May 23, 2014

Mr. Michael Rogers
Hanson Aggregates West
13550 Live Oak Avenue
Irwindale, California 91706-1318

Subject: **2013 Annual Consumer Confidence Report**
Hanson Aggregates Irwindale Quarry Site
13550 Live Oak Avenue
Irwindale, California
DPH Water System No. 1900018
AMEC Project 4953-14-0113

Dear Mr. Rogers:

AMEC Environment & Infrastructure, Inc. (AMEC) has prepared this 2013 Annual Consumer Confidence Report (Water Quality Report) for Hanson Aggregates Irwindale Quarry Site. This report is required by the Title 22 California Code of Regulations, Sections 64480-64483. Hanson Aggregates is required to provide information on concentrations of microbiological contaminants, minerals, physical agents, inorganic chemicals and organic chemicals in its water supply. This report provides specific information obtained during the 2013 calendar year that is summarized in the attached tables.

At least one copy should be posted in a public location at the Hanson Aggregates facility by **July 1, 2014**. No later than **October 1, 2014**, the fully-completed certification form (Attachment 7) should be sent to the Los Angeles County Department of Public Health for their records.

We appreciate working with you on this project. If you have any questions or require further assistance, please call Mr. Matt Fraychineaud at (323) 889-5310.

Sincerely,

AMEC Environment & Infrastructure, Inc.

Ron Lopez
Senior Engineer

Matt Fraychineaud, P.G. 7144
Associate Geologist

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(2 copies submitted)

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2013 Consumer Confidence Report

Hanson Aggregates Irwindale Quarry Site
13550 Live Oak Avenue
Irwindale, California
DPH Water System No. 1900018

Hanson Aggregates is pleased to submit this annual consumer confidence (or water quality) report for 2013. This report is designed to inform you about the quality of your drinking water. We test the drinking water quality for many constituents as required by state and federal regulations. This report presents the results of our monitoring for the period of January 1 – December 31, 2013 and may include earlier monitoring data. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

As shown in the attached tables, except for one monthly total residual chlorine result, the suspect constituents for water samples collected at the Hanson Aggregates site are below their respective drinking water maximum contaminant levels (where applicable). Although bottled water is provided at the site for drinking purposes, the water system is still sampled and tested as required by California Department of Public Health guidelines.

If you have any questions regarding this Annual Consumer Confidence Report, please contact Mr. Michael Rogers at (626) 856-6757.

(Este informe contiene informacion muy importante sobre su agua potable. Traduzcalo o hable con alguien que lo entienda bien).

Source of Water Supply

Water delivered to the Hanson Aggregates water system comes from the following sources:

- Well No. 409

Water is a Valuable Natural Resource

Definitions

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the public health goals (PHGs) and maximum contaminant level goals (MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the United States Environmental Protection Agency (US EPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency (Cal EPA).

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standards (PDWS): MCLs or MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Variances and Exemptions: Department permission to exceed and MCL or not comply with a treatment technique under certain conditions.

ND: Not detectable at testing limit.

ppm: Parts per million or milligrams per liter (mg/L).

ppb: Parts per billion or micrograms per liter (µg/L).

ppt: Parts per trillion or nanograms per liter (ng/L).

ppq: Parts per quadrillion or picoograms per liter (pg/L).

pCi/L: Picocuries per liter (a measure of radiation).

Drinking Water Contaminants

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal or human activities. The presence of contaminants does not necessarily indicate that drinking water poses a health risk.

Contaminants that may be present in source water include:

Microbial Contaminants – Viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Routine water samples are collected monthly for bacteriological analysis.

Cryptosporidium – A parasite commonly found in lakes and rivers, especially when the water is contaminated with sewage and animal wastes. Cryptosporidium is very resistant to disinfection, and even a well-operated water treatment system cannot ensure that drinking water will be completely free of this parasite. Current EPA drinking water standards were not explicitly designed to assure the removal or killing of Cryptosporidium. Many large water systems already voluntarily take actions for greater control of Cryptosporidium and other microbial contaminants. In 2001, the water systems serving the majority of the United States population (those relying on a surface water source, such as a river, and serving more than 10,000 people) a new EPA standard was set that strengthened control over microbial contaminants, including Cryptosporidium. The EPA continues to conduct research on microbial contaminants which will be used for determining priorities for the drinking water program, including setting future standards and reevaluating existing standards.

Cryptosporidium has caused several large waterborne disease outbreaks of gastrointestinal illness, with symptoms that include diarrhea, nausea, and/or stomach cramps. People with severely weakened immune systems (that is, severely immunocompromised) are likely to have more severe and more persistent symptoms than healthy individuals. Moreover, Cryptosporidium has been a contributing cause of death in some immunocompromised people. Individuals who are severely immunocompromised may include those who are infected with HIV/AIDS, cancer and transplant patients taking immunosuppressive drugs, and people born with a weakened immune system. (*Centers for Disease Control and Prevention, 1995*)

Pesticides and Herbicides – Pesticides and herbicides may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Inorganic Contaminants – Such as salts and metals, that can be naturally-occurring or can result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Organic Chemical Contaminants – Synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, can also come from gas stations, urban stormwater runoff, agricultural application and septic systems.

Radioactive Contaminants – Radioactive contaminants can be naturally-occurring or be the result of oil and gas production and mining activities.

Minerals – Minerals can affect the taste, odor or appearance of drinking water.

Disinfection Byproducts – Total trihalomethanes (TTHM) and haloacetic acids (HAA5) are byproducts of the disinfection process and suspected human carcinogens. Persons consuming water containing TTHM in excess of the MCL over several years may experience liver, kidney or central nervous system problems. An increased risk of getting cancer is also attributed to TTHM-impacted water above the MCL. The U.S. EPA MCL for TTHM is 80 parts per billion (ppb) while the MCL for HAA5 is 60 ppb.

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Department of Public Health (DPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. DPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. U.S. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Summary Information for Contaminants Exceeding an MCL, MRDL, AL or Violation of Any TT or Monitoring and Reporting Requirements

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
Total residual chlorine result for December (63.0 mg/L) exceeded the MRDL and MRDLG values.	The water tank flow switch for the chlorine pump was discovered to have become stuck in the open position which resulted in an increased flow of chlorine into the water tank.	Approximately 10-14 days.	The flow switch was inspected and replaced by the site California certified water system operator.	Possible irritation to eyes and nose and stomach discomfort.

Prepared by AMEC Environment & Infrastructure, Inc.

2013 WATER QUALITY TABLE - HANSON AGGREGATES RESULTS

TABLE 1 - SAMPLING RESULTS FOR MICROBIOLOGICAL CONTAMINANTS

MICROBIOLOGICAL CONTAMINANTS	UNIT	MAXIMUM CONTAMINANT LEVEL	PHG (MCLG)	LEVEL DETECTED	RANGE OF DETECTION	DATE SAMPLED	TYPICAL ORIGINS
Total Coliform and *E. coli* Bacteria	MPN/100 mL	More Than One Sample in a Month					Naturally present in the environment. Human and animal fecal waste.
No. of Routine Samples Collected		12	0	<1.1 (<1.1)		Jan - Dec 2013	
No. of Routine Samples Positive		0	(0)				
No. of Repeat Samples Collected		0	(0)				
No. of Repeat Samples Positive		0	(0)				

TABLE 2 - SAMPLING RESULTS FOR LEAD AND COPPER

PARAMETER	UNIT	MAXIMUM CONTAMINANT LEVEL	PHG (MCLG)	LEVEL DETECTED[a]	RANGE OF DETECTION	DATE SAMPLED	TYPICAL ORIGINS
Copper	mg/L	1.3 (AL)	0.3	0.237	0.0507-0.265	Sept-12	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	µg/L	15 (AL)	0.2	8.03	1.04-11.6	Sept-12	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

TABLE 3 - SAMPLING RESULTS FOR SODIUM AND HARDNESS

PARAMETER	UNIT	MAXIMUM CONTAMINANT LEVEL	PHG (MCLG)	LEVEL DETECTED	RANGE OF DETECTIONS	DATE SAMPLED	TYPICAL ORIGINS
Sodium	mg/L	No Standard	N/A	16.05	15.5-16.6	Feb/Aug-13	Salt present in the water and is generally naturally occurring
Hardness (as CaCo3)	mg/L	No Standard	N/A	194	188-200	Feb/Aug-13	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

[a] 90th percentile level of test results from five locations at Hanson

TABLE 4 - SAMPLING RESULTS FOR CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

PARAMETER	UNIT	MAXIMUM CONTAMINANT LEVEL	PHG (MCLG)	LEVEL DETECTED	RANGE OF DETECTIONS	DATE SAMPLED	TYPICAL ORIGINS
Gross Alpha Particle Activity	pCi/L	15	(0)	2.40J	—	Aug-13	Erosion of natural deposits
Combined Radium 226 & 228	pCi/L	5	(0)	<1.0	—	Aug-13	Erosion of natural deposits
Uranium	pCi/L	20	0.43	2.05	—	Aug-13	Erosion of natural deposits
Perchlorate	µg/L	6	6	<2.0	—	Aug-13	Industrial discharges
Aluminum	mg/L	1	0.6	<0.05	—	Feb/Aug-13	Erosion of natural deposits
Barium	mg/L	1	2	0.114	—	Aug-13	Erosion of natural deposits; industrial discharges
Cadmium	µg/L	5	0.04	<5	—	Feb/Aug-13	Erosion of natural deposits, industrial discharges
Chlorine (Total Residual)	mg/L	[4.0][b]	[4][c]	0.623	<0.1-2.42	Jan – Nov 2013[d]	By-product of drinking water chlorination
Chlorine (Total Residual)	mg/L	[4.0][b]	[4][c]	63.0*	—	Dec 2013	By-product of drinking water chlorination
Chromium	µg/L	50	(100)	<10	—	Feb/Aug-13	Erosion of natural deposits; industrial discharges
Fluoride	mg/L	2	1	0.1	<0.1-0.100J	Feb/Aug-13	Erosion of natural deposits
Nitrate (as N)	mg/L	45	45	3.09	1.30-6.51	Feb/Aug-13	Leaching from fertilizer use
Nitrite (as N)	mg/L	1	1	<0.01	—	Feb/Aug-13	Leaching from fertilizer use
Nickel	µg/L	100	12	<10	—	Feb/Aug-13	Erosion of natural deposits, industrial discharges
Aluminum	mg/L	1	0.6	<0.05	—	Feb/Aug-13	Erosion of natural deposits
Trihalomethanes	ug/L	80	N/A	11.05	10.5-11.6	Aug-13	By-product of drinking water chlorination
Haloacetic Acids	ug/L	60	N/A	1.9	1.3-2.5	Aug-13	By-product of drinking water chlorination
Benzene	µg/L	1	0.15	<0.25	—	Feb/Aug-13	Leaching from gas tanks and landfills
Tetrachloroethene (PCE)	µg/L	5	0.06	<0.25	—	Feb/Aug-13	Discharge from factories-dry cleaners-auto shops
Trichloroethene (TCE)	µg/L	5	1.7	<0.25	—	Feb/Aug-13	Discharge from degreasing sites and factories
Vinyl Chloride	ng/L	500	50	<250	—	Feb/Aug-13	Biodegradation product of PCE and TCE

[b] EPA Maximum Residual Disinfectant Level
[c] Maximum Residual Disinfectant Level Goal
[d] December 2013 was not included due to a chlorination system malfunction.

* See table on Page 7 of this report.

TABLE 5 - SAMPLING RESULTS FOR CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
PARAMETER	UNIT	MAXIMUM CONTAMINANT LEVEL	LEVEL DETECTED	RANGE OF DETECTIONS	DATE SAMPLED	TYPICAL ORIGINS
Calcium	mg/L	No Standard	57.4	55.1-59.7	Feb/Aug-13	Erosion of natural deposits
Chloride	mg/L	500	18.6	15.7-21.6	Feb/Aug-13	Runoff/leaching from natural deposits
Foaming Agents (MBAS)	µg/L	500	<30	—	Feb/Aug-13	Municipal/industrial waste discharges
Iron	µg/L	300	<30	—	Feb/Aug-13	Erosion of natural deposits
Magnesium	mg/L	No Standard	11.25	10.5-12.0	Feb/Aug-13	Erosion of natural deposits
Manganese	µg/L	50	<5	—	Feb/Aug-13	Erosion of natural deposits
Potassium	mg/L	No Standard	3.43	3.30-3.56	Feb/Aug-13	Erosion of natural deposits
Specific Conductance	µS/cm	1,600	423	406-440	Feb/Aug-13	Substances that form ions in the water
Sulfate	mg/L	500	30.55	29.6-31.5	Feb/Aug-13	Runoff/leaching from natural deposits
Turbidity	NTU	5	<0.5	—	Feb/Aug-13	Erosion of natural deposits
Total Dissolved Solids	mg/L	1,000	279	264-294	Feb/Aug-13	Runoff/leaching from natural deposits
Zinc	mg/L	5.0	<0.01	—	Feb/Aug-13	Erosion of natural deposits, industrial discharges

TABLE 6 - SAMPLING RESULTS FOR UNREGULATED CONSTITUENTS						
PARAMETER	UNIT	MAXIMUM CONTAMINANT LEVEL	LEVEL DECTECTED	RANGE OF DECTECTIONS	DATE SAMPLED	TYPICAL ORIGINS
pH	Units	No Standard	7.3	7.17-7.43	Feb/Aug-13	Physical characteristic
Boron	mg/L	1[e]	<0.05	—	Feb/Aug-13	Erosion of natural deposits
1,4 - Dioxane	µg/L	1[e]	<1.0	—	Oct-11	Industrial Discharge

Prepared By: RL 04/08/14
Checked By: MF 05/05/14

[e] Notification limit, not an MCL

Notes/Abbreviations

MPN/100 mL = most probable number per 100 mL
mg/L = milligrams per liter (parts per million)
µg/L = micrograms per liter (parts per billion)
ng/L = nanograms per liter (parts per trillion)
pCi/L = picoCuries per liter
AL = Action Level
N/A = Not Applicable
PHG = Public Health Goals
MCLG = Maximum Contaminant Level Goal
J = Concentration is between laboratory method detection and practical quantitation limits.
µS/cm = micro-Siemens per centimeter = µmhos/cm
µmhos/cm = micromhos
centimerter
NTU = nephelometric turbidity units

Note: Results from well No. 409 appears in the column

When you read about water quality, you might ask yourself:

How much is one part per billion (1ppb)?

Answer: 1 ppb is equal to 1 drop of water in 14,000 gallons, 1 second in 32 years, 1 inch in 16,000 miles or 1 cent in $10 million.

How much is one part per million (1ppm)?

Answer: 1 ppm is equal to 1 drop of water in 14 gallons, 1 second in 12 days, 1 inch in 16 miles or 1 cent in $10,000.