

Crystal Geyser Bottling Plant Draft EIR Public Comments

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Subject: Crystal Geyser Draft EIR
Sent: 2/26/17
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Hydrology

Water Contaminants

Siskiyou County Land Use policy 41.6 (page 4.9-5 of the DEIR) states,

“There shall be a demonstration to the satisfaction of the Siskiyou County Health Department and/or the California Regional Water Quality Control Board that sewage disposal from all proposed development will not contaminate groundwater.”

Phthalate Contamination

The draft EIR Hydrology section does not contain an assessment of the hazards of polyethylene terephthalate (PET) plastic, although it is mentioned in the Air Quality section. In addition to the PET plastic to be used by Crystal Geyser (CG), phthalate plastic bottles were also used by Dannon/Coca Cola. I brought up the issue of potential aquifer contamination by phthalates in my previous letter (Appendix_B_21_Comments) and it should have been addressed. There is a concern for potential contamination of local aquifers through use of the leach field for disposal of Industrial Process and Industrial Rinse wastewater. Phthalates are a concern as endocrine disrupters, as is antimony that is known to leach from PET plastic (Sax, Leonard. Polyethylene Terephthalate May Yield Endocrine Disrupters. Environ. Health Perspect. 2010 April, 188(4), 445-448; and the following link).

<http://www.dailymail.co.uk/health/article-379624/The-poison-lurking-plastic-water-bottle.html>

The link below documents concerns of Trout Unlimited and the Upper Sacramento, McCloud, Lower Pitt Rivers Regional Water Management Group about phthalates beneath the Project Site discharge facility in 2012. The letter from Trout Unlimited states in part,

“The waste discharge authorized in the EO is spread into a leach field (a land discharge) that drains directly into a drinking water aquifer. That aquifer has been shown, by the contract monitoring of DWNA, to have been impacted with DEHP, or Bis (2-ethylhexyl) phthalate. DEHP has a drinking water MCL of 6 ppb as established by the USEPA; a concentration of 250 ppb was observed in a monitoring well beneath the site.”

This link also contains the actual data from Basic Labs documenting this claim.

http://www.waterboards.ca.gov/public_notices/petitions/water_quality/docs/petitions/a2396petition.pdf

This data is not presented in the DEIR. Where is this 4th quarter 2012 Basic Labs data?

Antimony Contamination

Appendix R-11 documents numerous antimony readings above the MCL in the monitoring wells of the Project Site in 2004 and 2005 (pages 115, 119, and 123: 0.3 µg/l for MW-1, MW-2, and MW-3; pages 169, 173 and 177: 0.8 µg/l, 0.2 µg/l, and 0.2 µg/l for MW-1, MW-2, and MW-3, respectively; MCL 0.1 µg/l). Table 4.8-2 on page 4.8-20 which summarizes the Dannon IS/MND indicates that no antimony was detected and ignores this data.

Water Quality Testing

Appendix P (Table 3) shows huge gaps in water monitoring, with no data presented between 1998 until 2014. If additional data is available, it should be in the EIR. If it is not available, this demonstrates utter inadequacy of previous water quality testing of the leach field area.

Recent History of Water Contamination by Crystal Geyser

Crystal Geyser has a history of contaminating local aquifers as in the recent case in Olancho, CA. This is an area near Owens Lake. It is important for fish and wildlife habitat and is similar to this region in that regard.

Documentation for this can be found in a Lahontan Regional Water Quality Control Board letter to CG Roxane about the issues dated 7/24/14 and an email from the California Water Resources Control Board to CG Roxane and Geosyntec on 10/26/15:

http://www.swrcb.ca.gov/lahontan/board_decisions/adopted_orders/2014/docs/63.pdf

http://www.waterboards.ca.gov/lahontan/water_issues/programs/enforcement/docs/crystal_geyser/phase2sireport_comments.pdf

The first link describes the water board's inspection of the Olancho facility, documenting concerns about multiple holes and tears in the arsenic pond liner and higher than MCL concentrations of a number of pollutants including very high levels of arsenic in the compromised arsenic pond.

This second link from over a year later states,

“The Phase 2 investigation results document groundwater pollution (concentrations exceeding their respective maximum contaminant levels [MCLs] for drinking water) from

the following constituents of concern (COCs): Antimony, Arsenic, Barium, Lead, pH, Conductivity, Sulfate, Total Chlorine, and Total Dissolved Solids (TDS). Additionally, the results indicate groundwater degradation (concentrations below MCLs but exceeding apparent background levels) from Chromium, Copper, Molybdenum, Vanadium and Zinc, as well as Alkalinity, Chloride, Phosphate, Phosphorous, Sodium and other constituents. Further investigation is necessary to determine the full lateral and vertical extent of groundwater pollution and degradation at the site, determine the extent of adverse impacts to site soils and soil vapor, and investigate the potential for impacts to deeper groundwater resources at and near the Facility.”

The Water Board also noted that the test used for antimony had a lower detection limit of 15 µg/l, which is above the MCL of 6 µg/l, potentially allowing results of none detected when the amount was actually over the MCL.

Problems With Gateway Neighborhood Wells

The DEIR ignores Gateway Neighborhood (the residential neighborhood surrounding the GC plant) data on water levels and quality in surrounding residential wells. During the period of Dannon/Coca Cola water extraction there were problems with drops in water levels, muddy wells, and even wells going dry. The post-extraction period saw these wells recover, even though this period was during a severe multi-year drought. This issue was brought up in my initial letter but was not addressed. This evidence does not prove that the one caused the other, but is strong evidence of a potential problem of the impact of CG water extraction on nearby residential wells.

Questionable Hydrology Studies

SECOR Tracer Studies

http://www.co.siskiyou.ca.us/sites/default/files/docs/PLN-20170210_AppendixP_Secor1998ReportTracerInvestigation.pdf

The SECOR 1998 tracer studies, finally publicly available earlier this year, indicate a number of issues. The first tracer test (Tracer Test #1) was started on June 8, 1998 and consisted of 500 gallons of spring water with 100 ppb fluorescein introduced into DEX-1 and monitored at 5 Big Springs monitoring stations. Using a fluorimeter with a detection level of 0.1 ppb and taking samples over a 4-day period, no increase in fluorescence over background level was detected at any of the stations.

Presumably because they didn't like the first test results, a Tracer Test #2 was run on June 10 1998 using **5000 times** (50 ppm) the concentration of fluorescein. This test showed fluorescence increases in 3 of 5 stations of approximately 6-8 times background a day later.

Note that all this testing was done on Dex-1, not Dex-6, the proposed CG production well.

Chemical composition analysis of the water is the only data indicating a connection

between Big Springs and DEX-6. DEX-1 is claimed to be “very similar” to Big Springs and DEX-6 in chemical composition and isotope determined age. However, there are no negative controls in these studies; i.e. chemical composition and age of other unconnected Mt. Shasta aquifers. It would not be surprising to find that these are indistinguishable from connected aquifers based only on their chemistry and age.

SECOR Well Drawdown Data

http://www.co.siskiyou.ca.us/sites/default/files/docs/PLN-20170210_AppendixP_HydrogeologicReportSECOR1998.pdf

Pumping from DEX-6 was performed and water drawdown was studied in other wells including DEX-1 to establish a physical connection between these wells. Although there is a steady drawdown in DEX-1 following pumping of DEX-6, there again were no negative controls such as water levels in DEX-1 prior to DEX-6 pumping.

Bottle Rinse Water

An explanation is needed regarding “bottle rinse water” and the “bottle rinsing process”. Since the preformed PET bottles will be blown with air rather than rinsed, what is this bottle rinsing water and why is its production necessary? This is not explained in the draft EIR or on the CG website. I brought this up in my previous letter (Appendix_B_21_Comments) and this should have already been addressed.

Hydrology Mitigation

A thorough analysis of phthalates and antimony as well as other possible contaminants in the aquifer under and near the leach field should be done prior to commencement of CG operations to determine a baseline. After commencement of CG operations, the monitoring wells, Big Springs Creek and DEX-6 should be monitored for these substances going forward on at least a quarterly basis. This should be done at CG’s expense and this information should be made easily publically available (on the internet) one month after the water sampling is performed.

A monitoring program of water levels and potential contaminants of any Gateway Neighborhood residential well whose owner(s)/user(s) desire to participate should be set up prior to commencement of CG operations so that baseline levels can be determined. These parameters should then be monitored going forward. Evaluation of the above should be at least quarterly with all expenses to be paid by CG.

Given evidence of phthalate contamination following Dannon/Coca Cola water extraction at the project site, CG’s history of contamination of local aquifers elsewhere in California, and the sketchy hydrology data, **Wastewater Treatment Option 1 should be chosen for this project.**

Aesthetics

The city of Mt. Shasta is planning a night sky ordinance. Although this ordinance has not yet been approved, it is vital to this region to keep as much of its natural character as possible, including the splendor of the night sky. According to the International Dark Sky Association, 99% of the public cannot experience a natural night where they live. The night sky in some of the surrounding area is in pretty good shape, as I know from my nighttime nature photography. Rather than letting it slip further as the DEIR would do, let's try to keep it at or below the current level.

Aesthetics Mitigation

Restrict all CG activities to daytime hours.

Air Quality

As noted in section 3.3.1 and on page 4.9-2 of the DEIR, there is a Jehovah's Witnesses church within 375 feet of the automobile entrance to the CG plant. Page 4.2-19 indicates a cancer risk (MICR) at the caretaker's residence of 14.9, above the CEQA significance level of >10. Because of this the DEIR requires that occupancy of this residence be restricted to 40 hours per week and that a HEPA and/or charcoal activated air filter be installed.

Yet the Jehovah's church, which includes a daycare center and is on the same side of the plant as the caretaker's residence, is not mentioned in the Air Quality section at all. As noted on page 4.2-4, children are more susceptible to respiratory distress and other air quality related health problems. Although this church appears to be Sensitive Receptor #10 (Figure 4.2-1), there is no mention of it in the document.

In addition, Table 4.2-5 (page 4.2-19) indicates that the highest existing residential receptor (100 feet north of the Ski Village Drive property line) has an MICR cancer risk of 8.7 which is uncomfortably close to the CEQA threshold of >10. Page 17 of the Sierra Research High Risk Assessment section of Appendix M indicates that this value is "well below" the action threshold. It is clearly not the case that 8.7 is well below 10. Since these MICR values are only estimates, this underscores the need for a monitoring system to determine what the values actually are as the project proceeds. Page 4.2-19 states that these values will be substantially less than modeled. Let's see if this is actually the case.

Table 4.2-1 (page 4.2-2) should list the actual values for Siskiyou County air pollutants, rather than just the attainment/non attainment status. Values that perhaps are close to the limit need to be out in the open where we can see them.

Air Quality Mitigation

Require CG to frequently monitor air quality at the identified sensitive sites and make the results publicly available on the Internet within a week of data collection.

Biological Resources

Page 4.3-1, section “Project Site” states that the water quality of Big Springs Creek “is considered excellent”. This is certainly the general consensus around town, but where is the evidence for it?

Greenhouse Gases and Climate Change

There is no mention of the greenhouse gases associated with the manufacture of the plastic preforms to be used as the receptacles for CG products. Although these greenhouse gases will not be produced in Siskiyou County, they contribute to an overall global greenhouse gas crisis.

According to the USEPA, one ounce of CO₂ is emitted for each ounce of PET produced.

https://alumni.stanford.edu/get/page/magazine/article/?article_id=30619

<https://www3.epa.gov/epawaste/conservation/tools/warm/pdfs/Plastics.pdf>

The greenhouse gas emissions from the project are listed as “significant and unavoidable” (page 4.6-17). This statement ignores the fact that this significant effect is avoidable if the project is scaled back or not allowed at all.

Greenhouse Gases Mitigation

Greenhouse gas emissions from the production of PET bottles needs to be included in the EIR.

Noise and Vibration

Page 4.10-27, second paragraph, assumes that people who currently have trouble with waking during the passage of heavy trucks would sleep with their windows closed. I doubt this is the case. With daytime summer temperatures sometimes topping 100 degrees F and since most residences are without air conditioning, this seems unlikely.

Page 4.10-27 also states,

“Even with a worst-case estimate of building façade noise exposure of 20 dB with windows closed, the resulting worst-case interior noise level in the nearest residence to Mt. Shasta Boulevard would be 59 dB SEL during passby of heavy trucks... According to the ANSI methodology, a single passby of a heavy truck during nighttime hours for which an interior SEL of 48 to 59 dB is registered within a sleeping room would result in a probability of awakening of 0.9 to 1.4 percent”.

The probability of awakening is taken from a range with the actual figure of 59 db at the very top of the range. What is the probability of awakening after a single 60 to 70 dB passby? Also, this probability is for a single passby. With 100 trips per day, the 8-hour

nighttime period would have 33 truck trips on average. Therefore the probability of awakening is at least (because of the previously mentioned top of the range issue) $33 \times 1.4\%$ or 46%. This is surely significant.

Page 4.10-27 also states that heavy trucks currently use Mt. Shasta Blvd. at night. Is there any data for this? How many on average? How loud are they?

Impact Table 4.10-3 (Page 4.10-24): shows no mitigation available for operational traffic noise. Really? What about a smaller operation with fewer truck trips?

Noise and Vibration Mitigation

ALL CG activities should be limited to daylight hours. It goes without saying that the nearby residents will sleep better without large trucks rumbling in and out during the night. Traffic and operational noise are already significant in the sensitive areas and every effort should be made to prevent increases, particularly at night. In a meeting with residents in March 2014, CG promised reasonable operation hours. Now it's going to be 24/7. What happened?

Transportation and Circulation

Page 4.11-6, City of Mt. Shasta General Plan Circulation Element states,

“Although the project site is not within the City’s jurisdiction, relevant local goals and polices are listed below as they relate to adjacent and cumulative development in the City.”

This does not adequately state the actual situation. This sentence should read,

*“Although the project site is not within the City’s jurisdiction, **it is within the City’s sphere of influence and the CG truck traffic routes are within the City’s jurisdiction.**”*

Page 4.11-19, first paragraph: This section concludes that there would be a less than significant impact on bicycle and pedestrian facilities. As a pedestrian and bicyclist myself, it is hard to conclude anything other than the increased large truck traffic **WILL** have a significant effect on pedestrian and bicycle facilities. Getting hit by a car is bad enough, but getting hit by a truck is catastrophic.

Table 4.11-4 states that truck trips were converted to passenger car equivalents by multiplying by 1.5. Is a large truck only worth 1½ cars? This seems quite an underestimation. The link below documents the City of Vallejo, CA standard conversions that multiply by a factor of 2.0 to 3.0 depending on the number of axles of the trucks.

<http://www.ci.vallejo.ca.us/common/pages/DisplayFile.aspx?itemId=40753>

Nowhere is the DEIR does it mention the size of or number of axles of these trucks. Surely CG has estimates of this information. The word “truck” can designate anything from a pickup truck to an absolute monster. The Noise and Vibration section describes

“heavy” trucks. What does this mean?

Appendix U, Section 5.1 reads in part,

*“The trip generation calculations are based on the number of employees and shown in **Table 4**. They are based on trip generation rates for light industrial uses (Land Use Code 110) taken from the Institute of Transportation Engineer’s (ITE) Trip Generation Manual, 9th Edition.”*

This does not make sense and needs to be clarified. To base trip generation rates of employee travel from home to work and back on number of employees makes perfect sense, but the number of employees has nothing to do with the number of trucks to be used in transporting CG products, unless most of these 60 employees are actually driving the trucks. The second sentence implies that the trip generation rates for the trucks were simply based on “light industrial use” trip rates and not from an actual estimate from CG. Please clarify.

Events at Mt. Shasta City Park are not addressed. These presumably result in much higher than average traffic volume of all kinds- cars, bicycles and pedestrians.

Nowhere in this section does it address winter driving conditions. This needs to be thoroughly considered, particularly in regard to the truck traffic.

Transportation Mitigation

CG should be required to refrain from engaging in trucking in or out of the plant during events at nearby Mt. Shasta City Park to protect public safety. As for the Noise and Vibrations section, **no trucking should be allowed at night**.

Other CEQA Considerations

Page 5-8: DeGray Zone Change. Second sentence reads, “The project site is on the west side of I-5 in the City’s sphere of influence (SOI) approximately 2 miles northwest of the project site.” This is confusing. It should read, “The **DeGray** project site is on the west side of I-5 in the City’s sphere of influence (SOI) approximately 2 miles northwest of the **CGWC** project site.”

This DeGray project appears to be a 20-acre project according to the following link, not 5 acres as stated on page 5-8.

https://www.co.siskiyou.ca.us/sites/default/files/PLN-20160629_DegrayNOI_MND_ZoneChange-TentativeParcelMapZ1506_TPM1504.pdf

Respectfully submitted,

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