARGULL SULT NOTES: SITE: PROJ. NO: CRMIO 4887.4

WELL PERMIT NO:



WELL CONSTRUCTION DETAILS

BORING DESIGNATION: 13-15 WELL DESIGNATION INSTALLATION MW-3 DATE: 11/8/44 BY: 12-LIDWS down **DIMENSIONS** 18 A Total Depth of Boring (ft.) 2.5 B Borehole Diameter (in.) DEPTH/HEIGHT (FT) C Weil Casing Diameter (in.) 17.64 D Well Casing Length (ft.) E Well Casing Slotted Interval (ft.) F Well Casing End Cap or Sump (ft.) 0.1 G Annular Seal Interval (ft.) . 1.98 6 7.20 H Annular Seal Interval (ft.) 2.0 0.3 6.92 I Sand Pack Interval (ft.) 13.2 1.0 6.2 J Bottom Material interval (ft.) NA K Protective Cover Diameter (in.) L Monument Footing Interval (ft.) Well Centralizer Depth(s) (ft.) NA 2.8 4.8 5.8 MATERIALS DATA Monument Footing (PW) EX Annular Seal 4 12.8 bentoute Dellets Annular Seal 17.9 Sand Pack 18 MM **Bottom Material** 5 0.010 " 1216 Slotted Casing 19 I" PVL Well Casing NiA Well Centralizers 100 Protective Cover SECTION VIEW (not to scale)

SITE: CARGELL SALT

5033.9

PROJ. NO: CRA 101

WELL PERMIT NO:

NOTES:

APPENDIX D

Well Development Forms and Survey Results

WELL DEVELOPMENT FORMEINARSON, FOWLER & WATSON

Project No. (RIA IA)	Date: 1/1/2/99
Site Location: (avc.)\ St. +	Well: MW-1
Name: 7. Lanchon	Depth/Diameter: /8.37//"
Development Method: Sursu / Mil	Initial DTW: 3.75
Total Water Removed: 4.5 gal	Final DTW: 10.09
Water Contained? 55 cal. drum	Hydae#: Horiby #1, lole Durmer
importanti Estimate of specific capacity or recharge to well:	Conductiveta Drobe

Time Corn vol Sandshill Temp FC pH DTW Appendict Comments 1906	Time	F and the	Cons/Cile	Temp	l EC	рH	DTW	Appearance/Comments
9956 0 gal 3.75 TD = 18.37 (18.37-3.75) 0.04 gal/foot = 0.6 gal (18.38-3.75) 0.04 gal (18.38-3.75) 0.04 gal (18.38-3.75) 0.04 gal (18.38-3.75				19110	1	****		represente commenta
(18.37-3.75) 0.04 gal/bot = 0-6gal (020 0.5 \(\text{0.5}\) 5 19.1 179 8.78 Begin Surge/bai/ 1032 0.6 gal (18.57-3.75) 0.04 gal/bot = 0-6gal (1032 0.6 gal) (18.57 18.2 9.33 12.67 TD = 19.24 (1059 1.2 gal) 0.5 /4 18.1 441 8.30 15.9 TD = 18.04 170 ml susp. (1741 18.30 18.2 378 8.10 3.97 TD = 18.04 (18.57 2.7 gal) 18.2 389 8.10 15.48 TT = 18.04 (18.59 18.2 389 8.10 15.48 TT = 18.04 (18.59 18.2 389 8.10 15.48 TT = 18.04 (18.50 18.2 389 8.10 15.48 TT = 18.04 (18.50 18.48 TT = 18.04 (18.50 18.50 TT = 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (18.50 18.04 (1	Nac. la	1						70 - 19 20 1
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WELL DEVELOPMENT FORMEINARSON, FOWLER & WATSON

Project No. (2/4/01	Date: 11/16/99
Site Location: Caraill Salt	Well: mw-2
Name: 7. Langdon	Depth/Diameter: 47.76//"
Development Method: Surge / bail	Initial DTW: 5.22
Total Water Removed: 5.5	Final DTW: 6.03
Water Contained? 55 Sail . drum	Hydrot: Hor by #1. Cale Durane cond.
Important! Estimate of specific capacity or recharge to	well: Drobe

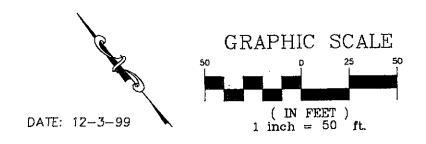
200020000000000000000000000000000000000					(6000000)		Appearance/Comments
Time		Sand/Silt (mi/1,000ml)		EC #5	ρH	DTW (TOC)	
1115	0					5.22	to = 16.63 1.50 Ct tug
							(17-5.22) x 0.04 sulpt= 0.5561
							Caging Vol., Start Sivie / pril
11:30	0.52		179	499	795		Casing Vol., Start Sure / buil
1745	1.5 gal	25/25	17.8	441	8.45	7.59	tarb > 384 (OCT Scale) 7 D = 16.79
1200	2.0 God		17.8	398	4.60	7.43	TD = 16.84 , 1t. Brwn
1215	2.5 gal	4/6	12.7	3-74	7.90	8.12	TD= 16-72, 1+. 6-00
13.3.2	3.0	7/13	13.8	368	8.47	8.53	TD = 16.27 1+ bruss
1252	3.5	4/6	17.7	334	8.68	7.40	TD= 16.19 1+ brwa
12,04	4.0	,	17.8	323	8.59	8.44	TD=16.07 H. brwa
1316	4.5	3/2	17.7	364	8.65	4.18	TD = 16.07 it. bown
1330	5.0	445	17.7	314	8.63	8.00	TD= 16.07 H. bruh
14 00	5.5	·	17.7	323	564	8.03	TD= 16.07, It hown -
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WELL DEVELOPMENT FORMEINARSON, FOWLER & WATSON

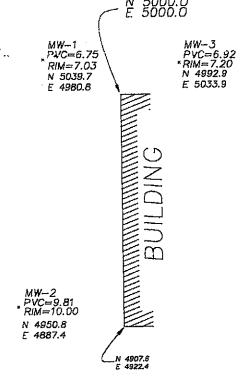
Project No. (RO 10)	Date: [[]]6 199
Site Location: Cureful Gult	Well: MW-3
Name: 7. Lung)m	Depth/Diameter: 12.64/11"
Development Method: Guy I Mail	Initial DTW: 4.34
Total Water Removed:	Final DTW: Drug
Water Contained? 55 City down	Hydac#: Hor. bu tel 10/2 Parmer
Important! Estimate of specific capacity or recharge to well	: 1 and meter

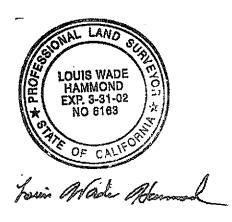
Time	Carro Voi	Sand/Silt	Temp	EC	рH	DTW	Appearance/Comments
		(mi/1.000ml)				(TOC)	
1543	0	•				4.34	TO= 17.49
1550	0.5/		12.5	470	965		17.49-4.34) x 0.049-1/EF=
							TD= 17.64 Water = 14. brun
1600	0.5 gen	40/40	17.5	435	9-45	11.5	TD= 17.60 ; Water = 11. brun
1620	1.0 get 2.0 gal		17.3	419	9.58	14.72	+D=17.49 H. Gran
1715	2. Ugal		17.0	369	9.69	MSG	TD = 17.79 17 brun
land	<i>M</i> 27. (8/4		70-	9.33	A	Durie well w/ benier
1755	2-59nd	8/9	17.2	330	7.55	ory	
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CLEMENT AVE.

BENCHMARK- CITY OF ALAMEDA DATUM EL=6.84 * SUBTRACT 3.41' FOR USC&GS DATUM





WELL SURVEY

CARGILL SALT DISPENSING DIVISION 2016 CLEMENT AVE. ALAMEDA, CA L. Wade Hammond

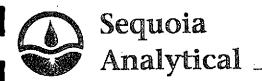
Licensed Land Surveyor No. 6163

36660 Newark Blvd. Suite D Newark, California 94560

> Tel:(510) 739-1600 Fax:(510) 739-1620

APPENDIX E

Certified Analytical Results - Groundwater Monitoring Wells



December 3, 1999

Robert Langdon Conor Pacific / EFW 2650 East Bayshore Rd. Palo Alto, CA 94303

RE: Cargill Salt/P911561

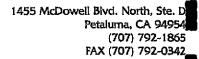
Dear Robert Langdon

Enclosed are the results of analyses for sample(s) received by the laboratory on November 19, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Michelle M. Portis Project Manager

CA ELAP Certificate Number I-2374



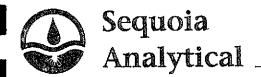


Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 11/16/99 Received: 11/19/99 Reported: 12/3/99

ANALYTICAL REPORT FOR P911561

Sample Description	T-1	Sec. 1 - 36-4-in	Ph-4- C1-4
Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	P911561-01	Water	11/16/99
MW-2	P911561-02	Water	11/16/99
MW-3	P911561-03	Water	11/16/99



Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

Sampled: 11/16/99 Received: 11/19/99 Reported: 12/3/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting		:	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
MW-1			P9115	6101			Water	
Bromodichloromethane	9110534	11/22/99	11/22/99	<u>01-01</u>	50.0	ND	ug/l	
Bromoform	911055 4	11/22/99	11/22/77		50.0	ND	ug, i	
Bromomethane	н		n		50.0	ND	н	
Carbon tetrachloride	31	н	n		50.0 50.0	ND	и	
Chlorobenzene	17	57	n		50.0	ND	Ħ	
Chloroethane	Ħ	tt	n		50.0	ND	Ħ	
2-Chloroethylvinyl ether	et	**	**		500	ND	Ħ	
Chloroform	tt	н	Ħ		50.0	ND	Ħ	
Chloromethane	н	ıt	Ħ		50.0	ND	et .	
Dibromochloromethane	н	n	n		50.0	ND	#	
1,2-Dibromoethane (EDB)	n	n	n		50.0	ND	nt .	
1,2-Dichlorobenzene	111	n	n		50.0	ND	#	
1,3-Dichlorobenzene	#	Ħ	51		50.0	ND	#	
1,4-Dichlorobenzene	Ħ	14	es		50.0	ND	n .	
Dichlorodifluoromethane	19	**	tt		50.0	ND	tt	
1,1-Dichloroethane	n	ts	Ħ		50.0	ND	ti	
1,2-Dichloroethane	H	н	п		50.0	ND	#	
1.1-Dichloroethene	Ħ	H	n		50.0	ND	#	
cis-1,2-Dichloroethene	t1	tt	n		50.0	ND		
trans-1,2-Dichloroethene	Ħ	es	19		50.0	ND	Ħ	
1,2-Dichloropropane	u	s t	Ħ		50.0	ND	н	
cis-1,3-Dichloropropene	tt	et	tr		50.0	ND	Ħ	
trans-1,3-Dichloropropene	n	rt.	Ħ		50.0	ND	n	
Freon 113	n	#t	**		50.0	ND	#	
Methylene chloride	tr	11	н		50.0	ND	n	
1,1,2,2-Tetrachloroethane	19	11	ŧī		50.0	ND	tt	
Tetrachloroethene	**	tř	Ħ		50.0	906	#	
1,1,2-Trichloroethane	Ħ	Ħ	ıt		50.0	ND	n	
1,1,1-Trichloroethane	н	Ħ	11		50.0	ND	e	
Trichloroethene	\$7	**	n		50.0	178	11	
Trichlorofluoromethane	t 7	41	11		50.0	ND		
Vinyl chloride	#1 	Ħ	11	.	50.0	ND	# 	
Surrogate: Bromochloromethane	B	я	n	65.0-135		100	%	
Surrogate: 1,4-Dichlorobutane	n	Ħ	n	65.0-135		116	Ħ	

Sequoia Analytical - Petaluma

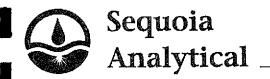




Conor Pacific / EFWProject:Cargill SaltSampled:11/16/992650 East Bayshore Rd.Project Number:CRA101Received:11/19/99Palo Alto, CA 94303Project Manager:Robert LangdonReported:12/3/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

MW-2 Bromodichloromethane Bromoform Bromomethane Carbon tetrachloride Chlorobenzene	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
Bromodichloromethane Bromoform Bromomethane Carbon tetrachloride		11 (00 (00						MOTOR.
Bromodichloromethane Bromoform Bromomethane Carbon tetrachloride		1.1.100.100	P9115	61-02			Water	
Bromomethane Carbon tetrachloride	n	11/22/99	11/22/99	<u> </u>	50.0	ND	ug/I	1
Carbon tetrachloride		n	11		50.0	ND	#	
	11	n	21		50.0	ND	41	
Chlarahavana	Ħ	n	n		50.0	ND		
Chioropenzene	н	n	tt		50.0	ND	Ħ	
Chloroethane	H	n	n		50.0	ND	D	i
2-Chloroethylvinyl ether	p		11		500	ND	#	
Chloroform	n	11	11		50.0	ND	Ħ	1
Chloromethane	Ħ	н ,	n		50.0	ND	Ħ	J
Dibromochloromethane	ti ti	n	n		50.0	ND	n	1
1,2-Dibromoethane (EDB)	a	**	at .		50.0	ND	n	
1,2-Dichlorobenzene	Ħ	n	st .		50.0 50.0	ND	Ħ	!
1,3-Dichlorobenzene	n	n	n		50.0	ND	H	
I,4-Dichlorobenzene	tt	#	Ħ		50.0	ND	#	·
Dichlorodifluoromethane	11	44	tt.		50.0	ND	ti	
1,1-Dichloroethane	Ħ	u	ш		50.0	ND	tt	
1,2-Dichloroethane	n	n	н		50.0	ND	π	ļ
1,1-Dichloroethene	Ħ	n	31		50.0	ND	n	
cis-1,2-Dichloroethene	Ħ	n	tf		50.0	ND	n	1
trans-1,2-Dichloroethene	Ħ	Ħ	n		50.0	ND	#	!
1,2-Dichloropropane	Ħ	ti	n		50.0	ND	Ħ	'
cis-1,3-Dichloropropene	Ħ	Ħ	H		50.0	ND	Ħ	
trans-1,3-Dichloropropene	tt	11	n		50.0	ND	н	
Freon 113	Ħ	n	t#		50.0	ND	n	
Methylene chloride .	æ	tt	11		50.0	ND	n	
1,1,2,2-Tetrachloroethane	m	#	ir		50.0	ND	#1	(
Tetrachloroethene	41	#	n		50.0	840	n	!
1,1,2-Trichloroethane	įt .	n	n		50.0	ND	#	1
1,1,1-Trichloroethane	Ħ	n	n		50.0	ND	tr	
Trichloroethene	Ħ	11	n		50.0	ND	n	
Trichlorofluoromethane	tt	tf .	tr .		50.0	ND	m	l
Vinyl chloride	1f	n	11		50.0	ND	Ħ	
Surrogate: Bromochloromethane	n	n	<u>n</u>	65.0-135		99.0	%	
Surrogate: 1,4-Dichlorobutane	n	n	a r	65.0-135		111	#	



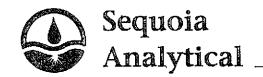
P	Conor Pacific / EFW	Project:	Cargill Salt	Sampled:	11/16/99
ı	2650 East Bayshore Rd.	Project Number:	CRA101	Received:	11/1 9/99
	Palo Alto, CA 94303	Project Manager:	Robert Langdon	Reported:	12/3/99

Volatile Organic Compounds by EPA Method 8021B Sequoia Analytical - Petaluma

- □		Batch	Date	Date	Surrogate	Reporting			
Α	nalyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
	MAAA A			W044 #	C4 00			****	
	IW-3 romodichloromethane	0110624	11 (00 (00	P9115	01-03	0.500).TTS	Water "	
_		9110534	11/22/99	11/22/99		0.500	ND	ug/l	
_	romoform	**	17	" "		0.500	ND	ti	
	romomethane	**	10	n		0.500	ND	n	
-	arbon tetrachloride	** #	**	# #		0.500	ND	"	
	hlorobenzene	"				0.500	ND		
-	hloroethane	#1	n	11		0.500	ND	##	
	-Chloroethylvinyl ether	Ħ	n	#		5.00	ND	9	
	hloroform	#	м	n		0.500	ND	41	
	hloromethane	n	н	21		0.500	ND	*1	
_ D	ibromochloromethane	Ħ	Ħ	28		0.500	ND	n	
1,	2-Dibromoethane (EDB)	n	a	Ħ		0.500	ND	#	
1.	2-Dichlorobenzene	n	er	**		0.500	ND	11	
1,	,3-Dichlorobenzene	Ħ	er	27		0.500	ND		
1.	4-Dichlorobenzene	n	Ħ	tt		0.500	ND	p	
m D	ichlorodifluoromethane	n	Ħ	Ħ		0.500	ND	Ħ	
1.	,1-Dichloroethane	Ħ	11	29		0.500	ND	n	
- 1,	2-Dichloroethane	n	Ħ	Ħ		0.500	ND	Ħ	
1.	I-Dichloroethene	n	Ħ	ts		0.500	ND	Ħ	
_ `	is-1,2-Dichloroethene	ti	#	P		0.500	ND	Ħ	
	ans-1,2-Dichloroethene	**	#	tt		0.500	ND	· #	
	2-Dichloropropane	11	Ħ	Ħ		0.500	ND	Ħ	
	is-1,3-Dichloropropene	11	n	H		0.500	ND	n	
	ans-1,3-Dichloropropene	37	n	н		0.500	ND	H	
_	reon 113	Ħ	n	sı		0,500	ND	Ħ	
	fethylene chloride	n	n	н	~	0.500	ND	n	
	1,2,2-Tetrachloroethane	Ħ	n	Ħ		0.500	ND	н	
	etrachloroethene	n	u	#		0.500	ND	` н	
_	1,2-Trichloroethane	n	n	#		0.500	ND	Ħ	
	1,1-Trichloroethane		н	Ħ		0.500	ND	11	
	richloroethene	n	Ħ	tt .		0.500	ND	#	
_	richlorofluoromethane	Ħ	19	n		0.500	ND	ti	
	inyl chloride	et	tr	. #		0.500	ND	Ħ	
	urrogate: Bromochloromethane	n	ti	11	65.0-135		101	%	
	urrogate: 1,4-Dichlorobutane	n	n	·#	65.0-135		125	7 0 #	
2 3	mirogane: 1,4-Dictionorounding				CC 1~0.CO		127		

Sequoia Analytical - Petaluma





Project: Project Number:

Cargill Salt

CRA101 Project Manager: Robert Langdon Sampled:

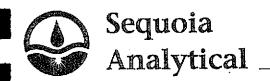
11/16/99

Received: 11/19/99 Reported: 12/3/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequois Analytical = Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
T										
Batch: 9110534	Date Prepa		<u>/99</u>		Extrac		_			
Blank	<u>9110534-BI</u>	<u>.K1</u>						•		
Bromodichloromethane	11/18/99			ND	ug/l	0.500				
Bromoform	#			ND	Ħ	0.500				
Bromomethane				ND	#1	0.500				
Carbon tetrachloride	п			ND	tt	0.500				1
Chlorobenzene	r.			ND	Ħ	0.500				
Chloroethane	n			ND	п	0.500				
2-Chloroethylvinyl ether	#			ND	# .	5.00				1
Chloroform	Ħ			ND	tt	0.500				1
Chioromethane	#			ND	t\$	0.500				_
Dibromochloromethane:	#			ND	Ħ	0.500				_
1,2-Dibromoethane (EDB)	et .			ND	Ħ	0.500				- 1
1,2-Dichlorobenzene	Ħ			ND	et .	0.500				
1,3-Dichlorobenzene	ıt			ND	ti	0.500				
1,4-Dichlorobenzene	n			ND	Ħ	0,500				•
Dichlorodifluoromethane	#			ND	tt	0.500				
1,1-Dichloroethane	Ħ			ND	Ħ	0.500				•
1,2-Dichloroethane	#			ND	Ħ	0.500				
1,1-Dichloroethene	n			ND	11	0.500				1
cis-1,2-Dichloroethene	Ħ			ND	#1	0.500				
trans-1,2-Dichloroethene	ti			ND	Ħ	0.500				_
1,2-Dichloropropane	ti			ND	Ħ	0.500				
cis-1,3-Dichloropropene	Ħ			ND	Ħ	0.500				
trans-1,3-Dichloropropene	ŧı			ND	Ħ	0.500				
Freon 113	п			ND	н	0.500				
Methylene chloride	ei			ND	Ħ	0.500				•
1,1,2,2-Tetrachloroethane	#			ND	#1	0.500				
Tetrachloroethene	e			ND	n	0.500				
1,1,2-Trichloroethane	n			ND	ti	0.500				
1,1,1-Trichloroethane	a			ND	н	0.500				
Trichloroethene	et .			ND	ta .	0.500				
Trichlorofluoromethane	**			ND	n	0.500				~
Vinyl chloride	Ħ			ND	n	0.500				
Surrogate: Bromochloromethane	Ħ	30.0	······	30.7	n	65.0-135	102			
Surrogate: 1,4-Dichlorobutane	n n	30.0		36.2	Ħ	65.0-135	121			•
Blank	9110534-BI	_K3				-				4
1,2,3-Trichloropropane	11/22/99			ND	ug/l	0.500				
Bromodichloromethane	#			ND	tt	0.500				_
Bromoform	#			ND	Ħ	0.500				_
Bromomethane	n			ND	Ħ	0.500				1
				• •						

Sequoia Analytical - Petaluma



Project: Cargill Salt
Project Number: CRA101
Project Manager: Robert Langdon

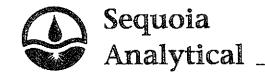
Sampled: 11/16/99 Received: 11/19/99 Reported: 12/3/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequola Analytical - Petaluma

	Date Spike Sample			QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	- %	Notes
Blank (continued)	9110534-BI	L K3				 -				
Carbon tetrachloride	11/22/99			ND	ng/l	0.500				
Chlorobenzene	H			ND	n	0.500				
Chloroethane	п			ND	n	0.500				
2-Chloroethylvinyl ether	n			ND	#	5.00				
Chloroform	Ħ			ND	ii .	0.500				
Chloromethane	n			ND	n	0.500				
Dibromochloromethane	Ħ			ND	TÎ.	0.500				
1,2-Dibromoethane (EDB)	11			ND	tr	0.500				
1,2-Dichlorobenzene	11.			ND	11	0.500				
1,3-Dichlorobenzene	Ħ			ND	Ħ	0.500				
1,4-Dichlorobenzene	n			ND	Ħ	0.500				
Dichlorodifluoromethane	Ħ			ND	17	0.500				
1,1-Dichloroethane	n			ND	q	0.500				
1,2-Dichloroethane	n			ND	n	0.500				
1,1-Dichloroethene	tt			ND	11	0.500				
cis-1,2-Dichloroethene	rs .			ND	Ħ	0.500				
trans-1,2-Dichloroethene	n			ND	#	0.500				
1,2-Dichloropropane	п			ND	ы	0.500				
cis-1,3-Dichloropropene	n			ND	n	0.500				
trans-1,3-Dichloropropene				ND	н	0.500				
Freon 113	#			ND	11	0.500				
Methylene chloride	tt			ND	Ħ	0.500				
1,1,2,2-Tetrachloroethane	n			ND	Ħ	0.500				
Tetrachloroethene	n			ND	Ħ	0.500				
1,1,2-Trichloroethane	н				n	0.500				
1,1,1-Trichloroethane	11			ND	tt	0.500				
Trichloroethene	 11			ND	tt	0.500				
				ND	# # # # # # # # # # # # # # # # # # #					
Trichlorofluoromethane	u u			ND	 !*	0.500				
Vinyl chloride				ND		0.500	107			
Surrogate: Bromochloromethane	"	30.0		31.7	# #	65.0-135	106			
Surrogate: 1,4-Dichlorobutane	,,	30.0		36.0	п	65.0-135	120			
LCS	9110534-B	C1								
Chlorobenzene	11/18/99	10.0		9.98	ug/l	65.0-135	99.8			
1,1-Dichloroethene	11/16/99	10.0		9.96 9.72	n n≅\≀	65.0-135	97.2			
Trichloroethene _ Trichloroethene	n			9.72 10.4	17	65.0-135	104			
Surrogate: Bromochloromethane	n	10.0		29.6	#	65.0-135	98.7			
	n	30.0			,,	65.0-135				
Surrogate: 1,4-Dichlorobutane		30.0		29.7	**	03.0-133	99.0			
LCS	9110534-B	S3								
1,2,3-Trichloropropane	11/22/99	10.0		10.2	ug/l	65.0-135	102			

Sequoia Analytical - Petaluma





Project: Cargill Salt
Project Number: CRA101

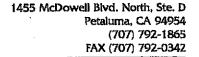
Project Number: CRA101
Project Manager: Robert Langdon

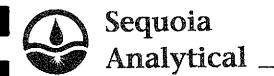
Sampled: 11/16/99 Received: 11/19/99

Manager: Robert Langdon Reported: 12/3/99

Volatile Organic Compounds by EPA Method 8021B/Quality Control Sequola Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
LCS (continued)	9110534-BS	<u>S3</u>								`
Chlorobenzene	11/22/99	10.0		9.42	ug/l	65.0-135	94.2			
1,1-Dichloroethene	श	10.0		9.52	#	65.0-135				,
Trichloroethene	Ħ	10.0		9.62	11	65.0-135				•
Surrogate: Bromochloromethane	H	30.0		28.9	11	65.0-135	96.3			
Surrogate: 1,4-Dichlorobutane	n	30.0		29.6	Ħ	65.0-135	98.7			7
Matrix Spike	9110534-M	(S1 P	911505-01							,
Chlorobenzene	11/18/99	10.0	ND	9.56	ug/l	65.0-135	95.6			
1,1-Dichloroethene	n	10.0	ND	9.57	#	65.0-135				'
Trichloroethene	n	10.0	ND	9.23	tt .	65.0-135				'
Surrogate: Bromochloromethane	*** #	30.0		28.6	ct	65.0-135	95.3			
Surrogate: 1,4-Dichlorobutane	tt	30.0		29.0	tt	65.0-135	96.7			
Matrix Spike Dup	9110534-M	ISD1 P	911505 <u>-01</u>							
Chlorobenzene	11/19/99	10.0	ND	9.56	ug/l	65.0-135	95.6	20.0	0	
1,1-Dichloroethene	Ħ	10.0	ND	10.3	u	65.0-135		20.0	7.35	
Trichloroethene	11	10.0	ND	9.95	n	65.0-135		20.0	7.51	
Surrogate: Bromochloromethane	tt .	30.0		29.1	Ħ	65.0-135	97.0			
Surrogate: 1,4-Dichlorobutane	Ħ	30.0		30.6	t#	65.0-135	102			





Conor Pacific / EFW Project: 2650 East Bayshore Rd. Project Number: CRA101 Palo Alto, CA 94303 Project Manager: Robert Langdon

Sampled: 11/16/99 Received: 11/19/99

Reported: 12/3/99

Notes and Definitions

Cargill Salt

Note

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

Sample results reported on a dry weight basis

Recov. Recovery

dry

RPD Relative Percent Difference

P911561	
EINARSON / /// V	
FOWLER & WATSON	

CHAIN OF CUSTODY

Page ____ of ___

CONTRACT LABORATORY: SCA- MAIL							TUR	N-AF	lOUI	ND TIE	NE:	40	M	land								
Project No. Site Name						, 1		U					Analy	ses				• •	•			
CRA	lOI		$-\int \int_{-1}^{\infty} t$	argill Salt.																		
				(signature)							$\dashv J / / / / / / / / /$											
Robert Langdon				the last the						 										1		
(COD	W 1		7							SOZIR SOZIR												
Sample	Sample Lab Collection I.D. Date Time		ection	Matrix	Depth	Container	Inform	ormation				/ /	/ /			Γ,	/					
I.D.				Бори.	Type/Volume	Qnty	Filt	Prsrv.			\perp	\bot				Remarks						
NW-1		11 1690	1736	120		VOVA/HOW	13	N	Hel		P	3715	61-	0/			XI-1	Plas	1			
MW 2			1446	't		•	3		T				-0	7			Veno	V S	010			
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