CONCHO

December 18, 2020

Mike Bratcher
Oil Conservation Division, District 2
811 S First St.
Artesia, NM 88210

Kelsey Wade
Bureau of Land Management, CFO
620 E. Green Street
Carlsbad, NM 88220

Closure Report

Skittles Federal #002
Incident #: NRM2022151323
DOR: July 31, 2020
GPS: 32.4094849 -104.1700668
Unit Letter H, Section 10, Township 22 South, Range 27 East
Eddy County, New Mexico

To Whom It May Concern,

COG Operating, LLC (COG) is pleased to submit the following closure report in response to a release that occurred at the Skittles Federal #002. The release is located in Unit Letter H, Section 10, Township 22 South and Range 27 East in Lea County, New Mexico. More specifically the latitude and longitude for the release are 32.4094849 North and -104.1700668 West.

BACKGROUND

The release was discovered on July 31, 2020. A C-141 initial report was submitted to the New Mexico Oil Conservation Division (NMOCD) and the Bureau of Land Management (BLM). The C-141 is presented in Appendix A. A lightning strike resulted in the release of approximately twenty (20) barrels (bbls) of produced water and five (5) bbls of oil. A vacuum truck was utilized to recover nineteen (19) bbls of produced water and four (4) bbls of oil.

GROUNDWATER AND REGULATORY FRAMEWORK

According to the United States Geological Survey (USGS) groundwater in the project vicinity is approximately twenty-four (24) feet below ground surface (BGS). The water well information is shown in Appendix B.

A risk based evaluation and site determinations were performed in accordance to the New Mexico Oil Conservation Division (NMOCD) Rule (Title 19 Chapter 15 Part 29) for releases on oil and gas development and production in New Mexico (effective August 14, 2018). According to the site characterization evaluation there is a medium potential for cave karst, no other receptors (water wells, playas, water course, lake beds or ordinance boundaries) were located within each specific boundaries or distance from the site. The groundwater data and the site characterization evaluation data is summarized in Appendix B. The delineation and closure criteria are listed below:

General Site Characterization and Groundwater:

Site Characterization	Average Groundwater Depth (ft.)
Medium Karst	24

Delineation and Closure Criteria:

Recommended Remedial Action Levels (RRALs)	
Chlorides	600 mg/kg
TPH (GRO and DRO and MRO)	100 mg/kg
TPH (GRO and DRO)	N/A
Benzene	10 mg/kg
Total BTEX	50 mg/kg

PROPOSED WORK PLAN

- The impacted area was excavated to depths from one (1) to three (3) feet BGS.
- All of the excavated material was hauled to an NMOCD approved solid waste disposal facility.
- Confirmation soil samples were taken from the bottom and sidewalls of the excavated areas per NMED 19.15.29.13.
- The excavation will be backfilled with clean “like” material and contoured to match the surrounding terrain.

SITE RECLAMATION AND RESTORATION

All of the fluid remained on the well pad. No reclamation activities will be required at this site.

CLOSURE REQUEST

COG Operating, LLC respectfully requests that the New Mexico Oil Conservation Division and the Bureau of Land Management grant closure approval for the Skittles Federal #002 incident that occurred on July 31, 2020.

Should you have any questions or concerns on, please do not hesitate to contact me.

Sincerely,

Sincerely,

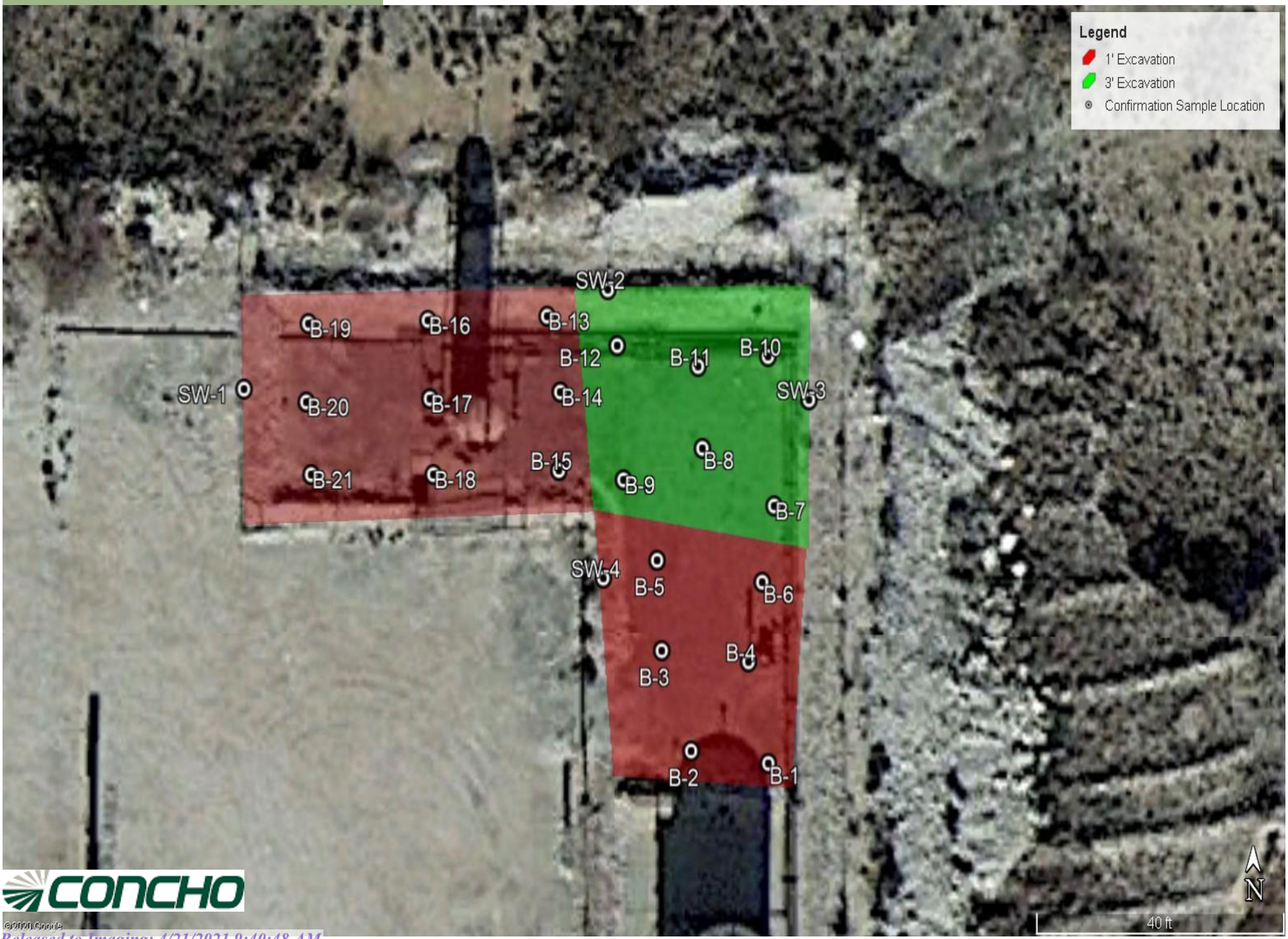
Sheldon Hitchcock

Sheldon L. Hitchcock
HSE Coordinator
slhitchcock@concho.com

FIGURES

July 31, 2020

Skittles Federal #002



CONCHO

TABLES

Table 1
COG Operating LLC.
Skittles Federal #2
Eddy County, New Mexico

Sample ID	Sample Depth (ft)	Sample Date	Soil Status		TPH (mg/kg)							Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	*Total*	GRO	DRO	*Total*			
NMOCD RRAL Limits (mg/kg)					-	-	-	100	-	-	100	10	50	600
SW-1	N/A	9/2/2020		X	<50.0	250	<50.0	250.0	<50.0	250	250.0	<0.002	<0.002	1,210
SW-2	N/A	9/2/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	36
SW-3	N/A	9/2/2020		X	<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,200
SW-4	N/A	9/2/2020		X	<50.0	1080	109	1189.0	<50.0	1080	1,080.0	<0.002	0.0119	1630
SW-1	N/A	11/3/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	309
SW-3	N/A	11/3/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	493
SW-4	N/A	11/3/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	429
B-1		9/2/2020	X		<50.0	90.5	<50.0	90.5	<50.0	90.5	90.5	<0.002	<0.002	461
B-2		9/2/2020	X		<50.0	86.8	<50.0	86.8	<50.0	86.8	86.8	<0.002	<0.002	455
B-3		9/2/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	404
B-4		9/2/2020	X		<50.0	67.7	<50.0	67.7	<50.0	67.7	67.7	<0.002	<0.002	341
B-5		9/2/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	314
B-6		9/2/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	85.5
B-7		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	521
B-8		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	546
B-9		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	502
B-10		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	434
B-11		9/4/2020		X	<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	705
B-12		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	509
B-13		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	191
B-14		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	152
B-15		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	187
B-16		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	172
B-17		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	179
B-18		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	165
B-19		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	202
B-20		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	176
B-21		9/4/2020	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	164
B-11		9/9/2020	X		#	#	#	0.0	#	#	0.0	#	#	117
(#)	Not Analyzed													

APPENDIX A

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☐ The source of the release has been stopped.
☐ The impacted area has been secured to protect human health and the environment.
☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☐ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature: Sheldon Hitson Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	_____ (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☐ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☐ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☐ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☐ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☐ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☐ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature: Sheldon Hitson Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature: Sheldon Hitson _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature: Sheldon Hitson _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

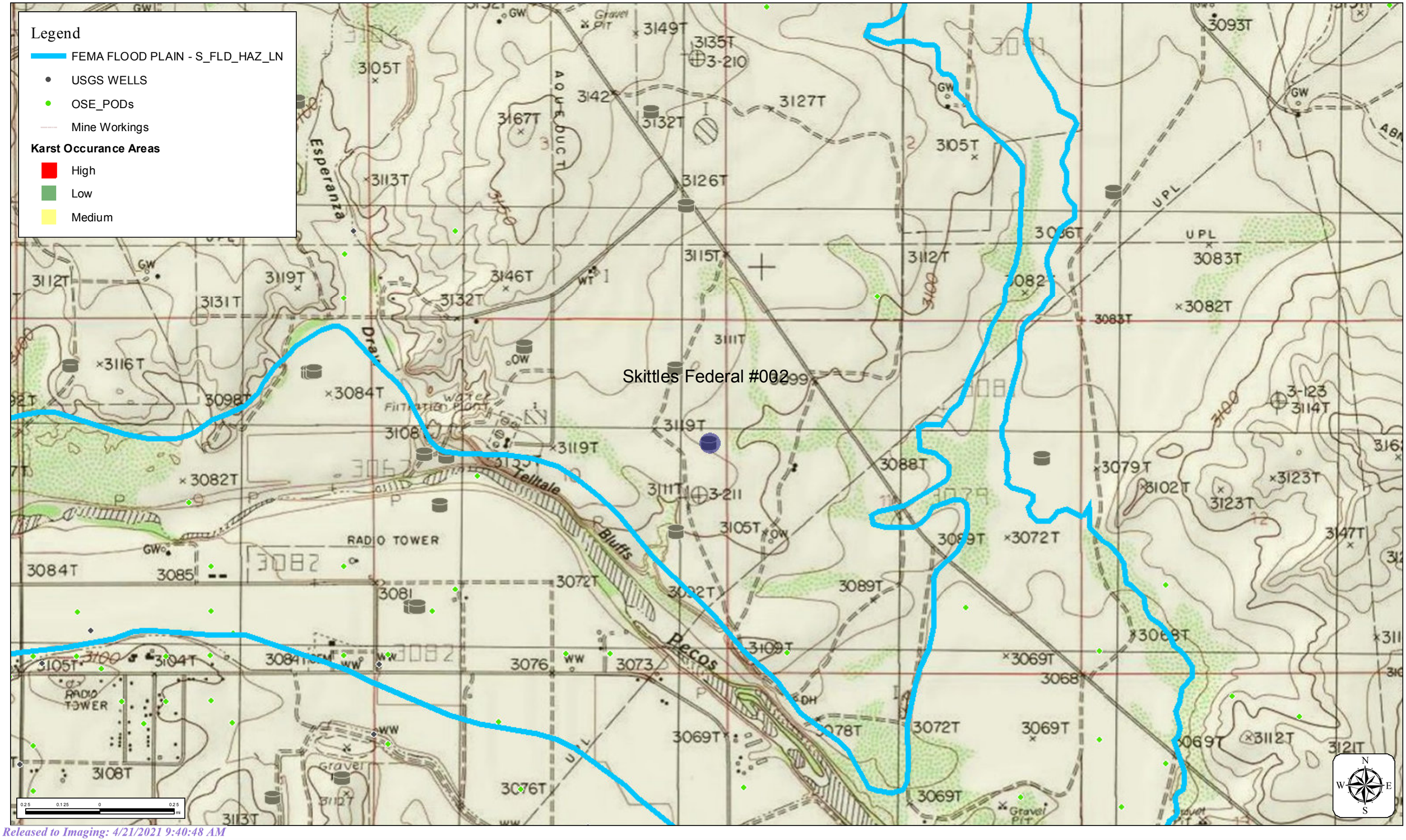
Closure Approved by: _____ Date: _____

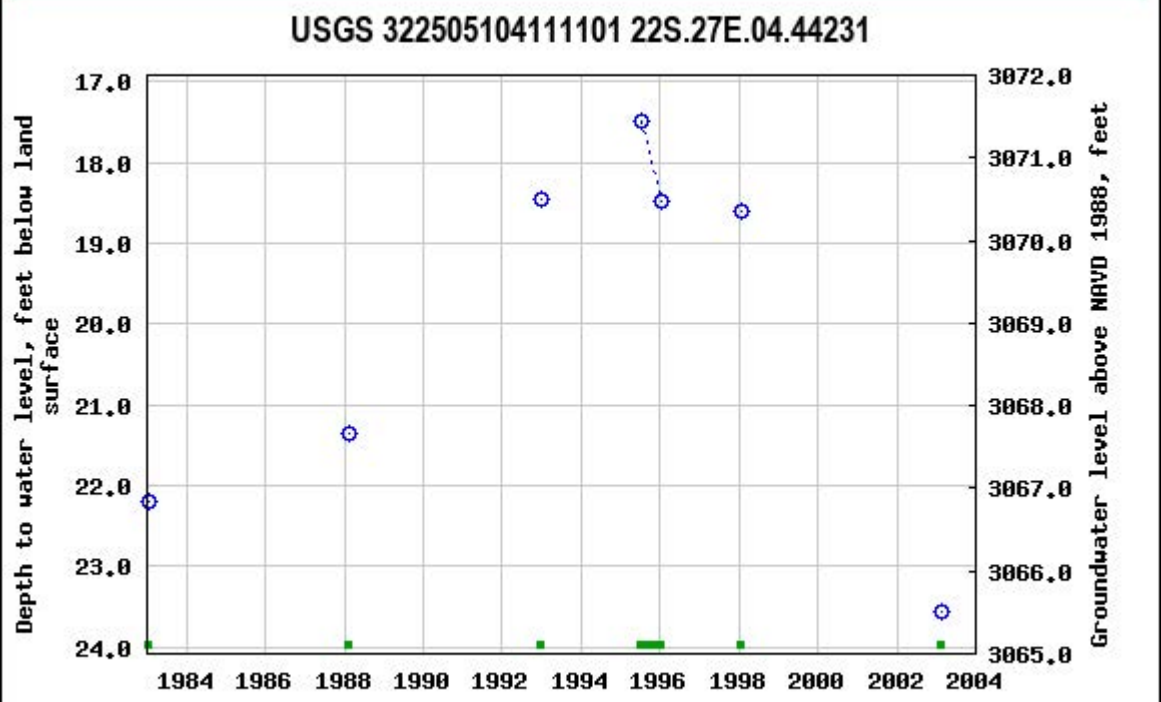
Printed Name: _____ Title: _____

APPENDIX B

CONCHO

ArcGIS Web Map




USGS 322505104111101 22S.27E.04.44231
Depth to water level, feet below land surface
Groundwater level above NAVD 1988, feet
17.0
18.0
19.0
20.0
21.0
22.0
23.0
24.0
3072.0
3071.0
3070.0
3069.0
3068.0
3067.0
3066.0
3065.0
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
Period of approved data

APPENDIX C

eurofins | Environment Testing Xenco

Certificate of Analysis Summary 671674

COG Operating LLC, Artesia, NM

Project Name: Skittles Fed #2

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy County

Date Received in Lab: Wed 09.02.2020 15:25

Report Date: 09.03.2020 12:09

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	671674-001		671674-002		671674-003		671674-004					
	Field Id:	SW-1		SW-2		SW-3		SW-4					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	09.02.2020 07:24		09.02.2020 07:26		09.02.2020 07:28		09.02.2020 07:30					
BTEX by EPA 8021B	***Extracted:***	09.02.2020 17:00		09.02.2020 17:00		09.02.2020 17:00		09.02.2020 17:00					
	Analyzed:	09.02.2020 23:52		09.03.2020 00:12		09.03.2020 00:33		09.03.2020 00:53					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	0.00584	0.00200				
m,p-Xylenes		<0.00396	0.00396	<0.00401	0.00401	<0.00398	0.00398	0.00609	0.00399				
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	0.00609	0.00200				
Total BTEX		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	0.0119	0.00200				
Chloride by EPA 300	***Extracted:***	09.02.2020 17:24		09.02.2020 18:24		09.02.2020 18:24		09.02.2020 18:24					
	Analyzed:	09.02.2020 18:22		09.02.2020 18:28		09.02.2020 18:33		09.02.2020 18:39					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		1210	50.0	36.0	9.94	1200	10.0	1630	50.4				
TPH By SW8015 Mod	***Extracted:***	09.02.2020 17:00		09.02.2020 17:00		09.02.2020 17:00		09.02.2020 17:00					
	Analyzed:	09.03.2020 09:34		09.02.2020 20:26		09.02.2020 20:47		09.02.2020 22:07					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons		<50.1	50.1	<49.8	49.8	<50.3	50.3	<50.1	50.1				
Diesel Range Organics		250	50.1	<49.8	49.8	<50.3	50.3	1080	50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<49.8	49.8	<50.3	50.3	109	50.1				
Total TPH		250	50.1	<49.8	49.8	<50.3	50.3	1190	50.1				

BRL - Below Reporting Limit

Jessica Kramer

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

eurofins | Environment Testing Xenco

Analytical Report 671674

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Skittles Fed #2

09.03.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

eurofins | Environment Testing Xenco

09.03.2020

Project Manager: **Sheldon Hitchcock**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **671674**
Skittles Fed #2
Project Address: Eddy County

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 671674. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 671674 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 671674

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW-1	S	09.02.2020 07:24		671674-001
SW-2	S	09.02.2020 07:26		671674-002
SW-3	S	09.02.2020 07:28		671674-003
SW-4	S	09.02.2020 07:30		671674-004

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CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Skittles Fed #2

Project ID:
Work Order Number(s): *671674*

Report Date: *09.03.2020*
Date Received: *09.02.2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 671674

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **SW-1** Matrix: Soil Date Received:09.02.2020 15:25

Lab Sample Id: 671674-001 Date Collected: 09.02.2020 07:24

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.02.2020 17:24 Basis: Wet Weight

Seq Number: 3136283

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1210**	50.0	mg/kg	09.02.2020 18:22		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.02.2020 17:00 Basis: Wet Weight

Seq Number: 3136233

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	09.03.2020 09:34	U	1
Diesel Range Organics	C10C28DRO	**250**	50.1	mg/kg	09.03.2020 09:34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.03.2020 09:34	U	1
Total TPH	PHC635	**250**	50.1	mg/kg	09.03.2020 09:34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	09.03.2020 09:34	
o-Terphenyl	84-15-1	95	%	70-135	09.03.2020 09:34	

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Certificate of Analytical Results 671674

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**SW-1**	Matrix:	Soil	Date Received:	09.02.2020 15:25
Lab Sample Id:	671674-001	Date Collected:	09.02.2020 07:24		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.02.2020 17:00	Basis:	Wet Weight
Seq Number:	3136275				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.02.2020 23:52	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.02.2020 23:52	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.02.2020 23:52	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.02.2020 23:52	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.02.2020 23:52	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.02.2020 23:52	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.02.2020 23:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	09.02.2020 23:52	
4-Bromofluorobenzene	460-00-4	101	%	70-130	09.02.2020 23:52	

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Certificate of Analytical Results 671674

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **SW-2** Matrix: Soil Date Received:09.02.2020 15:25

Lab Sample Id: 671674-002 Date Collected: 09.02.2020 07:26

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.02.2020 18:24 Basis: Wet Weight

Seq Number: 3136283

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.0**	9.94	mg/kg	09.02.2020 18:28		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.02.2020 17:00 Basis: Wet Weight

Seq Number: 3136233

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.02.2020 20:26	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.02.2020 20:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.02.2020 20:26	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.02.2020 20:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.02.2020 20:26	
o-Terphenyl	84-15-1	112	%	70-135	09.02.2020 20:26	

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COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**SW-2**	Matrix:	Soil	Date Received:	09.02.2020 15:25
Lab Sample Id:	671674-002	Date Collected:	09.02.2020 07:26		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.02.2020 17:00	Basis:	Wet Weight
Seq Number:	3136275				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.03.2020 00:12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.03.2020 00:12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.03.2020 00:12	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.03.2020 00:12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.03.2020 00:12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.03.2020 00:12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.03.2020 00:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	09.03.2020 00:12	
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.03.2020 00:12	

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Certificate of Analytical Results 671674

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **SW-3** Matrix: Soil Date Received:09.02.2020 15:25

Lab Sample Id: 671674-003 Date Collected: 09.02.2020 07:28

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.02.2020 18:24 Basis: Wet Weight

Seq Number: 3136283

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1200**	10.0	mg/kg	09.02.2020 18:33		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.02.2020 17:00 Basis: Wet Weight

Seq Number: 3136233

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.3	50.3	mg/kg	09.02.2020 20:47	U	1
Diesel Range Organics	C10C28DRO	<50.3	50.3	mg/kg	09.02.2020 20:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	09.02.2020 20:47	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	09.02.2020 20:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	09.02.2020 20:47	
o-Terphenyl	84-15-1	102	%	70-135	09.02.2020 20:47	

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COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**SW-3**	Matrix:	Soil	Date Received:	09.02.2020 15:25
Lab Sample Id:	671674-003	Date Collected:	09.02.2020 07:28		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.02.2020 17:00	Basis:	Wet Weight
Seq Number:	3136275				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.03.2020 00:33	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.03.2020 00:33	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.03.2020 00:33	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.03.2020 00:33	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.03.2020 00:33	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.03.2020 00:33	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.03.2020 00:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.03.2020 00:33	
4-Bromofluorobenzene	460-00-4	100	%	70-130	09.03.2020 00:33	

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COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **SW-4** Matrix: Soil Date Received:09.02.2020 15:25

Lab Sample Id: 671674-004 Date Collected: 09.02.2020 07:30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.02.2020 18:24 Basis: Wet Weight

Seq Number: 3136283

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1630**	50.4	mg/kg	09.02.2020 18:39		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.02.2020 17:00 Basis: Wet Weight

Seq Number: 3136233

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	09.02.2020 22:07	U	1
Diesel Range Organics	C10C28DRO	**1080**	50.1	mg/kg	09.02.2020 22:07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**109**	50.1	mg/kg	09.02.2020 22:07		1
Total TPH	PHC635	**1190**	50.1	mg/kg	09.02.2020 22:07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	09.02.2020 22:07	
o-Terphenyl	84-15-1	112	%	70-135	09.02.2020 22:07	

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Certificate of Analytical Results 671674

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**SW-4**	Matrix:	Soil	Date Received:	09.02.2020 15:25
Lab Sample Id:	671674-004	Date Collected:	09.02.2020 07:30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.02.2020 17:00	Basis:	Wet Weight
Seq Number:	3136275				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.03.2020 00:53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.03.2020 00:53	U	1
Ethylbenzene	100-41-4	**0.00584**	0.00200	mg/kg	09.03.2020 00:53		1
m,p-Xylenes	179601-23-1	**0.00609**	0.00399	mg/kg	09.03.2020 00:53		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.03.2020 00:53	U	1
Total Xylenes	1330-20-7	**0.00609**	0.00200	mg/kg	09.03.2020 00:53		1
Total BTEX		**0.0119**	0.00200	mg/kg	09.03.2020 00:53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	09.03.2020 00:53	
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.03.2020 00:53	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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QC Summary 671674

COG Operating LLC

Skittles Fed #2

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3136283 — Matrix: Solid — Date Prep: 09.02.2020
MB Sample Id: 7710696-1-BLK — LCS Sample Id: 7710696-1-BKS — LCSD Sample Id: 7710696-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	266	106	268	107	90-110	1	20	mg/kg	09.02.2020 16:08	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3136283 — Matrix: Soil — Date Prep: 09.02.2020
Parent Sample Id: 671625-001 — MS Sample Id: 671625-001 S — MSD Sample Id: 671625-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	325	200	533	104	533	104	90-110	0	20	mg/kg	09.02.2020 16:25	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3136283 — Matrix: Soil — Date Prep: 09.02.2020
Parent Sample Id: 671630-007 — MS Sample Id: 671630-007 S — MSD Sample Id: 671630-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	215	199	420	103	420	103	90-110	0	20	mg/kg	09.02.2020 17:43	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3136233 — Matrix: Solid — Date Prep: 09.02.2020
MB Sample Id: 7710673-1-BLK — LCS Sample Id: 7710673-1-BKS — LCSD Sample Id: 7710673-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	832	83	823	82	70-135	1	35	mg/kg	09.02.2020 11:50	
Diesel Range Organics	<50.0	1000	940	94	920	92	70-135	2	35	mg/kg	09.02.2020 11:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		111		108		70-135	%	09.02.2020 11:50
o-Terphenyl	100		110		107		70-135	%	09.02.2020 11:50

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3136233 — Matrix: Solid — Date Prep: 09.02.2020
MB Sample Id: 7710673-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.02.2020 11:30	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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QC Summary 671674

COG Operating LLC

Skittles Fed #2

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3136233 Matrix: Soil Date Prep: 09.02.2020
Parent Sample Id: 671640-001 MS Sample Id: 671640-001 S MSD Sample Id: 671640-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<49.9	998	835	84	813	81	70-135	3	35	mg/kg	09.02.2020 15:03	
Diesel Range Organics	<49.9	998	939	94	922	92	70-135	2	35	mg/kg	09.02.2020 15:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		111		70-135	%	09.02.2020 15:03
o-Terphenyl	113		110		70-135	%	09.02.2020 15:03

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3136275 Matrix: Solid Date Prep: 09.02.2020
MB Sample Id: 7710698-1-BLK LCS Sample Id: 7710698-1-BKS LCSD Sample Id: 7710698-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0961	96	0.0968	97	70-130	1	35	mg/kg	09.02.2020 16:14	
Toluene	<0.00200	0.100	0.0905	91	0.0925	93	70-130	2	35	mg/kg	09.02.2020 16:14	
Ethylbenzene	<0.00200	0.100	0.0942	94	0.0961	96	71-129	2	35	mg/kg	09.02.2020 16:14	
m,p-Xylenes	<0.00400	0.200	0.190	95	0.194	97	70-135	2	35	mg/kg	09.02.2020 16:14	
o-Xylene	<0.00200	0.100	0.0954	95	0.0975	98	71-133	2	35	mg/kg	09.02.2020 16:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		101		70-130	%	09.02.2020 16:14
4-Bromofluorobenzene	98		92		92		70-130	%	09.02.2020 16:14

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3136275 Matrix: Soil Date Prep: 09.02.2020
Parent Sample Id: 671625-001 MS Sample Id: 671625-001 S MSD Sample Id: 671625-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0927	93	0.105	105	70-130	12	35	mg/kg	09.03.2020 01:54	
Toluene	<0.00199	0.0994	0.0863	87	0.0963	96	70-130	11	35	mg/kg	09.03.2020 01:54	
Ethylbenzene	<0.00199	0.0994	0.0903	91	0.0943	94	71-129	4	35	mg/kg	09.03.2020 01:54	
m,p-Xylenes	<0.00398	0.199	0.178	89	0.185	93	70-135	4	35	mg/kg	09.03.2020 01:54	
o-Xylene	<0.00199	0.0994	0.0912	92	0.0897	90	71-133	2	35	mg/kg	09.03.2020 01:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		101		70-130	%	09.03.2020 01:54
4-Bromofluorobenzene	91		88		70-130	%	09.03.2020 01:54

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Analysis Request of Chain of Custody Record

CONCHO

One Concho Center/600/Illinois Avenue/Midland, Texas
Tel (432) 683-7443

6071674

Client Name: COG-Artesia

Site Manager: Sheldon Hitchcock

Project Name: Skittles Fed #2

Project Location: (county, state) Eddy, NM

Project #:

Invoice to: Sheldon Hitchcock

Receiving Laboratory: Xenco

Sampler Name: Sheldon Hitchcock

Comments:

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	# CONTAINERS	(C)omposite/(G)rab	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	SW-1	9/2/20	7:24		X			X	1	C	X	X	X	
	SW-2		7:26		X			X	1	C	X	X	X	
	SW-3		7:28		X			X	1	C	X	X	X	
	SW-4		7:30		X			X	1	C	X	X	X	

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Sheldon Hitchcock			Cloe Cuffin	9.2.20	15:25
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY
3.2/3.0
Sample Temperature

REMARKS:

- [X] RUSH: Same Day 24 hr (48 hr) 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

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Certificate of Analysis Summary 676767

COG Operating LLC, Artesia, NM

Project Name: Skittles Fed #2

Project Id:

Contact: Sheldon Hitchcock

Project Location:

Date Received in Lab: Tue 11.03.2020 11:58

Report Date: 11.04.2020 14:11

Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	676767-001		676767-002		676767-003					
	Field Id:	SW-1		SW-3		SW-4					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	11.03.2020 09:30		11.03.2020 09:40		11.03.2020 09:50					
BTEX by EPA 8021B	***Extracted:***	11.03.2020 14:07		11.03.2020 14:07		11.03.2020 14:07					
	Analyzed:	11.03.2020 18:09		11.03.2020 18:32		11.03.2020 18:54					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00397	0.00397	<0.00401	0.00401	<0.00399	0.00399				
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	11.03.2020 13:00		11.03.2020 13:00		11.03.2020 15:00					
	Analyzed:	11.03.2020 17:43		11.03.2020 17:49		11.03.2020 18:22					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		309	9.98	493	10.1	429	9.92				
TPH By SW8015 Mod	***Extracted:***	11.03.2020 13:00		11.03.2020 13:00		11.03.2020 13:00					
	Analyzed:	11.03.2020 17:22		11.03.2020 17:42		11.03.2020 18:02					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons		<50.0	50.0	<49.9	49.9	<50.3	50.3				
Diesel Range Organics		<50.0	50.0	<49.9	49.9	<50.3	50.3				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<50.3	50.3				
Total TPH		<50.0	50.0	<49.9	49.9	<50.3	50.3				

BRL - Below Reporting Limit

Jessica Kramer

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Analytical Report 676767

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Skittles Fed #2

11.04.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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11.04.2020

Project Manager: **Sheldon Hitchcock**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **676767**
Skittles Fed #2
Project Address:

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 676767. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 676767 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 676767

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW-1	S	11.03.2020 09:30		676767-001
SW-3	S	11.03.2020 09:40		676767-002
SW-4	S	11.03.2020 09:50		676767-003

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CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Skittles Fed #2

Project ID:
Work Order Number(s): *676767*

Report Date: *11.04.2020*
Date Received: *11.03.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 676767

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **SW-1** Matrix: Soil Date Received:11.03.2020 11:58

Lab Sample Id: 676767-001 Date Collected: 11.03.2020 09:30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB

Analyst: MAB Date Prep: 11.03.2020 13:00 % Moisture:

Seq Number: 3141306 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**309**	9.98	mg/kg	11.03.2020 17:43		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MAB

Analyst: CAC Date Prep: 11.03.2020 13:00 % Moisture:

Seq Number: 3141296 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.03.2020 17:22	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.03.2020 17:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.03.2020 17:22	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.03.2020 17:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	11.03.2020 17:22	
o-Terphenyl	84-15-1	120	%	70-135	11.03.2020 17:22	

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Certificate of Analytical Results 676767

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**SW-1**	Matrix:	Soil	Date Received:	11.03.2020 11:58
Lab Sample Id:	676767-001	Date Collected:	11.03.2020 09:30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB				
Analyst:	MAB	Date Prep:	11.03.2020 14:07	% Moisture:	
Seq Number:	3141303			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.03.2020 18:09	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.03.2020 18:09	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.03.2020 18:09	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.03.2020 18:09	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.03.2020 18:09	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	11.03.2020 18:09	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.03.2020 18:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	11.03.2020 18:09	
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.03.2020 18:09	

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Certificate of Analytical Results 676767

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **SW-3** Matrix: Soil Date Received:11.03.2020 11:58

Lab Sample Id: 676767-002 Date Collected: 11.03.2020 09:40

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB

Analyst: MAB Date Prep: 11.03.2020 13:00 % Moisture:

Seq Number: 3141306 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**493**	10.1	mg/kg	11.03.2020 17:49		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MAB

Analyst: CAC Date Prep: 11.03.2020 13:00 % Moisture:

Seq Number: 3141296 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.03.2020 17:42	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	11.03.2020 17:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.03.2020 17:42	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.03.2020 17:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	11.03.2020 17:42	
o-Terphenyl	84-15-1	113	%	70-135	11.03.2020 17:42	

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Certificate of Analytical Results 676767

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**SW-3**	Matrix:	Soil	Date Received:	11.03.2020 11:58
Lab Sample Id:	676767-002	Date Collected:	11.03.2020 09:40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB				
Analyst:	MAB	Date Prep:	11.03.2020 14:07	% Moisture:	
Seq Number:	3141303			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.03.2020 18:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.03.2020 18:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.03.2020 18:32	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.03.2020 18:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.03.2020 18:32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.03.2020 18:32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.03.2020 18:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.03.2020 18:32	
4-Bromofluorobenzene	460-00-4	89	%	70-130	11.03.2020 18:32	

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Certificate of Analytical Results 676767

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **SW-4** Matrix: Soil Date Received:11.03.2020 11:58

Lab Sample Id: 676767-003 Date Collected: 11.03.2020 09:50

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB

Analyst: MAB Date Prep: 11.03.2020 15:00 % Moisture:

Seq Number: 3141307 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**429**	9.92	mg/kg	11.03.2020 18:22		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MAB

Analyst: CAC Date Prep: 11.03.2020 13:00 % Moisture:

Seq Number: 3141296 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.3	50.3	mg/kg	11.03.2020 18:02	U	1
Diesel Range Organics	C10C28DRO	<50.3	50.3	mg/kg	11.03.2020 18:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.03.2020 18:02	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.03.2020 18:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	11.03.2020 18:02	
o-Terphenyl	84-15-1	110	%	70-135	11.03.2020 18:02	

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Certificate of Analytical Results 676767

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**SW-4**	Matrix:	Soil	Date Received:	11.03.2020 11:58
Lab Sample Id:	676767-003	Date Collected:	11.03.2020 09:50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB				
Analyst:	MAB	Date Prep:	11.03.2020 14:07	% Moisture:	
Seq Number:	3141303			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.03.2020 18:54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.03.2020 18:54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.03.2020 18:54	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.03.2020 18:54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.03.2020 18:54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.03.2020 18:54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.03.2020 18:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.03.2020 18:54	
4-Bromofluorobenzene	460-00-4	89	%	70-130	11.03.2020 18:54	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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QC Summary 676767

COG Operating LLC

Skittles Fed #2

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3141306 — Matrix: Solid — Date Prep: 11.03.2020
MB Sample Id: 7714455-1-BLK — LCS Sample Id: 7714455-1-BKS — LCSD Sample Id: 7714455-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	259	104	90-110	0	20	mg/kg	11.03.2020 15:10	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3141307 — Matrix: Solid — Date Prep: 11.03.2020
MB Sample Id: 7714457-1-BLK — LCS Sample Id: 7714457-1-BKS — LCSD Sample Id: 7714457-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	261	104	260	104	90-110	0	20	mg/kg	11.03.2020 18:11	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3141306 — Matrix: Soil — Date Prep: 11.03.2020
Parent Sample Id: 676707-001 — MS Sample Id: 676707-001 S — MSD Sample Id: 676707-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	606	200	796	95	806	100	90-110	1	20	mg/kg	11.03.2020 15:26	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3141306 — Matrix: Soil — Date Prep: 11.03.2020
Parent Sample Id: 676720-001 — MS Sample Id: 676720-001 S — MSD Sample Id: 676720-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	148	200	361	107	363	108	90-110	1	20	mg/kg	11.03.2020 16:43	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3141307 — Matrix: Soil — Date Prep: 11.03.2020
Parent Sample Id: 676767-003 — MS Sample Id: 676767-003 S — MSD Sample Id: 676767-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	429	199	630	101	631	102	90-110	0	20	mg/kg	11.03.2020 18:27	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3141307 — Matrix: Soil — Date Prep: 11.03.2020
Parent Sample Id: 676778-012 — MS Sample Id: 676778-012 S — MSD Sample Id: 676778-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	197	201	414	108	414	108	90-110	0	20	mg/kg	11.03.2020 19:55	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 676767

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COG Operating LLC

Skittles Fed #2

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3141296 — Matrix: Solid — Date Prep: 11.03.2020
MB Sample Id: 7714454-1-BLK — LCS Sample Id: 7714454-1-BKS — LCSD Sample Id: 7714454-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	909	91	883	88	70-135	3	35	mg/kg	11.03.2020 15:40	
Diesel Range Organics	<50.0	1000	1010	101	1000	100	70-135	1	35	mg/kg	11.03.2020 15:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		123		108		70-135	%	11.03.2020 15:40
o-Terphenyl	101		99		99		70-135	%	11.03.2020 15:40

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3141296 — Matrix: Solid — Date Prep: 11.03.2020
MB Sample Id: 7714454-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.03.2020 15:20	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3141296 — Matrix: Soil — Date Prep: 11.03.2020
Parent Sample Id: 676721-001 — MS Sample Id: 676721-001 S — MSD Sample Id: 676721-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<49.9	997	903	91	982	98	70-135	8	35	mg/kg	11.03.2020 16:41	
Diesel Range Organics	<49.9	997	1010	101	1070	107	70-135	6	35	mg/kg	11.03.2020 16:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		128		70-135	%	11.03.2020 16:41
o-Terphenyl	114		117		70-135	%	11.03.2020 16:41

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3141303 — Matrix: Solid — Date Prep: 11.03.2020
MB Sample Id: 7714462-1-BLK — LCS Sample Id: 7714462-1-BKS — LCSD Sample Id: 7714462-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0975	98	0.0945	95	70-130	3	35	mg/kg	11.03.2020 15:44	
Toluene	<0.00200	0.100	0.0952	95	0.0926	93	70-130	3	35	mg/kg	11.03.2020 15:44	
Ethylbenzene	<0.00200	0.100	0.0880	88	0.0861	86	71-129	2	35	mg/kg	11.03.2020 15:44	
m,p-Xylenes	<0.00400	0.200	0.178	89	0.173	87	70-135	3	35	mg/kg	11.03.2020 15:44	
o-Xylene	<0.00200	0.100	0.0872	87	0.0851	85	71-133	2	35	mg/kg	11.03.2020 15:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		100		100		70-130	%	11.03.2020 15:44
4-Bromofluorobenzene	88		85		85		70-130	%	11.03.2020 15:44

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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QC Summary 676767

COG Operating LLC

Skittles Fed #2

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3141303 Matrix: Soil Date Prep: 11.03.2020

Parent Sample Id: 676707-001 MS Sample Id: 676707-001 S MSD Sample Id: 676707-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.129	128	0.117	117	70-130	10	35	mg/kg	11.03.2020 16:29	
Toluene	<0.00201	0.101	0.123	122	0.111	111	70-130	10	35	mg/kg	11.03.2020 16:29	
Ethylbenzene	<0.00201	0.101	0.111	110	0.0997	100	71-129	11	35	mg/kg	11.03.2020 16:29	
m,p-Xylenes	<0.00402	0.201	0.225	112	0.200	100	70-135	12	35	mg/kg	11.03.2020 16:29	
o-Xylene	<0.00201	0.101	0.109	108	0.0983	98	71-133	10	35	mg/kg	11.03.2020 16:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		99		70-130	%	11.03.2020 16:29
4-Bromofluorobenzene	86		85		70-130	%	11.03.2020 16:29

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

6767767

Analysis Request of Chain of Custody Record

Page 1 of 1

CONCHO

One Concho Center/600/Illinois Avenue/Midland, Texas
Tel (432) 683-7443

Client Name: COG-Artesia	Site Manager: Sheldon Hitchcock
Project Name: Skittles Fed #2	
Project Location: (county, state)	Project #:
Invoice to: Sheldon Hitchcock	
Receiving Laboratory: Xenco	Sampler Name: Sheldon Hitchcock
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	# CONTAINERS	(C)omposite/(G)rab	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	SW-1	11/3	9:30		X			X	1	C	X	X	X	
	SW-3	"	9:40		X			X	1	C	X	X	X	
	SW-4	"	9:50		X			X	1	C	X	X	X	

ANALYSIS REQUEST (Circle or Specify Method No.)

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	11/3/20	11:58		11/3/20	11:58
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature: 4.2/4.0°C

REMARKS:

- [X] RUSH: Same Day (24 hr) 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 11.03.2020 11.58.00 AM

Work Order #: 676767

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	Sample received in bulk containers.
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Cloe Clifton Date: 11.03.2020

Checklist reviewed by: Jessica Kramer Date: 11.04.2020

Jessica Kramer

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Certificate of Analysis Summary 671676

COG Operating LLC, Artesia, NM

Project Name: Skittles Fed #2

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy County

Date Received in Lab: Wed 09.02.2020 15:25

Report Date: 09.03.2020 12:10

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	671676-001		671676-002		671676-003		671676-004		671676-005		671676-006	
	Field Id:	B-1		B-2		B-3		B-4		B-5		B-6	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	09.02.2020 07:10		09.02.2020 07:12		09.02.2020 07:14		09.02.2020 07:16		09.02.2020 07:18		09.02.2020 07:20	
BTEX by EPA 8021B	***Extracted:***	09.02.2020 17:00		09.02.2020 17:00		09.02.2020 16:43		09.02.2020 16:43		09.02.2020 16:43		09.02.2020 16:43	
	Analyzed:	09.03.2020 01:13		09.03.2020 01:34		09.02.2020 20:02		09.02.2020 20:25		09.02.2020 20:47		09.02.2020 21:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00401	0.00401	<0.00398	0.00398	<0.00399	0.00399	<0.00399	0.00399
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	09.02.2020 18:24		09.02.2020 18:24		09.02.2020 17:26		09.02.2020 17:26		09.02.2020 17:26		09.02.2020 17:26	
	Analyzed:	09.02.2020 18:44		09.02.2020 18:50		09.02.2020 19:23		09.02.2020 19:40		09.02.2020 19:46		09.02.2020 19:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		461	9.98	455	9.94	404	9.92	341	9.90	314	9.88	85.5	9.92
TPH By SW8015 Mod	***Extracted:***	09.02.2020 17:00		09.02.2020 17:00		09.02.2020 17:15		09.02.2020 17:15		09.02.2020 17:15		09.02.2020 17:15	
	Analyzed:	09.02.2020 21:07		09.02.2020 21:27		09.02.2020 18:05		09.02.2020 19:06		09.02.2020 19:26		09.02.2020 19:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<49.9	49.9	<50.1	50.1	<49.8	49.8	<50.0	50.0	<49.9	49.9	<50.1	50.1
Diesel Range Organics		90.5	49.9	86.8	50.1	<49.8	49.8	67.7	50.0	<49.9	49.9	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.1	50.1	<49.8	49.8	<50.0	50.0	<49.9	49.9	<50.1	50.1
Total TPH		90.5	49.9	86.8	50.1	<49.8	49.8	67.7	50.0	<49.9	49.9	<50.1	50.1

BRL - Below Reporting Limit

Jessica Kramer

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Analytical Report 671676

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Skittles Fed #2

09.03.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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09.03.2020

Project Manager: **Sheldon Hitchcock**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **671676**
Skittles Fed #2
Project Address: Eddy County

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 671676. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 671676 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 671676

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
B-1	S	09.02.2020 07:10		671676-001
B-2	S	09.02.2020 07:12		671676-002
B-3	S	09.02.2020 07:14		671676-003
B-4	S	09.02.2020 07:16		671676-004
B-5	S	09.02.2020 07:18		671676-005
B-6	S	09.02.2020 07:20		671676-006

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CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Skittles Fed #2

Project ID:
Work Order Number(s): *671676*

Report Date: *09.03.2020*
Date Received: *09.02.2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3136278 TPH By SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 671676-006.

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Certificate of Analytical Results 671676

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **B-1** Matrix: Soil Date Received:09.02.2020 15:25

Lab Sample Id: 671676-001 Date Collected: 09.02.2020 07:10

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.02.2020 18:24 Basis: Wet Weight

Seq Number: 3136283

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**461**	9.98	mg/kg	09.02.2020 18:44		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.02.2020 17:00 Basis: Wet Weight

Seq Number: 3136233

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.02.2020 21:07	U	1
Diesel Range Organics	C10C28DRO	**90.5**	49.9	mg/kg	09.02.2020 21:07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.02.2020 21:07	U	1
Total TPH	PHC635	**90.5**	49.9	mg/kg	09.02.2020 21:07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	09.02.2020 21:07	
o-Terphenyl	84-15-1	104	%	70-135	09.02.2020 21:07	

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Certificate of Analytical Results 671676

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**B-1**	Matrix:	Soil	Date Received:	09.02.2020 15:25
Lab Sample Id:	671676-001	Date Collected:	09.02.2020 07:10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.02.2020 17:00	Basis:	Wet Weight
Seq Number:	3136275				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.03.2020 01:13	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.03.2020 01:13	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.03.2020 01:13	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.03.2020 01:13	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.03.2020 01:13	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.03.2020 01:13	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.03.2020 01:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	09.03.2020 01:13	
1,4-Difluorobenzene	540-36-3	105	%	70-130	09.03.2020 01:13	

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Certificate of Analytical Results 671676

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **B-2** Matrix: Soil Date Received:09.02.2020 15:25

Lab Sample Id: 671676-002 Date Collected: 09.02.2020 07:12

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.02.2020 18:24 Basis: Wet Weight

Seq Number: 3136283

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**455**	9.94	mg/kg	09.02.2020 18:50		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.02.2020 17:00 Basis: Wet Weight

Seq Number: 3136233

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	09.02.2020 21:27	U	1
Diesel Range Organics	C10C28DRO	**86.8**	50.1	mg/kg	09.02.2020 21:27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.02.2020 21:27	U	1
Total TPH	PHC635	**86.8**	50.1	mg/kg	09.02.2020 21:27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	09.02.2020 21:27	
o-Terphenyl	84-15-1	106	%	70-135	09.02.2020 21:27	

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Certificate of Analytical Results 671676

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**B-2**	Matrix:	Soil	Date Received:	09.02.2020 15:25
Lab Sample Id:	671676-002	Date Collected:	09.02.2020 07:12		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.02.2020 17:00	Basis:	Wet Weight
Seq Number:	3136275				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.03.2020 01:34	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.03.2020 01:34	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.03.2020 01:34	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.03.2020 01:34	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.03.2020 01:34	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.03.2020 01:34	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.03.2020 01:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.03.2020 01:34	
4-Bromofluorobenzene	460-00-4	98	%	70-130	09.03.2020 01:34	

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Certificate of Analytical Results 671676

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **B-3** Matrix: Soil Date Received:09.02.2020 15:25

Lab Sample Id: 671676-003 Date Collected: 09.02.2020 07:14

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.02.2020 17:26 Basis: Wet Weight

Seq Number: 3136284

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**404**	9.92	mg/kg	09.02.2020 19:23		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.02.2020 17:15 Basis: Wet Weight

Seq Number: 3136278

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.02.2020 18:05	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.02.2020 18:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.02.2020 18:05	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.02.2020 18:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	09.02.2020 18:05	
o-Terphenyl	84-15-1	117	%	70-135	09.02.2020 18:05	

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COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**B-3**	Matrix:	Soil	Date Received:	09.02.2020 15:25
Lab Sample Id:	671676-003	Date Collected:	09.02.2020 07:14		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.02.2020 16:43	Basis:	Wet Weight
Seq Number:	3136282				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.02.2020 20:02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.02.2020 20:02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.02.2020 20:02	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.02.2020 20:02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.02.2020 20:02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.02.2020 20:02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.02.2020 20:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.02.2020 20:02	
4-Bromofluorobenzene	460-00-4	89	%	70-130	09.02.2020 20:02	

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COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **B-4** Matrix: Soil Date Received:09.02.2020 15:25

Lab Sample Id: 671676-004 Date Collected: 09.02.2020 07:16

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.02.2020 17:26 Basis: Wet Weight

Seq Number: 3136284

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**341**	9.90	mg/kg	09.02.2020 19:40		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.02.2020 17:15 Basis: Wet Weight

Seq Number: 3136278

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.02.2020 19:06	U	1
Diesel Range Organics	C10C28DRO	**67.7**	50.0	mg/kg	09.02.2020 19:06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.02.2020 19:06	U	1
Total TPH	PHC635	**67.7**	50.0	mg/kg	09.02.2020 19:06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	09.02.2020 19:06	
o-Terphenyl	84-15-1	117	%	70-135	09.02.2020 19:06	

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Skittles Fed #2

Sample Id:	**B-4**	Matrix:	Soil	Date Received:	09.02.2020 15:25
Lab Sample Id:	671676-004	Date Collected:	09.02.2020 07:16		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.02.2020 16:43	Basis:	Wet Weight
Seq Number:	3136282				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.02.2020 20:25	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.02.2020 20:25	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.02.2020 20:25	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.02.2020 20:25	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.02.2020 20:25	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.02.2020 20:25	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.02.2020 20:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.02.2020 20:25	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.02.2020 20:25	

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COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **B-5** Matrix: Soil Date Received:09.02.2020 15:25

Lab Sample Id: 671676-005 Date Collected: 09.02.2020 07:18

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.02.2020 17:26 Basis: Wet Weight

Seq Number: 3136284

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**314**	9.88	mg/kg	09.02.2020 19:46		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.02.2020 17:15 Basis: Wet Weight

Seq Number: 3136278

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.02.2020 19:26	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.02.2020 19:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.02.2020 19:26	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.02.2020 19:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	09.02.2020 19:26	
o-Terphenyl	84-15-1	121	%	70-135	09.02.2020 19:26	

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Skittles Fed #2

Sample Id:	**B-5**	Matrix:	Soil	Date Received:	09.02.2020 15:25
Lab Sample Id:	671676-005	Date Collected:	09.02.2020 07:18		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.02.2020 16:43	Basis:	Wet Weight
Seq Number:	3136282				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.02.2020 20:47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.02.2020 20:47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.02.2020 20:47	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.02.2020 20:47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.02.2020 20:47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.02.2020 20:47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.02.2020 20:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.02.2020 20:47	
4-Bromofluorobenzene	460-00-4	94	%	70-130	09.02.2020 20:47	

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COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **B-6** Matrix: Soil Date Received:09.02.2020 15:25

Lab Sample Id: 671676-006 Date Collected: 09.02.2020 07:20

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.02.2020 17:26 Basis: Wet Weight

Seq Number: 3136284

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**85.5**	9.92	mg/kg	09.02.2020 19:51		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.02.2020 17:15 Basis: Wet Weight

Seq Number: 3136278

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	09.02.2020 19:46	U	1
Diesel Range Organics	C10C28DRO	<50.1	50.1	mg/kg	09.02.2020 19:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.02.2020 19:46	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.02.2020 19:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	131	%	70-135	09.02.2020 19:46	
o-Terphenyl	84-15-1	142	%	70-135	09.02.2020 19:46	**

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COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**B-6**	Matrix:	Soil	Date Received:	09.02.2020 15:25
Lab Sample Id:	671676-006	Date Collected:	09.02.2020 07:20		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.02.2020 16:43	Basis:	Wet Weight
Seq Number:	3136282				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.02.2020 21:10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.02.2020 21:10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.02.2020 21:10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.02.2020 21:10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.02.2020 21:10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.02.2020 21:10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.02.2020 21:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	09.02.2020 21:10	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.02.2020 21:10	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 671676

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COG Operating LLC

Skittles Fed #2

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3136283 — Matrix: Solid — Date Prep: 09.02.2020
MB Sample Id: 7710696-1-BLK — LCS Sample Id: 7710696-1-BKS — LCSD Sample Id: 7710696-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	266	106	268	107	90-110	1	20	mg/kg	09.02.2020 16:08	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3136284 — Matrix: Solid — Date Prep: 09.02.2020
MB Sample Id: 7710697-1-BLK — LCS Sample Id: 7710697-1-BKS — LCSD Sample Id: 7710697-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	267	107	270	108	90-110	1	20	mg/kg	09.02.2020 19:12	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3136283 — Matrix: Soil — Date Prep: 09.02.2020
Parent Sample Id: 671625-001 — MS Sample Id: 671625-001 S — MSD Sample Id: 671625-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	325	200	533	104	533	104	90-110	0	20	mg/kg	09.02.2020 16:25	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3136283 — Matrix: Soil — Date Prep: 09.02.2020
Parent Sample Id: 671630-007 — MS Sample Id: 671630-007 S — MSD Sample Id: 671630-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	215	199	420	103	420	103	90-110	0	20	mg/kg	09.02.2020 17:43	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3136284 — Matrix: Soil — Date Prep: 09.02.2020
Parent Sample Id: 671676-003 — MS Sample Id: 671676-003 S — MSD Sample Id: 671676-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	404	200	609	103	611	104	90-110	0	20	mg/kg	09.02.2020 19:29	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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QC Summary 671676

COG Operating LLC

Skittles Fed #2

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3136233 — Matrix: Solid — Date Prep: 09.02.2020
MB Sample Id: 7710673-1-BLK — LCS Sample Id: 7710673-1-BKS — LCSD Sample Id: 7710673-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	832	83	823	82	70-135	1	35	mg/kg	09.02.2020 11:50	
Diesel Range Organics	<50.0	1000	940	94	920	92	70-135	2	35	mg/kg	09.02.2020 11:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		111		108		70-135	%	09.02.2020 11:50
o-Terphenyl	100		110		107		70-135	%	09.02.2020 11:50

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3136278 — Matrix: Solid — Date Prep: 09.02.2020
MB Sample Id: 7710725-1-BLK — LCS Sample Id: 7710725-1-BKS — LCSD Sample Id: 7710725-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	1010	101	991	99	70-135	2	35	mg/kg	09.02.2020 17:25	
Diesel Range Organics	<50.0	1000	1110	111	1090	109	70-135	2	35	mg/kg	09.02.2020 17:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		126		129		70-135	%	09.02.2020 17:25
o-Terphenyl	127		125		123		70-135	%	09.02.2020 17:25

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3136233 — Matrix: Solid — Date Prep: 09.02.2020
MB Sample Id: 7710673-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.02.2020 11:30	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3136278 — Matrix: Solid — Date Prep: 09.02.2020
MB Sample Id: 7710725-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.02.2020 17:05	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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QC Summary 671676

COG Operating LLC

Skittles Fed #2

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3136233 — Matrix: Soil — Date Prep: 09.02.2020
Parent Sample Id: 671640-001 — MS Sample Id: 671640-001 S — MSD Sample Id: 671640-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<49.9	998	835	84	813	81	70-135	3	35	mg/kg	09.02.2020 15:03	
Diesel Range Organics	<49.9	998	939	94	922	92	70-135	2	35	mg/kg	09.02.2020 15:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		111		70-135	%	09.02.2020 15:03
o-Terphenyl	113		110		70-135	%	09.02.2020 15:03

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3136278 — Matrix: Soil — Date Prep: 09.02.2020
Parent Sample Id: 671676-003 — MS Sample Id: 671676-003 S — MSD Sample Id: 671676-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<49.8	996	961	96	984	97	70-135	2	35	mg/kg	09.02.2020 18:25	
Diesel Range Organics	<49.8	996	1100	110	1010	100	70-135	9	35	mg/kg	09.02.2020 18:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		128		70-135	%	09.02.2020 18:25
o-Terphenyl	126		127		70-135	%	09.02.2020 18:25

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3136275 — Matrix: Solid — Date Prep: 09.02.2020
MB Sample Id: 7710698-1-BLK — LCS Sample Id: 7710698-1-BKS — LCSD Sample Id: 7710698-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0961	96	0.0968	97	70-130	1	35	mg/kg	09.02.2020 16:14	
Toluene	<0.00200	0.100	0.0905	91	0.0925	93	70-130	2	35	mg/kg	09.02.2020 16:14	
Ethylbenzene	<0.00200	0.100	0.0942	94	0.0961	96	71-129	2	35	mg/kg	09.02.2020 16:14	
m,p-Xylenes	<0.00400	0.200	0.190	95	0.194	97	70-135	2	35	mg/kg	09.02.2020 16:14	
o-Xylene	<0.00200	0.100	0.0954	95	0.0975	98	71-133	2	35	mg/kg	09.02.2020 16:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		101		70-130	%	09.02.2020 16:14
4-Bromofluorobenzene	98		92		92		70-130	%	09.02.2020 16:14

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 671676

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COG Operating LLC

Skittles Fed #2

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3136282 — Matrix: Solid — Date Prep: 09.02.2020
MB Sample Id: 7710699-1-BLK — LCS Sample Id: 7710699-1-BKS — LCSD Sample Id: 7710699-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.104	104	0.105	105	70-130	1	35	mg/kg	09.02.2020 17:59	
Toluene	<0.00200	0.100	0.0998	100	0.101	101	70-130	1	35	mg/kg	09.02.2020 17:59	
Ethylbenzene	<0.00200	0.100	0.0928	93	0.0938	94	71-129	1	35	mg/kg	09.02.2020 17:59	
m,p-Xylenes	<0.00400	0.200	0.187	94	0.189	95	70-135	1	35	mg/kg	09.02.2020 17:59	
o-Xylene	<0.00200	0.100	0.0933	93	0.0944	94	71-133	1	35	mg/kg	09.02.2020 17:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		98		100		70-130	%	09.02.2020 17:59
4-Bromofluorobenzene	87		88		85		70-130	%	09.02.2020 17:59

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3136275 — Matrix: Soil — Date Prep: 09.02.2020
Parent Sample Id: 671625-001 — MS Sample Id: 671625-001 S — MSD Sample Id: 671625-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0927	93	0.105	105	70-130	12	35	mg/kg	09.03.2020 01:54	
Toluene	<0.00199	0.0994	0.0863	87	0.0963	96	70-130	11	35	mg/kg	09.03.2020 01:54	
Ethylbenzene	<0.00199	0.0994	0.0903	91	0.0943	94	71-129	4	35	mg/kg	09.03.2020 01:54	
m,p-Xylenes	<0.00398	0.199	0.178	89	0.185	93	70-135	4	35	mg/kg	09.03.2020 01:54	
o-Xylene	<0.00199	0.0994	0.0912	92	0.0897	90	71-133	2	35	mg/kg	09.03.2020 01:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		101		70-130	%	09.03.2020 01:54
4-Bromofluorobenzene	91		88		70-130	%	09.03.2020 01:54

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3136282 — Matrix: Soil — Date Prep: 09.02.2020
Parent Sample Id: 671676-003 — MS Sample Id: 671676-003 S — MSD Sample Id: 671676-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.123	123	0.100	100	70-130	21	35	mg/kg	09.02.2020 18:44	
Toluene	<0.00200	0.0998	0.117	117	0.0947	95	70-130	21	35	mg/kg	09.02.2020 18:44	
Ethylbenzene	<0.00200	0.0998	0.109	109	0.0828	83	71-129	27	35	mg/kg	09.02.2020 18:44	
m,p-Xylenes	<0.00399	0.200	0.219	110	0.166	83	70-135	28	35	mg/kg	09.02.2020 18:44	
o-Xylene	<0.00200	0.0998	0.107	107	0.0828	83	71-133	26	35	mg/kg	09.02.2020 18:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		99		70-130	%	09.02.2020 18:44
4-Bromofluorobenzene	89		89		70-130	%	09.02.2020 18:44

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Analysis Request of Chain of Custody Record

CONCHO

One Concho Center/600/Illinois Avenue/Midland, Texas
Tel (432) 683-7443

671676

Client Name: COG-Artesia

Site Manager: Sheldon Hitchcock

Project Name: Smith Fed #2

Project Location: (county, state) Eddy, NM

Project #:

Invoice to: Sheldon Hitchcock

Receiving Laboratory:

Sampler Name: Sheldon Hitchcock

Comments:

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	# CONTAINERS	(C)omposite/(G)rab	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	B-1	9/2	7:10		X			X	1	C	X	X	X	
	B-2	"	7:12		X			X	1	C	"	"	"	
	B-3	"	7:14		X			X	1	C	"	"	"	
	B-4	"	7:16		X			X	1	C	"	"	"	
	B-5	"	7:18		X			X	1	C	"	"	"	
	B-6	"	7:20		X			X	1	C	"	"	"	

ANALYSIS REQUEST (Circle or Specify Method No.)

Relinquished by: Date: Time:

Received by: Cloe Clifton 9.2.20 15:25

Relinquished by: Date: Time:

Received by: Date: Time:

Relinquished by: Date: Time:

Received by: Date: Time:

LAB USE ONLY

Sample Temperature 3.2/3.0

REMARKS:

RUSH: Same Day 24 hr 48 hr 72 hr

Rush Charges Authorized

Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

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Certificate of Analysis Summary 671895

COG Operating LLC, Artesia, NM

Project Name: Skittles Fed #2

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 09.04.2020 12:06

Report Date: 09.09.2020 09:47

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	671895-001		671895-002		671895-003		671895-004		671895-005		671895-006	
	Field Id:	B-7		B-8		B-9		B-10		B-11		B-12	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	09.04.2020 09:15		09.04.2020 09:20		09.04.2020 09:25		09.04.2020 09:30		09.04.2020 09:32		09.04.2020 09:34	
BTEX by EPA 8021B	***Extracted:***	09.04.2020 14:39		09.04.2020 14:39		09.04.2020 14:39		09.04.2020 14:39		09.04.2020 14:39		09.04.2020 14:39	
	Analyzed:	09.04.2020 21:28		09.04.2020 21:51		09.04.2020 22:13		09.04.2020 22:36		09.04.2020 22:58		09.04.2020 23:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
m,p-Xylenes		<0.00400	0.00400	<0.00398	0.00398	<0.00401	0.00401	<0.00401	0.00401	<0.00403	0.00403	<0.00396	0.00396
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
Chloride by EPA 300	***Extracted:***	09.04.2020 14:33		09.04.2020 14:33		09.04.2020 14:33		09.04.2020 14:33		09.04.2020 14:33		09.04.2020 14:33	
	Analyzed:	09.04.2020 14:48		09.04.2020 14:53		09.04.2020 15:10		09.04.2020 15:16		09.04.2020 15:21		09.04.2020 15:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		521	10.1	546	9.92	502	9.92	434	9.98	705	10.0	509	9.92
TPH By SW8015 Mod	***Extracted:***	09.04.2020 14:30		09.04.2020 14:30		09.04.2020 14:30		09.04.2020 14:30		09.04.2020 14:30		09.04.2020 14:30	
	Analyzed:	09.04.2020 16:17		09.04.2020 16:37		09.04.2020 16:58		09.04.2020 17:19		09.04.2020 17:39		09.04.2020 17:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<50.1	50.1	<50.1	50.1	<50.3	50.3	<50.0	50.0	<49.9	49.9	<50.2	50.2
Diesel Range Organics		<50.1	50.1	<50.1	50.1	<50.3	50.3	<50.0	50.0	<49.9	49.9	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.1	50.1	<50.3	50.3	<50.0	50.0	<49.9	49.9	<50.2	50.2
Total TPH		<50.1	50.1	<50.1	50.1	<50.3	50.3	<50.0	50.0	<49.9	49.9	<50.2	50.2

BRL - Below Reporting Limit

Jessica Kramer

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Certificate of Analysis Summary 671895

COG Operating LLC, Artesia, NM

Project Name: Skittles Fed #2

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 09.04.2020 12:06

Report Date: 09.09.2020 09:47

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	671895-007		671895-008		671895-009		671895-010		671895-011		671895-012	
	Field Id:	B-13		B-14		B-15		B-16		B-17		B-18	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	09.04.2020 09:36		09.04.2020 09:38		09.04.2020 09:40		09.04.2020 09:42		09.04.2020 09:46		09.04.2020 09:48	
BTEX by EPA 8021B	***Extracted:***	09.04.2020 14:39		09.04.2020 14:39		09.04.2020 14:39		09.04.2020 14:39		09.04.2020 14:30		09.04.2020 14:30	
	Analyzed:	09.04.2020 23:43		09.05.2020 00:05		09.05.2020 00:28		09.05.2020 00:50		09.05.2020 04:34		09.05.2020 04:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00396	0.00396	<0.00399	0.00399	<0.00398	0.00398	<0.00401	0.00401	<0.00399	0.00399	<0.00398	0.00398
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	09.04.2020 14:33		09.04.2020 14:33		09.04.2020 14:33		09.04.2020 14:33		09.04.2020 14:33		09.04.2020 14:33	
	Analyzed:	09.04.2020 15:33		09.04.2020 15:38		09.04.2020 15:55		09.04.2020 16:00		09.04.2020 16:17		09.04.2020 16:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		191	9.98	152	9.92	187	9.98	172	9.98	179	9.96	165	9.96
TPH By SW8015 Mod	***Extracted:***	09.04.2020 14:30		09.04.2020 16:10		09.04.2020 16:10		09.04.2020 16:10		09.04.2020 16:10		09.04.2020 16:10	
	Analyzed:	09.04.2020 18:19		09.04.2020 21:41		09.04.2020 22:42		09.04.2020 23:02		09.04.2020 23:22		09.04.2020 23:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.3	50.3	<50.0	50.0	<49.8	49.8
Diesel Range Organics		<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.3	50.3	<50.0	50.0	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.3	50.3	<50.0	50.0	<49.8	49.8
Total TPH		<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.3	50.3	<50.0	50.0	<49.8	49.8

BRL - Below Reporting Limit

Jessica Kramer

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Certificate of Analysis Summary 671895

COG Operating LLC, Artesia, NM

Project Name: Skittles Fed #2

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 09.04.2020 12:06

Report Date: 09.09.2020 09:47

Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	671895-013		671895-014		671895-015					
	Field Id:	B-19		B-20		B-21					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	09.04.2020 09:50		09.04.2020 09:52		09.04.2020 09:54					
BTEX by EPA 8021B	***Extracted:***	09.04.2020 14:30		09.04.2020 14:30		09.04.2020 14:30					
	Analyzed:	09.05.2020 05:18		09.05.2020 05:41		09.05.2020 06:03					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401	<0.00399	0.00399				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	09.04.2020 14:33		09.04.2020 14:33		09.04.2020 14:33					
	Analyzed:	09.04.2020 16:28		09.04.2020 16:34		09.04.2020 16:39					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		202	9.98	176	9.92	164	9.98				
TPH By SW8015 Mod	***Extracted:***	09.04.2020 16:10		09.04.2020 16:10		09.04.2020 16:10					
	Analyzed:	09.05.2020 00:02		09.05.2020 00:22		09.05.2020 00:43					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons		<49.8	49.8	<49.9	49.9	<50.0	50.0				
Diesel Range Organics		<49.8	49.8	<49.9	49.9	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<49.9	49.9	<50.0	50.0				
Total TPH		<49.8	49.8	<49.9	49.9	<50.0	50.0				

BRL - Below Reporting Limit

Jessica Kramer

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

eurofins | Environment Testing Xenco

Analytical Report 671895

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Skittles Fed #2

09.09.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

eurofins | Environment Testing Xenco

09.09.2020

Project Manager: **Sheldon Hitchcock**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **671895**
Skittles Fed #2
Project Address: Eddy County, New Mexico

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 671895. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 671895 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 671895

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
B-7	S	09.04.2020 09:15		671895-001
B-8	S	09.04.2020 09:20		671895-002
B-9	S	09.04.2020 09:25		671895-003
B-10	S	09.04.2020 09:30		671895-004
B-11	S	09.04.2020 09:32		671895-005
B-12	S	09.04.2020 09:34		671895-006
B-13	S	09.04.2020 09:36		671895-007
B-14	S	09.04.2020 09:38		671895-008
B-15	S	09.04.2020 09:40		671895-009
B-16	S	09.04.2020 09:42		671895-010
B-17	S	09.04.2020 09:46		671895-011
B-18	S	09.04.2020 09:48		671895-012
B-19	S	09.04.2020 09:50		671895-013
B-20	S	09.04.2020 09:52		671895-014
B-21	S	09.04.2020 09:54		671895-015

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CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Skittles Fed #2

Project ID:
Work Order Number(s): *671895*

Report Date: *09.09.2020*
Date Received: *09.04.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 671895

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id: **B-7** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-001 Date Collected: 09.04.2020 09:15

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**521**	10.1	mg/kg	09.04.2020 14:48		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 14:30 Basis: Wet Weight

Seq Number: 3136594

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	09.04.2020 16:17	U	1
Diesel Range Organics	C10C28DRO	<50.1	50.1	mg/kg	09.04.2020 16:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.04.2020 16:17	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.04.2020 16:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.04.2020 16:17	
o-Terphenyl	84-15-1	113	%	70-135	09.04.2020 16:17	

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Sample Id:	**B-7**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-001	Date Collected:	09.04.2020 09:15		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:39	Basis:	Wet Weight
Seq Number:	3136534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.04.2020 21:28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.04.2020 21:28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.04.2020 21:28	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.04.2020 21:28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.04.2020 21:28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.04.2020 21:28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.04.2020 21:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	09.04.2020 21:28	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.04.2020 21:28	

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Skittles Fed #2

Sample Id: **B-8** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-002 Date Collected: 09.04.2020 09:20

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**546**	9.92	mg/kg	09.04.2020 14:53		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 14:30 Basis: Wet Weight

Seq Number: 3136594

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	09.04.2020 16:37	U	1
Diesel Range Organics	C10C28DRO	<50.1	50.1	mg/kg	09.04.2020 16:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.04.2020 16:37	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.04.2020 16:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.04.2020 16:37	
o-Terphenyl	84-15-1	110	%	70-135	09.04.2020 16:37	

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Sample Id:	**B-8**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-002	Date Collected:	09.04.2020 09:20		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:39	Basis:	Wet Weight
Seq Number:	3136534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.04.2020 21:51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.04.2020 21:51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.04.2020 21:51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.04.2020 21:51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.04.2020 21:51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.04.2020 21:51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.04.2020 21:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	09.04.2020 21:51	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.04.2020 21:51	

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Skittles Fed #2

Sample Id: **B-9** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-003 Date Collected: 09.04.2020 09:25

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**502**	9.92	mg/kg	09.04.2020 15:10		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 14:30 Basis: Wet Weight

Seq Number: 3136594

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.3	50.3	mg/kg	09.04.2020 16:58	U	1
Diesel Range Organics	C10C28DRO	<50.3	50.3	mg/kg	09.04.2020 16:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	09.04.2020 16:58	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	09.04.2020 16:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.04.2020 16:58	
o-Terphenyl	84-15-1	113	%	70-135	09.04.2020 16:58	

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Sample Id:	**B-9**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-003	Date Collected:	09.04.2020 09:25		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:39	Basis:	Wet Weight
Seq Number:	3136534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.04.2020 22:13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.04.2020 22:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.04.2020 22:13	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.04.2020 22:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.04.2020 22:13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.04.2020 22:13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.04.2020 22:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.04.2020 22:13	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.04.2020 22:13	

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Skittles Fed #2

Sample Id: **B-10** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-004 Date Collected: 09.04.2020 09:30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**434**	9.98	mg/kg	09.04.2020 15:16		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 14:30 Basis: Wet Weight

Seq Number: 3136594

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.04.2020 17:19	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.04.2020 17:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.04.2020 17:19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.04.2020 17:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	09.04.2020 17:19	
o-Terphenyl	84-15-1	109	%	70-135	09.04.2020 17:19	

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Sample Id:	**B-10**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-004	Date Collected:	09.04.2020 09:30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:39	Basis:	Wet Weight
Seq Number:	3136534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.04.2020 22:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.04.2020 22:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.04.2020 22:36	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.04.2020 22:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.04.2020 22:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.04.2020 22:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.04.2020 22:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.04.2020 22:36	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.04.2020 22:36	

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Skittles Fed #2

Sample Id: **B-11** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-005 Date Collected: 09.04.2020 09:32

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**705**	10.0	mg/kg	09.04.2020 15:21		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 14:30 Basis: Wet Weight

Seq Number: 3136594

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.04.2020 17:39	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.04.2020 17:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.04.2020 17:39	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.04.2020 17:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	09.04.2020 17:39	
o-Terphenyl	84-15-1	131	%	70-135	09.04.2020 17:39	

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Skittles Fed #2

Sample Id:	**B-11**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-005	Date Collected:	09.04.2020 09:32		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:39	Basis:	Wet Weight
Seq Number:	3136534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.04.2020 22:58	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.04.2020 22:58	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.04.2020 22:58	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.04.2020 22:58	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.04.2020 22:58	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.04.2020 22:58	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.04.2020 22:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	09.04.2020 22:58	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.04.2020 22:58	

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Skittles Fed #2

Sample Id: **B-12** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-006 Date Collected: 09.04.2020 09:34

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**509**	9.92	mg/kg	09.04.2020 15:27		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 14:30 Basis: Wet Weight

Seq Number: 3136594

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	09.04.2020 17:59	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	09.04.2020 17:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.04.2020 17:59	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.04.2020 17:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	09.04.2020 17:59	
o-Terphenyl	84-15-1	104	%	70-135	09.04.2020 17:59	

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Sample Id:	**B-12**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-006	Date Collected:	09.04.2020 09:34		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:39	Basis:	Wet Weight
Seq Number:	3136534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.04.2020 23:21	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.04.2020 23:21	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.04.2020 23:21	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.04.2020 23:21	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.04.2020 23:21	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.04.2020 23:21	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.04.2020 23:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.04.2020 23:21	
4-Bromofluorobenzene	460-00-4	89	%	70-130	09.04.2020 23:21	

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Sample Id: **B-13** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-007 Date Collected: 09.04.2020 09:36

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**191**	9.98	mg/kg	09.04.2020 15:33		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 14:30 Basis: Wet Weight

Seq Number: 3136594

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	09.04.2020 18:19	U	1
Diesel Range Organics	C10C28DRO	<50.1	50.1	mg/kg	09.04.2020 18:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.04.2020 18:19	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.04.2020 18:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.04.2020 18:19	
o-Terphenyl	84-15-1	107	%	70-135	09.04.2020 18:19	

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Sample Id:	**B-13**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-007	Date Collected:	09.04.2020 09:36		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:39	Basis:	Wet Weight
Seq Number:	3136534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.04.2020 23:43	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.04.2020 23:43	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.04.2020 23:43	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.04.2020 23:43	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.04.2020 23:43	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.04.2020 23:43	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.04.2020 23:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	09.04.2020 23:43	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.04.2020 23:43	

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Skittles Fed #2

Sample Id: **B-14** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-008 Date Collected: 09.04.2020 09:38

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**152**	9.92	mg/kg	09.04.2020 15:38		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 16:10 Basis: Wet Weight

Seq Number: 3136582

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	09.04.2020 21:41	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	09.04.2020 21:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.04.2020 21:41	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.04.2020 21:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	09.04.2020 21:41	
o-Terphenyl	84-15-1	111	%	70-135	09.04.2020 21:41	

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Sample Id:	**B-14**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-008	Date Collected:	09.04.2020 09:38		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:39	Basis:	Wet Weight
Seq Number:	3136534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.05.2020 00:05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.05.2020 00:05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.05.2020 00:05	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.05.2020 00:05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.05.2020 00:05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.05.2020 00:05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.05.2020 00:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.05.2020 00:05	
4-Bromofluorobenzene	460-00-4	89	%	70-130	09.05.2020 00:05	

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Skittles Fed #2

Sample Id: **B-15** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-009 Date Collected: 09.04.2020 09:40

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**187**	9.98	mg/kg	09.04.2020 15:55		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 16:10 Basis: Wet Weight

Seq Number: 3136582

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	09.04.2020 22:42	U	1
Diesel Range Organics	C10C28DRO	<50.1	50.1	mg/kg	09.04.2020 22:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.04.2020 22:42	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.04.2020 22:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	09.04.2020 22:42	
o-Terphenyl	84-15-1	106	%	70-135	09.04.2020 22:42	

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Skittles Fed #2

Sample Id:	**B-15**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-009	Date Collected:	09.04.2020 09:40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:39	Basis:	Wet Weight
Seq Number:	3136534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.05.2020 00:28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.05.2020 00:28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.05.2020 00:28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.05.2020 00:28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.05.2020 00:28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.05.2020 00:28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.05.2020 00:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	09.05.2020 00:28	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.05.2020 00:28	

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Skittles Fed #2

Sample Id: **B-16** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-010 Date Collected: 09.04.2020 09:42

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**172**	9.98	mg/kg	09.04.2020 16:00		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 16:10 Basis: Wet Weight

Seq Number: 3136582

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.3	50.3	mg/kg	09.04.2020 23:02	U	1
Diesel Range Organics	C10C28DRO	<50.3	50.3	mg/kg	09.04.2020 23:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	09.04.2020 23:02	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	09.04.2020 23:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.04.2020 23:02	
o-Terphenyl	84-15-1	107	%	70-135	09.04.2020 23:02	

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Skittles Fed #2

Sample Id:	**B-16**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-010	Date Collected:	09.04.2020 09:42		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:39	Basis:	Wet Weight
Seq Number:	3136534				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.05.2020 00:50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.05.2020 00:50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.05.2020 00:50	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.05.2020 00:50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.05.2020 00:50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.05.2020 00:50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.05.2020 00:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	09.05.2020 00:50	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.05.2020 00:50	

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Skittles Fed #2

Sample Id: **B-17** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-011 Date Collected: 09.04.2020 09:46

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**179**	9.96	mg/kg	09.04.2020 16:17		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 16:10 Basis: Wet Weight

Seq Number: 3136582

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.04.2020 23:22	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.04.2020 23:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.04.2020 23:22	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.04.2020 23:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	09.04.2020 23:22	
o-Terphenyl	84-15-1	107	%	70-135	09.04.2020 23:22	

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Skittles Fed #2

Sample Id:	**B-17**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-011	Date Collected:	09.04.2020 09:46		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:30	Basis:	Wet Weight
Seq Number:	3136535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.05.2020 04:34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.05.2020 04:34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.05.2020 04:34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.05.2020 04:34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.05.2020 04:34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.05.2020 04:34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.05.2020 04:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.05.2020 04:34	
4-Bromofluorobenzene	460-00-4	88	%	70-130	09.05.2020 04:34	

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Skittles Fed #2

Sample Id: **B-18** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-012 Date Collected: 09.04.2020 09:48

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**165**	9.96	mg/kg	09.04.2020 16:23		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 16:10 Basis: Wet Weight

Seq Number: 3136582

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.04.2020 23:42	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.04.2020 23:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.04.2020 23:42	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.04.2020 23:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.04.2020 23:42	
o-Terphenyl	84-15-1	106	%	70-135	09.04.2020 23:42	

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COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**B-18**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-012	Date Collected:	09.04.2020 09:48		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:30	Basis:	Wet Weight
Seq Number:	3136535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.05.2020 04:56	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.05.2020 04:56	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.05.2020 04:56	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.05.2020 04:56	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.05.2020 04:56	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.05.2020 04:56	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.05.2020 04:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	09.05.2020 04:56	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.05.2020 04:56	

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Skittles Fed #2

Sample Id: **B-19** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-013 Date Collected: 09.04.2020 09:50

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**202**	9.98	mg/kg	09.04.2020 16:28		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 16:10 Basis: Wet Weight

Seq Number: 3136582

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.05.2020 00:02	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.05.2020 00:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.05.2020 00:02	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.05.2020 00:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.05.2020 00:02	
o-Terphenyl	84-15-1	111	%	70-135	09.05.2020 00:02	

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Skittles Fed #2

Sample Id:	**B-19**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-013	Date Collected:	09.04.2020 09:50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:30	Basis:	Wet Weight
Seq Number:	3136535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.05.2020 05:18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.05.2020 05:18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.05.2020 05:18	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.05.2020 05:18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.05.2020 05:18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.05.2020 05:18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.05.2020 05:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	09.05.2020 05:18	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.05.2020 05:18	

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Skittles Fed #2

Sample Id: **B-20** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-014 Date Collected: 09.04.2020 09:52

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**176**	9.92	mg/kg	09.04.2020 16:34		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 16:10 Basis: Wet Weight

Seq Number: 3136582

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.05.2020 00:22	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.05.2020 00:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.05.2020 00:22	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.05.2020 00:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.05.2020 00:22	
o-Terphenyl	84-15-1	113	%	70-135	09.05.2020 00:22	

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Skittles Fed #2

Sample Id:	**B-20**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-014	Date Collected:	09.04.2020 09:52		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:30	Basis:	Wet Weight
Seq Number:	3136535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.05.2020 05:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.05.2020 05:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.05.2020 05:41	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.05.2020 05:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.05.2020 05:41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.05.2020 05:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.05.2020 05:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	09.05.2020 05:41	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.05.2020 05:41	

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Skittles Fed #2

Sample Id: **B-21** Matrix: Soil Date Received:09.04.2020 12:06

Lab Sample Id: 671895-015 Date Collected: 09.04.2020 09:54

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 09.04.2020 14:33 Basis: Wet Weight

Seq Number: 3136471

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**164**	9.98	mg/kg	09.04.2020 16:39		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 09.04.2020 16:10 Basis: Wet Weight

Seq Number: 3136582

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.05.2020 00:43	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.05.2020 00:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.05.2020 00:43	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.05.2020 00:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	09.05.2020 00:43	
o-Terphenyl	84-15-1	110	%	70-135	09.05.2020 00:43	

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Sample Id:	**B-21**	Matrix:	Soil	Date Received:	09.04.2020 12:06
Lab Sample Id:	671895-015	Date Collected:	09.04.2020 09:54		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.04.2020 14:30	Basis:	Wet Weight
Seq Number:	3136535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.05.2020 06:03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.05.2020 06:03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.05.2020 06:03	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.05.2020 06:03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.05.2020 06:03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.05.2020 06:03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.05.2020 06:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.05.2020 06:03	
4-Bromofluorobenzene	460-00-4	95	%	70-130	09.05.2020 06:03	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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QC Summary 671895

COG Operating LLC

Skittles Fed #2

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3136471 — Matrix: Solid — Date Prep: 09.04.2020
MB Sample Id: 7710858-1-BLK — LCS Sample Id: 7710858-1-BKS — LCSD Sample Id: 7710858-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	266	106	268	107	90-110	1	20	mg/kg	09.04.2020 14:09	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3136471 — Matrix: Soil — Date Prep: 09.04.2020
Parent Sample Id: 671892-001 — MS Sample Id: 671892-001 S — MSD Sample Id: 671892-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	566	199	768	102	766	101	90-110	0	20	mg/kg	09.04.2020 14:25	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3136471 — Matrix: Soil — Date Prep: 09.04.2020
Parent Sample Id: 671895-008 — MS Sample Id: 671895-008 S — MSD Sample Id: 671895-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	152	200	358	103	358	103	90-110	0	20	mg/kg	09.04.2020 15:44	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3136594 — Matrix: Solid — Date Prep: 09.04.2020
MB Sample Id: 7710811-1-BLK — LCS Sample Id: 7710811-1-BKS — LCSD Sample Id: 7710811-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	872	87	859	86	70-135	2	35	mg/kg	09.04.2020 10:53	
Diesel Range Organics	<50.0	1000	1000	100	978	98	70-135	2	35	mg/kg	09.04.2020 10:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		117		115		70-135	%	09.04.2020 10:53
o-Terphenyl	106		118		114		70-135	%	09.04.2020 10:53

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3136582 — Matrix: Solid — Date Prep: 09.04.2020
MB Sample Id: 7710887-1-BLK — LCS Sample Id: 7710887-1-BKS — LCSD Sample Id: 7710887-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	909	91	907	91	70-135	0	35	mg/kg	09.04.2020 21:01	
Diesel Range Organics	<50.0	1000	1080	108	1060	106	70-135	2	35	mg/kg	09.04.2020 21:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		124		121		70-135	%	09.04.2020 21:01
o-Terphenyl	113		123		121		70-135	%	09.04.2020 21:01

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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QC Summary 671895

COG Operating LLC

Skittles Fed #2

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3136594 Matrix: Solid Date Prep: 09.04.2020
MB Sample Id: 7710811-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.04.2020 10:33	

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3136582 Matrix: Solid Date Prep: 09.04.2020
MB Sample Id: 7710887-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.04.2020 20:41	

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3136594 Matrix: Soil Date Prep: 09.04.2020
Parent Sample Id: 671826-007 MS Sample Id: 671826-007 S MSD Sample Id: 671826-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.2	1000	836	84	822	81	70-135	2	35	mg/kg	09.04.2020 11:54	
Diesel Range Organics	<50.2	1000	959	96	964	95	70-135	1	35	mg/kg	09.04.2020 11:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		114		70-135	%	09.04.2020 11:54
o-Terphenyl	112		111		70-135	%	09.04.2020 11:54

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3136582 Matrix: Soil Date Prep: 09.04.2020
Parent Sample Id: 671895-008 MS Sample Id: 671895-008 S MSD Sample Id: 671895-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	999	907	91	915	92	70-135	1	35	mg/kg	09.04.2020 22:02	
Diesel Range Organics	<50.0	999	1050	105	1060	106	70-135	1	35	mg/kg	09.04.2020 22:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		131		70-135	%	09.04.2020 22:02
o-Terphenyl	127		130		70-135	%	09.04.2020 22:02

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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QC Summary 671895

COG Operating LLC

Skittles Fed #2

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3136535 — Matrix: Solid — Date Prep: 09.04.2020
MB Sample Id: 7710861-1-BLK — LCS Sample Id: 7710861-1-BKS — LCSD Sample Id: 7710861-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.108	108	0.102	102	70-130	6	35	mg/kg	09.05.2020 02:31	
Toluene	<0.00200	0.100	0.102	102	0.0966	97	70-130	5	35	mg/kg	09.05.2020 02:31	
Ethylbenzene	<0.00200	0.100	0.0935	94	0.0885	89	71-129	5	35	mg/kg	09.05.2020 02:31	
m,p-Xylenes	<0.00400	0.200	0.187	94	0.178	89	70-135	5	35	mg/kg	09.05.2020 02:31	
o-Xylene	<0.00200	0.100	0.0942	94	0.0895	90	71-133	5	35	mg/kg	09.05.2020 02:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		100		70-130	%	09.05.2020 02:31
4-Bromofluorobenzene	87		86		86		70-130	%	09.05.2020 02:31

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3136534 — Matrix: Solid — Date Prep: 09.04.2020
MB Sample Id: 7710860-1-BLK — LCS Sample Id: 7710860-1-BKS — LCSD Sample Id: 7710860-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0922	92	0.112	112	70-130	19	35	mg/kg	09.04.2020 15:08	
Toluene	<0.00200	0.100	0.0880	88	0.107	107	70-130	19	35	mg/kg	09.04.2020 15:08	
Ethylbenzene	<0.00200	0.100	0.0817	82	0.0988	99	71-129	19	35	mg/kg	09.04.2020 15:08	
m,p-Xylenes	<0.00400	0.200	0.164	82	0.199	100	70-135	19	35	mg/kg	09.04.2020 15:08	
o-Xylene	<0.00200	0.100	0.0817	82	0.0990	99	71-133	19	35	mg/kg	09.04.2020 15:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		99		70-130	%	09.04.2020 15:08
4-Bromofluorobenzene	91		91		86		70-130	%	09.04.2020 15:08

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3136535 — Matrix: Soil — Date Prep: 09.04.2020
Parent Sample Id: 671895-011 — MS Sample Id: 671895-011 S — MSD Sample Id: 671895-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.107	107	0.0980	98	70-130	9	35	mg/kg	09.05.2020 03:16	
Toluene	<0.00200	0.100	0.103	103	0.0945	95	70-130	9	35	mg/kg	09.05.2020 03:16	
Ethylbenzene	<0.00200	0.100	0.0953	95	0.0876	88	71-129	8	35	mg/kg	09.05.2020 03:16	
m,p-Xylenes	<0.00401	0.200	0.192	96	0.177	89	70-135	8	35	mg/kg	09.05.2020 03:16	
o-Xylene	<0.00200	0.100	0.0960	96	0.0882	88	71-133	8	35	mg/kg	09.05.2020 03:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	09.05.2020 03:16
4-Bromofluorobenzene	88		92		70-130	%	09.05.2020 03:16

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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QC Summary 671895

COG Operating LLC

Skittles Fed #2

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3136534 Matrix: Soil Date Prep: 09.04.2020

Parent Sample Id: 671855-001 MS Sample Id: 671855-001 S MSD Sample Id: 671855-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0896	89	0.0997	100	70-130	11	35	mg/kg	09.05.2020 06:26	
Toluene	<0.00202	0.101	0.0858	85	0.0946	95	70-130	10	35	mg/kg	09.05.2020 06:26	
Ethylbenzene	<0.00202	0.101	0.0803	80	0.0867	87	71-129	8	35	mg/kg	09.05.2020 06:26	
m,p-Xylenes	<0.00403	0.202	0.160	79	0.174	87	70-135	8	35	mg/kg	09.05.2020 06:26	
o-Xylene	<0.00202	0.101	0.0802	79	0.0874	87	71-133	9	35	mg/kg	09.05.2020 06:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		70-130	%	09.05.2020 06:26
4-Bromofluorobenzene	87		91		70-130	%	09.05.2020 06:26

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Analysis Request of Chain of Custody Record

Page 1 of 2

CONCHO

One Concho Center/600/Illinois Avenue/Midland, Texas
Tel (432) 683-7443

671895

Client Name: COG-Artesia	Site Manager: Sheldon Hitchcock
Project Name: Grittles Fed #2	
Project Location: (county, state) Eddy, NM	Project #:
Invoice to: Sheldon Hitchcock	
Receiving Laboratory: Xenco	Sampler Name: Sheldon Hitchcock
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	# CONTAINERS	(C)omposite/(G)rab	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	B-7	9/4	9:15		X			X	1	C	X	X	X	
	B-8		9:20											
	B-9		9:25											
	B-10		9:30											
	B-11		9:32											
	B-12		9:34											
	B-13		9:36											
	B-14		9:38											
	B-15		9:40											
	B-16		9:42											

ANALYSIS REQUEST (Circle or Specify Method No.)

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Shelton Hitchcock			Cloe Cayton	9.4.20	12:06
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature 3.0/2.8

REMARKS:

- [X] RUSH: Same Day 24 hr (48 hr) 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

Page 2 of 2

CONCHO

One Concho Center/600/Illinois Avenue/Midland, Texas
Tel (432) 683-7443

671895

Client Name: COG-Artesia

Site Manager: Sheldon Hitchcock

Project Name: Skittles Fed #2

Project Location: (county, state) Eddy, NM

Project #:

Invoice to: Sheldon Hitchcock

Receiving Laboratory: Xenco

Sampler Name: Sheldon Hitchcock

Comments:

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	# CONTAINERS	(C)omposite/(G)rab	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	B-17	9/4	9:46		X			X	1	C	X	X	X	
	B-18		9:48		X			X	1	C	X	X	X	
	B-19		9:50		X			X	1	C	X	X	X	
	B-20		9:52		X			X	1	C	X	X	X	
	B-21		9:54		X			X	1	C	X	X	X	

ANALYSIS REQUEST (Circle or Specify Method No.)

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			Cloe Cuthra	9.4.20	12:06
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature 3.0/2.8

REMARKS:

- [X] RUSH: Same Day 24 hr (48 hr) 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 09.04.2020 12.06.00 PM

Work Order #: 671895

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	Samples received in bulk containers.
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Cloe Clifton Date: 09.04.2020

Checklist reviewed by: Jessica Kramer Date: 09.08.2020

Jessica Kramer

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Certificate of Analysis Summary 672164

COG Operating LLC, Artesia, NM

Project Name: Skittles Fed #2

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy County

Date Received in Lab: Wed 09.09.2020 15:07

Report Date: 09.10.2020 10:41

Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	672164-001					
	Field Id:	B-11					
	Depth:						
	Matrix:	SOIL					
	Sampled:	09.09.2020 14:50					
Chloride by EPA 300	***Extracted:***	09.09.2020 15:36					
	Analyzed:	09.09.2020 17:13					
	Units/RL:	mg/kg	RL				
Chloride		117	9.94				

BRL - Below Reporting Limit

Jessica Kramer

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Analytical Report 672164

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Skittles Fed #2

09.10.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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09.10.2020

Project Manager: **Sheldon Hitchcock**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **672164**
Skittles Fed #2
Project Address: Eddy County

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 672164. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 672164 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 672164

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
B-11	S	09.09.2020 14:50		672164-001

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CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Skittles Fed #2

Project ID:
Work Order Number(s): *672164*

Report Date: *09.10.2020*
Date Received: *09.09.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 672164

COG Operating LLC, Artesia, NM

Skittles Fed #2

Sample Id:	**B-11**	Matrix:	Soil	Date Received:	09.09.2020 15:07
Lab Sample Id:	672164-001	Date Collected:	09.09.2020 14:50		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.09.2020 15:36	Basis:	Wet Weight
Seq Number:	3136730				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**117**	9.94	mg/kg	09.09.2020 17:13		1

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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QC Summary 672164

COG Operating LLC

Skittles Fed #2

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3136730 Matrix: Solid Date Prep: 09.09.2020

MB Sample Id: 7711008-1-BLK LCS Sample Id: 7711008-1-BKS LCSD Sample Id: 7711008-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	251	100	252	101	90-110	0	20	mg/kg	09.09.2020 14:28	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3136730 Matrix: Soil Date Prep: 09.09.2020

Parent Sample Id: 672074-001 MS Sample Id: 672074-001 S MSD Sample Id: 672074-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	72.0	200	275	102	276	101	90-110	0	20	mg/kg	09.09.2020 14:44	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3136730 Matrix: Soil Date Prep: 09.09.2020

Parent Sample Id: 672167-003 MS Sample Id: 672167-003 S MSD Sample Id: 672167-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	158	200	362	102	362	102	90-110	0	20	mg/kg	09.09.2020 17:46	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Analysis Request of Chain of Custody Record

Page 1 of 1

CONCHO

One Concho Center/600/Illinois Avenue/Midland, Texas Tel (432) 683-7443

672164

Client Name: COG-Artesia	Site Manager: Sheldon Hitchcock
Project Name: Skittles Fed #2	
Project Location: (county, state) Eddy, NM	Project #:
Invoice to: Sheldon Hitchcock	
Receiving Laboratory: Xenco	Sampler Name: Sheldon Hitchcock
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	TIME	MATRIX WATER	SOIL	PRESERVATIVE METHOD HCL	HNO_3	ICE	# CONTAINERS	(C)omposite/(G)rab	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	B-11	9/9	2:50		X			X	1	C			X	

ANALYSIS REQUEST (Circle or Specify Method No.)

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Brady Tice	9/9/20	15:07	Cloe Cuffaro	9.9.20	15:07
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature 0.4/0.2

REMARKS:

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 09.09.2020 03.07.00 PM

Work Order #: 672164

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	Samples received in bulk containers.
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Cloe Clifton Date: 09.09.2020

Checklist reviewed by: Jessica Kramer Date: 09.10.2020

Jessica Kramer

APPENDIX D

NW W SW S SE

240 270 300 210 180 150

229°SW (T) 32°24'33"N, 104°10'10"W ±32ft ▲ 3108ft

CENTURY GRAPHICS & SIGN, INC
1.800.228.4447
www.centurygs.com
Midland,Tx·Seguin,Tx

COG Operating LLC

SKITTLES FEDERAL #2
1850' FNL & 330' FEL
SEC. 10, T22S, R27E
EDDY COUNTY, NM NMNM045404
API #30-015-36462

12 Aug 2020, 08:13:35

W NW N
270 300 330 0 30

322°NW (T) 32°24'34"N, 104°10'10"W ±16ft ▲3107ft

01 Sep 2020, 10:31:32

N NE E

0 30 60 90 1

48°NE (T) 32°24'34"N, 104°10'10"W ±16ft 3108ft

01 Sep 2020, 10:31:35

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 16429

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
COG OPERATING LLC	600 W Illinois Ave	Midland, TX79701	229137	16429	C-141

OCD Reviewer	Condition
ceads	None