

TABLE 1
FORMER IKENOUE F 29-22, 23 TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
CONTAMINANTS OF CONCERN

Sample ID	Date Sampled	Depth	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1, 2, 4-TMB (mg/kg)	1, 3, 5-TMB (mg/kg)	Naphthalene (mg/kg)	TPH ⁽⁴⁾ (mg/kg)	Benz(a) (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ^(1,2)			1.2	490	5.8	58	30	27	2	500	1.1	18	24
Protection of Groundwater SSL ^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	0.011	0.006	0.019
SS60 @ 6'	1/22/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS61 @ 4'	1/22/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	0.00562	<0.00500	<0.00500
SS62 @ 6'	1/22/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS63 @ 4'	1/22/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	0.0274	<0.00500	<0.00500
SS64 @ 6'	1/22/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS65 @ 4'	2/9/2024	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	0.00851	<0.00500	<0.00500
SS66 @ 6'	2/9/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	0.0466	<0.00500	<0.00500
SS67 @ 3'	2/16/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	0.0107	<0.00500	<0.00500
SS68 @ 6'	2/16/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS69 @ 7'	2/16/2024	7 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS70 @ 3'	2/16/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	0.0147	<0.00500	<0.00500
SS71 @ 6'	2/16/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS72 @ 3'	2/16/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	0.0106	<0.00500	<0.00500
SS73 @ 6'	2/16/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS74 @ 3'	2/28/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	0.0115	<0.00500	<0.00500
SS75 @ 6'	2/28/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	0.00745	<0.00500	<0.00500
SS76 @ 3'	3/11/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	0.00629	<0.00500	<0.00500
SS77 @ 6'	3/11/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS78 @ 3'	3/11/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS79 @ 6'	3/11/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS80 @ 3'	3/11/2024	3 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500
SS81 @ 6'	3/11/2024	6 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.00500	<0.00500	<0.00500

Notes:

- Compounds referenced from the ECMC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
 - Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
 - SSLs are applicable if a pathway for communication with groundwater is present.
 - Value calculated by adding TPH-GRO, TPH-DRO, and TPH-ORO concentrations.
 - The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- ECMC = Energy & Carbon Management Commission
 (<) = Analytical result is less than the indicated laboratory reporting limit.
 TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
 TPH-DRO = Total petroleum hydrocarbons - diesel range organics
 TPH-ORO = Total petroleum hydrocarbons - oil range organics
 mg/kg = Milligrams per kilogram
 TMB = Trimethylbenzene
 Benz(a) = Benzanthracene
 NA = Constituent not analyzed
 = Source material characterization sample material, excavated and transported off-site for disposal
 = Material excavated and transported off-site for disposal
 ft. = Feet
 in. = Inches
 bgs = Below ground surface
BOLD = Analytical result is in exceedance of applicable standard.

TABLE 2
FORMER IKENOUE F 29-22, 23 TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
SEP01-DL @ 4'	10/30/2023	4 ft. bgs	8.10	0.197	0.190	<2.00
SEP01-FL @ 4'	10/30/2023	4 ft. bgs	7.97	0.230	0.173	<2.00
SEP02-DL @ 4'	10/30/2023	4 ft. bgs	8.23	0.193	0.239	<2.00
SEP02-FL @ 4'	10/30/2023	4 ft. bgs	7.84	0.524	0.765	<2.00
WC01 @ 4'	10/31/2023	4 ft. bgs	6.34	0.241	0.405	<2.00
SS21 @ 2.5'	1/10/2024	2.5 ft. bgs	8.62	0.191	0.457	<2.00
SS24 @ 2.5'	1/11/2024	2.5 ft. bgs	8.27	3.52	2.27	<2.00
SS44 @ 2.5'	1/17/2024	2.5 ft. bgs	8.28	0.245	0.772	<2.00
SS47 @ 2.5'	1/17/2024	2.5 ft. bgs	8.00	0.267	0.774	<2.00
BKG01 @ 2.5'	10/30/2023	2.5 ft. bgs	NA	NA	5.10	NA
BKG01 @ 4'	10/30/2023	4 ft. bgs	NA	NA	0.668	NA
BKG02 @ 2.5'	1/11/2024	2.5 ft. bgs	8.65	NA	NA	NA
BKG02 @ 4'	1/11/2024	4 ft. bgs	8.10	NA	NA	NA
BKG02 @ 6'	1/11/2024	6 ft. bgs	7.92	NA	NA	NA
BKG02 @ 7'	1/11/2024	7 ft. bgs	7.52	NA	NA	NA
BKG03 @ 2.5'	1/11/2024	2.5 ft. bgs	8.35	NA	NA	NA
BKG03 @ 4'	1/11/2024	4 ft. bgs	8.26	NA	NA	NA
BKG03 @ 6'	1/11/2024	6 ft. bgs	8.82	NA	NA	NA
BKG03 @ 7'	1/11/2024	7 ft. bgs	8.60	NA	NA	NA

Notes:

1. Compounds referenced from the ECOM 2 CCR 404-1, Table 915-1, effective January 15, 2021.

ECMC = Colorado Energy & Carbon Management Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligram per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

BOLD = Analytical result is in exceedance of applicable standard, but below background concentration.

NA = Constituent not analyzed

 = Source material characterization sample material, excavated and transported off-site for disposal

TABLE 3
FORMER IKENOYE F 29-22, 23 TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS - PAHs

Sample ID	Date Sampled	Depth	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ^(1,2)			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^(1,2,3)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
SS70 @ 3'	2/16/2024	3 ft. bgs	<0.00500	<0.00500	0.0147	0.00979	0.0145	<0.00500	0.0114	<0.00500	0.0197	<0.00500	<0.00500	0.0248	<0.00500	<0.00500
SS71 @ 6'	2/16/2024	6 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS72 @ 3'	2/16/2024	3 ft. bgs	<0.00500	<0.00500	0.0106	0.00978	0.0122	<0.00500	0.00832	<0.00500	0.0109	<0.00500	<0.00500	0.0158	<0.00500	<0.00500
SS73 @ 6'	2/16/2024	6 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS74 @ 3'	2/28/2024	3 ft. bgs	<0.00500	<0.00500	0.0115	0.0265	0.0296	0.00951	0.0221	<0.00500	0.0284	<0.00500	0.0157	0.0452	<0.00500	<0.00500
SS75 @ 6'	2/28/2024	6 ft. bgs	<0.00500	<0.00500	0.00745	0.00936	0.00689	<0.00500	0.00563	<0.00500	0.00759	<0.00500	<0.00500	0.00949	<0.00500	<0.00500
SS76 @ 3'	3/11/2024	3 ft. bgs	<0.00500	<0.00500	0.00629	0.00577	0.00708	<0.00500	0.00521	<0.00500	0.00665	<0.00500	<0.00500	0.00782	<0.00500	<0.00500
SS77 @ 6'	3/11/2024	6 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS78 @ 3'	3/11/2024	3 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS79 @ 6'	3/11/2024	6 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00678	<0.00500	<0.00500
SS80 @ 3'	3/11/2024	3 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS81 @ 6'	3/11/2024	6 ft. bgs	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Notes:

1. Compounds referenced from the ECOM 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with groundwater is present.
4. The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.

ECMC = Colorado Energy & Carbon Management Commission
(<) = Analytical result is less than the indicated laboratory reporting limit.
PAHs = Polycyclic aromatic hydrocarbons

Benzo(a) = Benzoanthracene

Benzo(a) = Benzopyrene

Benzo(b) = Benzofluoranthene

Benzo(k) = Benzofluoranthene

A,H = Dibenzoanthracene

1,2,3-CD = Indenopyrene

M = Methylnaphthalene

mg/kg = Milligrams per kilogram

in. = Inches

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

 = Source material characterization sample material, excavated and transported off-site for disposal

 = Material excavated and transported off-site for disposal

TABLE 4
FORMER IKENOUYE F 29-22, 23 TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
METALS

Sample ID	Date Sampled	Depth	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ^(1,2)			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^(1,2,3)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
WC01 @ 4'	10/31/2023	4 ft. bgs	2.45	75.1	0.592	<0.30 ⁽⁴⁾	37.3	57.6	1.81	0.266	1.01	55.7
BKG01 @ 2.5'	10/30/2023	2.5 ft. bgs	39.2	119	1.49	<0.30 ⁽⁴⁾	109	306	3.26	0.620	8.93	126
BKG01 @ 4'	10/30/2023	4 ft. bgs	0.995	12.9	<0.200	<0.30 ⁽⁴⁾	80.1	26.7	1.15	<0.260	0.0904	47.6
Highest Background Concentration ⁽⁵⁾			39.2	119	1.49	0.30	109	306	3.26	0.620	8.93	126
1.25x Highest Background Concentration			49.0	149	1.86	0.38	136	383	4.08	0.775	11.2	158

Notes:

1. Compounds referenced from the ECOM 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with groundwater is present.
4. Compound falls within ECOM Table 915-1 Footnote 9.
5. Non-detect background results accounted for in the mean background concentration by using the reporting limit.

ECMC = Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

BOLD = Analytical result is in exceedance of applicable standard, but within 1.25x background concentration.

BOLD = Source material characterization sample material, excavated and transported off-site for disposal

TABLE 5
FORMER IKENOUYE F 29-22, 23 TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Depth to Water ⁽²⁾ (ft.)	Groundwater Elevation (ft. AMSL)
ECMC Table 915-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	140	67	67	-	-
GW01 @ 6.5'	10/31/2023	670	11	6,300	54,000	38	6,500	3,700	6.5	NA

Notes:

1. Groundwater standards referenced from ECMC 2 CCR 404-1, Table 915-1, January 15, 2021.

2. Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

TMB = Trimethylbenzene

ECMC = Energy & Carbon Management Commission

µg/L = Micrograms per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

ft. = Feet

AMSL = Above Mean Sea Level

BOLD = Analytical result is in exceedance of applicable standard.

**TABLE 6
FORMER IKENOUE F 29-22, 23 TANK BATTERY
FIELD DATA SUMMARY TABLE**

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
			Latitude	Longitude		
AST01 @ 0-6"	10/30/2023	0-6 in. bgs	40.367869	-104.682198	0.9	2.1
AST02 @ 0-6"	10/30/2023	0-6 in. bgs	40.367825	-104.682188	1.0	1.4
AST03 @ 0-6"	10/30/2023	0-6 in. bgs	40.367777	-104.682182	1.0	0.9
SEP01-DL @ 4'	10/30/2023	4 ft. bgs	40.367763	-104.682500	1.1	0.6
SEP01-FL @ 4'	10/30/2023	4 ft. bgs	40.367733	-104.682545	1.2	0.3
SEP02-DL @ 4'	10/30/2023	4 ft. bgs	40.367748	-104.682496	1.1	0.1
SEP02-FL @ 4'	10/30/2023	4 ft. bgs	40.367723	-104.682535	1.1	0.1
MH01 @ 0-6"	10/30/2023	0-6 in. bgs	40.367789	-104.682432	1.0	0.0
ECD01 @ 0-6"	10/31/2023	0-6 in. bgs	40.367845	-104.682544	0.9	0.0
ECD02 @ 0-6"	10/31/2023	0-6 in. bgs	40.367622	-104.682504	0.9	0.0
GW01 @ 6.5'	10/31/2023	6.5 ft. bgs	40.366794	-104.682655	1.4	NA
WC01 @ 4'	10/31/2023	4 ft. bgs	40.366794	-104.682648	1.2	994
SS01 @ 7'	1/9/2024	7 ft. bgs	NC	NC	NC	10.3
SS02 @ 4'	1/9/2024	4 ft. bgs	40.368011	-104.682210	NC	0.5
SS03 @ 6'	1/9/2024	6 ft. bgs	40.368011	-104.682210	NC	0.6
SS04 @ 7'	1/9/2024	7 ft. bgs	NC	NC	NC	0.9
SS05 @ 4'	1/9/2024	4 ft. bgs	40.368037	-104.682245	0.9	0.4
SS06 @ 6'	1/9/2024	6 ft. bgs	40.368037	-104.682245	0.9	1.4
SS07 @ 4'	1/10/2024	4 ft. bgs	40.368070	-104.682322	NC	0.2
SS08 @ 6'	1/10/2024	6 ft. bgs	40.368070	-104.682322	NC	6.4
SS09 @ 7'	1/10/2024	7 ft. bgs	NC	NC	NC	2.0
SS10 @ 7'	1/10/2024	7 ft. bgs	NC	NC	NC	1.8
SS11 @ 7'	1/10/2024	7 ft. bgs	NC	NC	NC	1.1
SS12 @ 4'	1/10/2024	4 ft. bgs	40.368032	-104.682362	NC	0.5
SS13 @ 6'	1/10/2024	6 ft. bgs	40.368032	-104.682362	NC	0.5
SS14 @ 7'	1/10/2024	7 ft. bgs	NC	NC	NC	0.5
SS15 @ 4'	1/10/2024	4 ft. bgs	40.367992	-104.682382	NC	0.3
SS16 @ 6'	1/10/2024	6 ft. bgs	40.367992	-104.682382	NC	0.3
SS17 @ 7'	1/10/2024	7 ft. bgs	NC	NC	NC	0.5
SS18 @ 4'	1/10/2024	4 ft. bgs	40.367953	-104.682362	NC	0.4
SS19 @ 6'	1/10/2024	6 ft. bgs	40.367953	-104.682362	NC	0.4
SS20 @ 7'	1/10/2024	7 ft. bgs	NC	NC	NC	0.8
SS21 @ 2.5'	1/10/2024	2.5 ft. bgs	40.367917	-104.682359	NC	0.4
SS22 @ 4'	1/10/2024	4 ft. bgs	40.367917	-104.682359	NC	0.2
SS23 @ 6'	1/10/2024	6 ft. bgs	40.367917	-104.682359	NC	3.0
SS24 @ 2.5'	1/11/2024	2.5 ft. bgs	40.367963	-104.682168	NC	0.0
SS25 @ 4'	1/11/2024	4 ft. bgs	40.367963	-104.682168	NC	0.1
SS26 @ 6'	1/11/2024	6 ft. bgs	40.367963	-104.682168	NC	7.5
SS27 @ 7'	1/11/2024	7 ft. bgs	NC	NC	NC	1.9
SS28 @ 4'	1/11/2024	4 ft. bgs	40.367888	-104.682178	NC	0.3
SS29 @ 6'	1/11/2024	6 ft. bgs	40.367888	-104.682178	NC	0.2
SS30 @ 7'	1/11/2024	7 ft. bgs	NC	NC	NC	3.0

TABLE 6
FORMER IKENOUE F 29-22, 23 TANK BATTERY
FIELD DATA SUMMARY TABLE

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
			Latitude	Longitude		
SS31 @ 4'	1/17/2024	4 ft. bgs	40.367857	-104.682173	NC	0.2
SS32 @ 6'	1/17/2024	6 ft. bgs	40.367857	-104.682173	NC	0.3
SS33 @ 7'	1/17/2024	7 ft. bgs	NC	NC	NC	0.2
SS34 @ 4'	1/17/2024	4 ft. bgs	40.367862	-104.682333	NC	0.4
SS35 @ 6'	1/17/2024	6 ft. bgs	40.367862	-104.682333	NC	0.4
SS36 @ 7'	1/17/2024	7 ft. bgs	NC	NC	NC	0.9
SS37 @ 4'	1/17/2024	4 ft. bgs	40.367822	-104.682303	NC	0.7
SS38 @ 6'	1/17/2024	6 ft. bgs	40.367822	-104.682303	NC	0.5
SS39 @ 7'	1/17/2024	7 ft. bgs	NC	NC	NC	3.4
SS40 @ 7'	1/17/2024	7 ft. bgs	NC	NC	NC	0.7
SS41 @ 4'	1/17/2024	4 ft. bgs	40.367796	-104.682269	NC	0.4
SS42 @ 6'	1/17/2024	6 ft. bgs	40.367796	-104.682269	NC	0.3
SS43 @ 7'	1/17/2024	7 ft. bgs	NC	NC	NC	0.4
SS44 @ 2.5'	1/17/2024	2.5 ft. bgs	40.368070	-104.682322	NC	0.6
SS45 @ 4'	1/17/2024	4 ft. bgs	40.367814	-104.682173	NC	0.5
SS46 @ 6'	1/17/2024	6 ft. bgs	40.367814	-104.682173	NC	0.6
SS47 @ 2.5'	1/17/2024	2.5 ft. bgs	40.367785	-104.682200	0.8	1.5
SS48 @ 4'	1/17/2024	4 ft. bgs	40.367785	-104.682200	0.8	3.9
SS49 @ 6'	1/17/2024	6 ft. bgs	40.367785	-104.682200	0.8	1.9
SS50 @ 7'	1/17/2024	7 ft. bgs	NC	NC	NC	1.8
SS51 @ 6"	1/17/2024	6 in. bgs	40.367773	-104.682186	NC	2.1
SS52 @ 6"	1/17/2024	6 in. bgs	40.367776	-104.682168	NC	1.4
SS53 @ 6"	1/17/2024	6 in. bgs	40.367752	-104.682180	NC	6.7
SS54 @ 6"	1/17/2024	6 in. bgs	40.367770	-104.682199	NC	7.8
SS55 @ 1'	1/18/2024	1 ft. bgs	40.367794	-104.682131	NC	0.1
SS56 @ 6"	1/18/2024	6 in. bgs	40.367741	-104.682175	0.9	0.0
SS57 @ 4'	1/22/2024	4 ft. bgs	40.367842	-104.682147	NC	0.2
SS58 @ 6'	1/22/2024	6 ft. bgs	40.367842	-104.682147	NC	0.1
SS59 @ 4'	1/22/2024	4 ft. bgs	40.367816	-104.682151	NC	0.2
SS60 @ 6'	1/22/2024	6 ft. bgs	40.367816	-104.682151	NC	0.3
SS61 @ 4'	1/22/2024	4 ft. bgs	40.367854	-104.682343	1.1	0.2
SS62 @ 6'	1/22/2024	6 ft. bgs	40.367854	-104.682343	1.1	0.3
SS63 @ 4'	1/22/2024	4 ft. bgs	40.367775	-104.682284	NC	0.3
SS64 @ 6'	1/22/2024	6 ft. bgs	40.367775	-104.682284	NC	0.3
SS65 @ 4'	2/9/2024	4 ft. bgs	40.367757	-104.682295	1.0	0.3
SS66 @ 6'	2/9/2024	6 ft. bgs	40.367756	-104.682295	1.0	0.2
SS67 @ 3'	2/16/2024	3 ft. bgs	40.367752	-104.682276	0.9	0.0
SS68 @ 6'	2/16/2024	6 ft. bgs	40.367752	-104.682276	0.9	0.0
SS69 @ 7'	2/16/2024	7 ft. bgs	NC	NC	NC	0.0
SS70 @ 3'	2/16/2024	3 ft. bgs	40.367747	-104.682302	0.9	0.2
SS71 @ 6'	2/16/2024	6 ft. bgs	40.367747	-104.682302	0.9	0.0
SS72 @ 3'	2/16/2024	3 ft. bgs	40.367767	-104.682310	0.9	0.2

**TABLE 6
FORMER IKENOUE F 29-22, 23 TANK BATTERY
FIELD DATA SUMMARY TABLE**

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
			Latitude	Longitude		
SS73 @ 6'	2/16/2024	6 ft. bgs	40.367767	-104.682310	0.9	0.0
SS74 @ 3'	2/28/2024	3 ft. bgs	40.367730	-104.682315	1.1	0.6
SS75 @ 6'	2/28/2024	6 ft. bgs	40.367730	-104.682315	1.1	0.4
SS76 @ 3'	3/11/2024	3 ft. bgs	40.367707	-104.682307	0.8	0.0
SS77 @ 6'	3/11/2024	6 ft. bgs	40.367707	-104.682307	0.8	0.1
SS78 @ 3'	3/11/2024	3 ft. bgs	40.367715	-104.682328	0.7	0.0
SS79 @ 6'	3/11/2024	6 ft. bgs	40.367715	-104.682328	0.7	0.0
SS80 @ 3'	3/11/2024	3 ft. bgs	40.367730	-104.682338	0.8	0.0
SS81 @ 6'	3/11/2024	6 ft. bgs	40.367730	-104.682338	0.8	0.1
BKG01 @ 2.5'	10/30/2023	2.5 ft. bgs	40.368129	-104.682373	1.2	0.0
BKG01 @ 4'	10/30/2023	4 ft. bgs	40.368129	-104.682373	1.2	0.2
BKG02 @ 2.5'	1/11/2024	2.5 ft. bgs	40.367644	-104.682772	NC	0.3
BKG02 @ 4'	1/11/2024	4 ft. bgs	40.367644	-104.682772	NC	0.3
BKG02 @ 6'	1/11/2024	6 ft. bgs	40.367644	-104.682772	NC	0.5
BKG02 @ 7'	1/11/2024	7 ft. bgs	40.367644	-104.682772	NC	0.4
BKG03 @ 2.5'	1/11/2024	2.5 ft. bgs	40.367957	-104.682804	1.0	0.2
BKG03 @ 4'	1/11/2024	4 ft. bgs	40.367957	-104.682804	1.0	0.2
BKG03 @ 6'	1/11/2024	6 ft. bgs	40.367957	-104.682804	1.0	0.3
BKG03 @ 7'	1/11/2024	7 ft. bgs	40.367957	-104.682804	1.0	0.5

Notes:

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum 1983 (NAD83) UTM Zone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

ft. = Feet

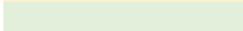
in. = Inches

bgs = Below ground surface

NC = Data not collected

NA = Not applicable

 = Source material characterization sample material, excavated and transported off-site for disposal

 = Material excavated and transported off-site for disposal

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 10, 2024

Mark Longhurst

Tasman Geosciences

6855 W. 119th Ave.

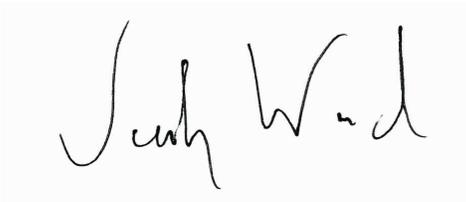
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2310581

Enclosed are the results of analyses for samples received by Summit Scientific on 10/30/23 17:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/10/24 16:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG01@2.5'	2310581-01	Soil	10/30/23 14:09	10/30/23 17:40
BKG01@4'	2310581-02	Soil	10/30/23 14:12	10/30/23 17:40

Case Narrative

Bryce Goldade requested SAR be added to all samples on 12/21/2023.
This report includes those results.

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



4653 Table Mountain Drive
 Golden, CO 80403
 303-277-9310

Lab ID
 2310581
 Page 1 of 1

Send Data To:		Send Invoice To:	
Client: PDC / Tasman	Project Manager: Mark Longhurst	Company: PDC Energy	
Address: 6855 W 119th Ave	E-Mail: mark.longhurst@PDCE.com	Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020		AFE#:	
Phone: 303-487-1228	Project Name: <i>Kenoye F29-22, 23 Tank Battery</i>	PO/Billing Codes:	
Sampler Name: <i>R. Yawinsley</i>	Project Number:	Contact: Mark Longhurst	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested					Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	
1	<i>BK601 @ 2.5'</i>	<i>10/30/23</i>	<i>1409</i>	<i>1</i>			<i>X</i>			<i>X</i>							<i>X</i>	
2	<i>BK601 @ 4'</i>	<i>1</i>	<i>1412</i>	<i>1</i>			<i>1</i>			<i>1</i>							<i>1</i>	
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by: <i>[Signature]</i>	Date/Time: <i>10/30/23 1640</i>	Received by: <i>Tasman lockbox</i>	Date/Time: <i>10/30/23 1640</i>	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <i>Tasman (lockbox)</i>	Date/Time: <i>10/30/23 1740</i>	Received by: <i>[Signature]</i>	Date/Time: <i>10/30/23 1740</i>	1 Day	Field ORP	
				2 Days	<i>X</i> Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: <i>8.1</i>	Corrected Temperature: <i>8</i>	IR gun #: <i>1</i>	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2310581

Client: Procterman

Client Project ID: Kenauye F29-22,23

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #: Tank Battery

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) 8.1

Thermometer # 1

	Yes	No	N/A	Comments (If any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>ON ZCE</u>
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>2 Day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

Bags

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AS

Custodian Printed Name

10/30/23

Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/10/24 16:36

BKG01@2.5'
2310581-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **10/30/23 14:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	39.2	0.200	mg/kg dry	1	BGK0063	11/02/23	11/03/23	EPA 6020B	
Barium	119	0.400	"	"	"	"	"	"	
Cadmium	1.49	0.200	"	"	"	"	"	"	
Copper	109	0.400	"	"	"	"	"	"	
Lead	306	0.200	"	"	"	"	"	"	
Nickel	3.26	0.400	"	"	"	"	"	"	
Silver	8.93	0.0200	"	"	"	"	"	"	
Zinc	126	0.400	"	"	"	"	"	"	
Selenium	0.620	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/30/23 14:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0011	11/01/23	11/02/23	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **10/30/23 14:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	51.5	0.0500	mg/L dry	1	BHA0211	01/05/24	01/09/24	EPA 6020B	
Magnesium	38.0	0.0500	"	"	"	"	"	"	
Sodium	198	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/30/23 14:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	5.10	0.00100	units	1	BHA0365	01/10/24	01/10/24	Calculation	

Summit Scientific

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Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 01/10/24 16:36

BKG01@2.5'
2310581-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/30/23 14:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.4		%	1	BGK0054	11/02/23	11/02/23	Calculation	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/10/24 16:36

BKG01@4'
2310581-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **10/30/23 14:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.995	0.200	mg/kg dry	1	BGK0063	11/02/23	11/03/23	EPA 6020B	
Barium	12.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	80.1	0.400	"	"	"	"	"	"	
Lead	26.7	0.200	"	"	"	"	"	"	
Nickel	1.15	0.400	"	"	"	"	"	"	
Silver	0.0904	0.0200	"	"	"	"	"	"	
Zinc	47.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/30/23 14:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0011	11/01/23	11/02/23	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **10/30/23 14:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	14.8	0.0500	mg/L dry	1	BHA0211	01/05/24	01/09/24	EPA 6020B	
Magnesium	7.64	0.0500	"	"	"	"	"	"	
Sodium	12.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/30/23 14:12**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.668	0.00100	units	1	BHA0365	01/10/24	01/10/24	Calculation	

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Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 01/10/24 16:36

BKG01@4'
2310581-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/30/23 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.2		%	1	BGK0054	11/02/23	11/02/23	Calculation	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/10/24 16:36

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

Batch BGK0063 - EPA 3050B

Blank (BGK0063-BLK1)

Prepared: 11/02/23 Analyzed: 11/03/23

Arsenic	ND	0.200	mg/kg wet						
Barium	ND	0.400	"						
Cadmium	ND	0.200	"						
Copper	ND	0.400	"						
Lead	ND	0.200	"						
Nickel	ND	0.400	"						
Silver	ND	0.0200	"						
Zinc	ND	0.400	"						
Selenium	ND	0.260	"						

LCS (BGK0063-BS1)

Prepared: 11/02/23 Analyzed: 11/03/23

Arsenic	44.9	0.200	mg/kg wet	40.0	112	80-120
Barium	33.7	0.400	"	40.0	84.3	80-120
Cadmium	1.72	0.200	"	2.00	85.9	80-120
Copper	46.3	0.400	"	40.0	116	80-120
Lead	17.0	0.200	"	20.0	85.2	80-120
Nickel	46.1	0.400	"	40.0	115	80-120
Silver	1.71	0.0200	"	2.00	85.4	80-120
Zinc	45.4	0.400	"	40.0	114	80-120
Selenium	4.50	0.260	"	4.00	112	80-120

Duplicate (BGK0063-DUP1)

Source: 2309512-01

Prepared: 11/02/23 Analyzed: 11/03/23

Arsenic	0.805	0.200	mg/kg dry	0.940	15.4	20
Barium	11.1	0.400	"	9.20	19.1	20
Cadmium	0.0166	0.200	"	ND	200	20
Copper	1.13	0.400	"	1.21	7.38	20
Lead	3.44	0.200	"	3.92	13.0	20
Nickel	1.05	0.400	"	1.27	18.7	20
Silver	0.00393	0.0200	"	0.00393	0.00	20
Zinc	7.31	0.400	"	8.75	17.9	20
Selenium	ND	0.260	"	ND		20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/10/24 16:36

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BGK0063 - EPA 3050B

Matrix Spike (BGK0063-MS1)

Source: 2309512-01

Prepared: 11/02/23 Analyzed: 11/03/23

Arsenic	26.6	0.200	mg/kg dry	43.6	0.940	58.8	75-125				QM-07
Barium	48.1	0.400	"	43.6	9.20	89.1	75-125				
Cadmium	1.65	0.200	"	2.18	ND	75.5	75-125				
Copper	28.2	0.400	"	43.6	1.21	61.7	75-125				QM-07
Lead	20.2	0.200	"	21.8	3.92	74.7	75-125				QM-07
Nickel	27.8	0.400	"	43.6	1.27	60.7	75-125				QM-07
Silver	1.60	0.0200	"	2.18	0.00393	73.1	75-125				QM-07
Zinc	34.4	0.400	"	43.6	8.75	58.9	75-125				QM-07
Selenium	4.31	0.260	"	4.36	ND	98.6	75-125				

Matrix Spike Dup (BGK0063-MSD1)

Source: 2309512-01

Prepared: 11/02/23 Analyzed: 11/03/23

Arsenic	27.1	0.200	mg/kg dry	43.6	0.940	60.0	75-125	1.89	25		QM-07
Barium	49.1	0.400	"	43.6	9.20	91.5	75-125	2.16	25		
Cadmium	1.66	0.200	"	2.18	ND	75.9	75-125	0.555	25		
Copper	28.4	0.400	"	43.6	1.21	62.3	75-125	0.947	25		QM-07
Lead	20.5	0.200	"	21.8	3.92	75.9	75-125	1.35	25		
Nickel	28.1	0.400	"	43.6	1.27	61.6	75-125	1.33	25		QM-07
Silver	1.61	0.0200	"	2.18	0.00393	73.8	75-125	0.869	25		QM-07
Zinc	35.0	0.400	"	43.6	8.75	60.1	75-125	1.62	25		QM-07
Selenium	3.90	0.260	"	4.36	ND	89.4	75-125	9.85	25		

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/10/24 16:36

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGK0011 - 3060A Mod

Blank (BGK0011-BLK1)

Prepared: 11/01/23 Analyzed: 11/02/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGK0011-BS1)

Prepared: 11/01/23 Analyzed: 11/02/23

Chromium, Hexavalent 25.9 0.30 mg/kg wet 25.0 104 80-120

Duplicate (BGK0011-DUP1)

Source: 2310269-01

Prepared: 11/01/23 Analyzed: 11/02/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGK0011-MS1)

Source: 2310269-01

Prepared: 11/01/23 Analyzed: 11/02/23

Chromium, Hexavalent 28.1 0.30 mg/kg dry 29.7 ND 94.6 75-125

Matrix Spike Dup (BGK0011-MSD1)

Source: 2310269-01

Prepared: 11/01/23 Analyzed: 11/02/23

Chromium, Hexavalent 27.9 0.30 mg/kg dry 29.7 ND 94.0 75-125 0.636 20

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/10/24 16:36

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHA0211 - General Preparation

Blank (BHA0211-BLK1)

Prepared: 01/05/24 Analyzed: 01/09/24

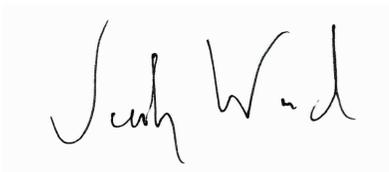
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BHA0211-BS1)

Prepared: 01/05/24 Analyzed: 01/09/24

Calcium	5.29	0.0500	mg/L wet	5.00		106	70-130			
Magnesium	4.90	0.0500	"	5.00		97.9	70-130			
Sodium	4.77	0.0500	"	5.00		95.4	70-130			

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/10/24 16:36

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BGK0054 - General Preparation

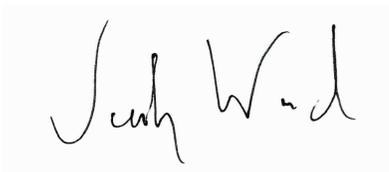
Duplicate (BGK0054-DUP1)

Source: 2310577-01

Prepared & Analyzed: 11/02/23

% Solids	83.2		%		85.9			3.17		20	
----------	------	--	---	--	------	--	--	------	--	----	--

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
01/10/24 16:36

Notes and Definitions

- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 10, 2023

Mark Longhurst

Tasman Geosciences

6855 W. 119th Ave.

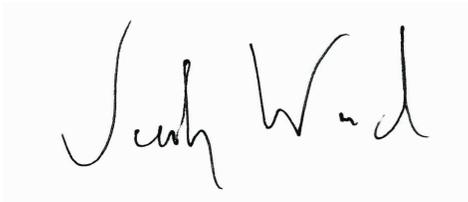
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2310584

Enclosed are the results of analyses for samples received by Summit Scientific on 10/30/23 17:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0-6"	2310584-01	Soil	10/30/23 12:44	10/30/23 17:40
AST02@0-6"	2310584-02	Soil	10/30/23 12:42	10/30/23 17:40
AST03@0-6"	2310584-03	Soil	10/30/23 12:40	10/30/23 17:40
SEP01-FL@4'	2310584-04	Soil	10/30/23 13:46	10/30/23 17:40
SEP02-FL@4'	2310584-05	Soil	10/30/23 13:52	10/30/23 17:40
SEP01-DL@4'	2310584-06	Soil	10/30/23 13:49	10/30/23 17:40
SEP02-DL@4'	2310584-07	Soil	10/30/23 13:55	10/30/23 17:40

Summit Scientific

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4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2310584	

Client: PDC / Tasman		Send Data To: Project Manager: Mark Longhurst		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: mark.longhurst@PDCE.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020				AFE#:	
Phone: 303-487-1228		Project Name: Ikenouye F29-22,23 Facility ^{NY}		PO/Billing Codes:	
Sampler Name: R. Yavinsky		Project Number: Tank Buttery		Contact: Mark Longhurst	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested					Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR		PAHs
1	AST01@0-6"	10/30/23	1244	2			X			X			X	X	X			X	
2	AST02@0-6"		1242																
3	AST03@0-6"		1240																
4	SEPD1-FL@4'		1346										X	X	X	X	X	X	
5	SEPD2-FL@4'		1352																
6	SEPD1-DL@4'		1349																
7	SEPD2-DL@4'		1355																
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: <i>[Signature]</i>	Date/Time: 10/30/23 1640	Received by: Tarman Lockbox	Date/Time: 10/30/23 1640	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 10/30/23 1740	Received by: <i>[Signature]</i>	Date/Time: 10/30/23 1740	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 8.1	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2310584

Client: Dr. Trisman Client Project ID: Ikanduye F29-22,23
Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: Tank Doherty

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) 8.1 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? (1) NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ice
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? (1) Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? (1) Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

(1) If NO, then contact the client before proceeding with analysis and note in case narrative.

AS
Custodian Printed Name

10/30/23
Date/Time

0.00



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

AST01@0-6"
2310584-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/30/23 12:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGK0022	11/01/23	11/02/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/30/23 12:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0436	109 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0449	112 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/30/23 12:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGK0023	11/01/23	11/02/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/30/23 12:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.7	102 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

AST01@0-6"
2310584-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/30/23 12:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BGK0010	11/01/23	11/01/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/30/23 12:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0143	42.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0166	49.9 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

AST02@0-6"
2310584-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/30/23 12:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGK0022	11/01/23	11/02/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/30/23 12:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0432	108 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0440	110 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0440	110 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/30/23 12:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGK0023	11/01/23	11/02/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/30/23 12:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	14.8	119 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

AST02@0-6"
2310584-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/30/23 12:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Acenaphthene	ND	0.00500		mg/kg	1	BGK0010	11/01/23	11/01/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	0.00714	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	0.00852	0.00500		"	"	"	"	"	"	

Date Sampled: **10/30/23 12:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0153	46.0 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0162	48.7 %		40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

AST03@0-6"
2310584-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/30/23 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGK0022	11/01/23	11/02/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.038	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3.1	0.50	"	"	"	"	"	"	

Date Sampled: **10/30/23 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0446	112 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0428	107 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0425	106 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/30/23 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGK0023	11/01/23	11/02/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/30/23 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.3	106 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

AST03@0-6"
2310584-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/30/23 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0010	11/01/23	11/01/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/30/23 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0137	41.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0158	47.4 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP01-FL@4'
2310584-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGK0022	11/01/23	11/02/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0458	114 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0422	106 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0439	110 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGK0023	11/01/23	11/02/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.7	85.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP01-FL@4'
2310584-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0010	11/01/23	11/01/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.00553	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00608	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00649	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0159	47.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0153	45.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0215	11/07/23	11/08/23	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP01-FL@4'
2310584-04 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	36.8	0.0500	mg/L dry	1	BGK0171	11/06/23	11/08/23	EPA 6020B	
Magnesium	8.81	0.0500	"	"	"	"	"	"	
Sodium	4.50	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.173	0.00100	units	1	BGK0345	11/09/23	11/09/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.2		%	1	BGK0166	11/06/23	11/07/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.230	0.0100	mmhos/cm	1	BGK0191	11/07/23	11/07/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **10/30/23 13:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.97		pH Units	1	BGK0190	11/07/23	11/07/23	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP02-FL@4'
2310584-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGK0022	11/01/23	11/02/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0518	130 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0452	113 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0390	97.5 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGK0023	11/01/23	11/02/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.9	87.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP02-FL@4'
2310584-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0010	11/01/23	11/01/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.00812	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.00805	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.00949	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.00719	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0114	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.00520	0.00500	"	"	"	"	"	"	
Pyrene	0.0135	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0148	44.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0138	41.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0215	11/07/23	11/08/23	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP02-FL@4'
2310584-05 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	46.5	0.0500	mg/L dry	1	BGK0171	11/06/23	11/08/23	EPA 6020B	
Magnesium	14.5	0.0500	"	"	"	"	"	"	
Sodium	23.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.765	0.00100	units	1	BGK0345	11/09/23	11/09/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.0		%	1	BGK0166	11/06/23	11/07/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.524	0.0100	mmhos/cm	1	BGK0191	11/07/23	11/07/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **10/30/23 13:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.84		pH Units	1	BGK0190	11/07/23	11/07/23	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP01-DL@4'
2310584-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGK0022	11/01/23	11/02/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0448	112 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0430	107 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0427	107 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGK0023	11/01/23	11/02/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.58	76.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP01-DL@4'
2310584-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0010	11/01/23	11/01/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0143	43.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0139	41.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0215	11/07/23	11/08/23	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP01-DL@4'
2310584-06 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	32.8	0.0500	mg/L dry	1	BGK0171	11/06/23	11/08/23	EPA 6020B	
Magnesium	10.2	0.0500	"	"	"	"	"	"	
Sodium	4.87	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.190	0.00100	units	1	BGK0345	11/09/23	11/09/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.5		%	1	BGK0166	11/06/23	11/07/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.197	0.0100	mmhos/cm	1	BGK0191	11/07/23	11/07/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **10/30/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10		pH Units	1	BGK0190	11/07/23	11/07/23	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP02-DL@4'
2310584-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGK0022	11/01/23	11/02/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0427	107 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0418	104 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGK0023	11/01/23	11/02/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.96	79.7 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP02-DL@4'
2310584-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0010	11/01/23	11/02/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.00525	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.00621	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00708	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00765	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0170	50.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0154	46.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0215	11/07/23	11/08/23	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

SEP02-DL@4'
2310584-07 (Soil)

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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	27.3	0.0500	mg/L dry	1	BGK0171	11/06/23	11/08/23	EPA 6020B	
Magnesium	12.7	0.0500	"	"	"	"	"	"	
Sodium	6.03	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.239	0.00100	units	1	BGK0345	11/09/23	11/09/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.5		%	1	BGK0166	11/06/23	11/07/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.193	0.0100	mmhos/cm	1	BGK0191	11/07/23	11/07/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **10/30/23 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BGK0190	11/07/23	11/07/23	EPA 9045D	

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BGK0022 - EPA 5030 Soil MS

Blank (BGK0022-BLK1)

Prepared & Analyzed: 11/01/23

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0399		"	0.0400		99.8	50-150				
<i>Surrogate: Toluene-d8</i>	0.0459		"	0.0400		115	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0407		"	0.0400		102	50-150				

LCS (BGK0022-BS1)

Prepared & Analyzed: 11/01/23

Benzene	0.124	0.0020	mg/kg	0.100		124	70-130				
Toluene	0.130	0.0050	"	0.100		130	70-130				
Ethylbenzene	0.115	0.0050	"	0.100		115	70-130				
m,p-Xylene	0.224	0.010	"	0.200		112	70-130				
o-Xylene	0.105	0.0050	"	0.100		105	70-130				
1,2,4-Trimethylbenzene	0.110	0.0050	"	0.100		110	70-130				
1,3,5-Trimethylbenzene	0.110	0.0050	"	0.100		110	70-130				
Naphthalene	0.110	0.0038	"	0.100		110	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0410		"	0.0400		103	50-150				
<i>Surrogate: Toluene-d8</i>	0.0449		"	0.0400		112	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0379		"	0.0400		94.8	50-150				

Matrix Spike (BGK0022-MS1)

Source: 2310583-01

Prepared & Analyzed: 11/01/23

Benzene	0.108	0.0020	mg/kg	0.100	ND	108	70-130				
Toluene	0.111	0.0050	"	0.100	ND	111	70-130				
Ethylbenzene	0.0992	0.0050	"	0.100	ND	99.2	70-130				
m,p-Xylene	0.193	0.010	"	0.200	ND	96.6	70-130				
o-Xylene	0.0941	0.0050	"	0.100	ND	94.1	70-130				
1,2,4-Trimethylbenzene	0.0941	0.0050	"	0.100	ND	94.1	70-130				
1,3,5-Trimethylbenzene	0.0945	0.0050	"	0.100	ND	94.5	70-130				
Naphthalene	0.118	0.0038	"	0.100	ND	118	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0407		"	0.0400		102	50-150				
<i>Surrogate: Toluene-d8</i>	0.0435		"	0.0400		109	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0412		"	0.0400		103	50-150				

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGK0022 - EPA 5030 Soil MS

Matrix Spike Dup (BGK0022-MSD1)	Source: 2310583-01			Prepared & Analyzed: 11/01/23						
Benzene	0.109	0.0020	mg/kg	0.100	ND	109	70-130	0.749	30	
Toluene	0.115	0.0050	"	0.100	ND	115	70-130	3.63	30	
Ethylbenzene	0.0998	0.0050	"	0.100	ND	99.8	70-130	0.573	30	
m,p-Xylene	0.192	0.010	"	0.200	ND	95.9	70-130	0.701	30	
o-Xylene	0.0919	0.0050	"	0.100	ND	91.9	70-130	2.32	30	
1,2,4-Trimethylbenzene	0.0923	0.0050	"	0.100	ND	92.3	70-130	1.87	30	
1,3,5-Trimethylbenzene	0.0939	0.0050	"	0.100	ND	93.9	70-130	0.605	30	
Naphthalene	0.119	0.0038	"	0.100	ND	119	70-130	0.758	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0413</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0443</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BGK0023 - EPA 3550A

Blank (BGK0023-BLK1)

Prepared & Analyzed: 11/01/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	15.6		"	12.5		125	30-150				

LCS (BGK0023-BS1)

Prepared & Analyzed: 11/01/23

C10-C28 (DRO)	378	50	mg/kg	500		75.6	70-130				
Surrogate: <i>o</i> -Terphenyl	10.6		"	12.5		84.5	30-150				

Matrix Spike (BGK0023-MS1)

Source: 2310583-01

Prepared & Analyzed: 11/01/23

C10-C28 (DRO)	404	50	mg/kg	500	ND	80.9	70-130				
Surrogate: <i>o</i> -Terphenyl	11.4		"	12.5		91.3	30-150				

Matrix Spike Dup (BGK0023-MSD1)

Source: 2310583-01

Prepared & Analyzed: 11/01/23

C10-C28 (DRO)	470	50	mg/kg	500	ND	93.9	70-130	14.9	20		
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.5		98.7	30-150				

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGK0010 - EPA 5030 Soil MS

Blank (BGK0010-BLK1)

Prepared & Analyzed: 11/01/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0346</i>		"	<i>0.0333</i>		<i>104</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0246</i>		"	<i>0.0333</i>		<i>73.9</i>		<i>40-150</i>		

LCS (BGK0010-BS1)

Prepared & Analyzed: 11/01/23

Acenaphthene	0.0233	0.00500	mg/kg	0.0333		70.0		31-137		
Anthracene	0.0248	0.00500	"	0.0333		74.5		30-120		
Benzo (a) anthracene	0.0235	0.00500	"	0.0333		70.5		30-120		
Benzo (a) pyrene	0.0208	0.00500	"	0.0333		62.5		30-120		
Benzo (b) fluoranthene	0.0227	0.00500	"	0.0333		68.1		30-120		
Benzo (k) fluoranthene	0.0240	0.00500	"	0.0333		71.9		30-120		
Chrysene	0.0250	0.00500	"	0.0333		74.9		30-120		
Dibenz (a,h) anthracene	0.0192	0.00500	"	0.0333		57.5		30-120		
Fluoranthene	0.0248	0.00500	"	0.0333		74.3		30-120		
Fluorene	0.0236	0.00500	"	0.0333		70.7		30-120		
Indeno (1,2,3-cd) pyrene	0.0251	0.00500	"	0.0333		75.2		30-120		
Pyrene	0.0253	0.00500	"	0.0333		75.9		35-142		
1-Methylnaphthalene	0.0273	0.00500	"	0.0333		81.8		35-142		
2-Methylnaphthalene	0.0284	0.00500	"	0.0333		85.3		35-142		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0186</i>		"	<i>0.0333</i>		<i>55.7</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0242</i>		"	<i>0.0333</i>		<i>72.7</i>		<i>40-150</i>		

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

PAH by EPA Method 8270D SIM - Quality Control

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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGK0010 - EPA 5030 Soil MS

Matrix Spike (BGK0010-MS1)

Source: 2310583-01

Prepared & Analyzed: 11/01/23

Acenaphthene	0.0140	0.00500	mg/kg	0.0333	ND	42.0	31-137		
Anthracene	0.0162	0.00500	"	0.0333	ND	48.5	30-120		
Benzo (a) anthracene	0.0168	0.00500	"	0.0333	ND	50.4	30-120		
Benzo (a) pyrene	0.0144	0.00500	"	0.0333	ND	43.3	30-120		
Benzo (b) fluoranthene	0.0144	0.00500	"	0.0333	ND	43.3	30-120		
Benzo (k) fluoranthene	0.0145	0.00500	"	0.0333	ND	43.4	30-120		
Chrysene	0.0157	0.00500	"	0.0333	ND	47.1	30-120		
Dibenz (a,h) anthracene	0.0144	0.00500	"	0.0333	ND	43.4	30-120		
Fluoranthene	0.0165	0.00500	"	0.0333	ND	49.4	30-120		
Fluorene	0.0173	0.00500	"	0.0333	ND	51.8	30-120		
Indeno (1,2,3-cd) pyrene	0.0173	0.00500	"	0.0333	ND	52.0	30-120		
Pyrene	0.0168	0.00500	"	0.0333	ND	50.5	35-142		
1-Methylnaphthalene	0.0188	0.00500	"	0.0333	ND	56.4	15-130		
2-Methylnaphthalene	0.0206	0.00500	"	0.0333	ND	61.7	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0134		"	0.0333		40.1	40-150		
Surrogate: Fluoranthene-d10	0.0166		"	0.0333		49.9	40-150		

Matrix Spike Dup (BGK0010-MSD1)

Source: 2310583-01

Prepared & Analyzed: 11/01/23

Acenaphthene	0.0158	0.00500	mg/kg	0.0333	ND	47.3	31-137	12.0	30
Anthracene	0.0149	0.00500	"	0.0333	ND	44.7	30-120	8.02	30
Benzo (a) anthracene	0.0153	0.00500	"	0.0333	ND	45.9	30-120	9.53	30
Benzo (a) pyrene	0.0152	0.00500	"	0.0333	ND	45.5	30-120	4.97	30
Benzo (b) fluoranthene	0.0135	0.00500	"	0.0333	ND	40.6	30-120	6.42	30
Benzo (k) fluoranthene	0.0141	0.00500	"	0.0333	ND	42.4	30-120	2.12	30
Chrysene	0.0143	0.00500	"	0.0333	ND	43.0	30-120	9.10	30
Dibenz (a,h) anthracene	0.0147	0.00500	"	0.0333	ND	44.0	30-120	1.47	30
Fluoranthene	0.0150	0.00500	"	0.0333	ND	45.1	30-120	9.08	30
Fluorene	0.0150	0.00500	"	0.0333	ND	45.0	30-120	13.9	30
Indeno (1,2,3-cd) pyrene	0.0152	0.00500	"	0.0333	ND	45.5	30-120	13.2	30
Pyrene	0.0150	0.00500	"	0.0333	ND	45.1	35-142	11.3	30
1-Methylnaphthalene	0.0166	0.00500	"	0.0333	ND	49.9	15-130	12.1	50
2-Methylnaphthalene	0.0184	0.00500	"	0.0333	ND	55.2	15-130	11.2	50
Surrogate: 2-Methylnaphthalene-d10	0.0144		"	0.0333		43.2	40-150		
Surrogate: Fluoranthene-d10	0.0153		"	0.0333		45.9	40-150		

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BGK0215 - EPA 3050B

Blank (BGK0215-BLK1)

Prepared: 11/07/23 Analyzed: 11/08/23

Boron ND 2.00 mg/L

LCS (BGK0215-BS1)

Prepared: 11/07/23 Analyzed: 11/08/23

Boron 5.95 2.00 mg/L 5.00 119 80-120

Duplicate (BGK0215-DUP1)

Source: 2310322-03

Prepared: 11/07/23 Analyzed: 11/08/23

Boron 0.449 2.00 mg/L 0.454 1.17 20

Matrix Spike (BGK0215-MS1)

Source: 2310322-03

Prepared: 11/07/23 Analyzed: 11/10/23

Boron 4.96 2.00 mg/L 5.00 0.454 90.1 75-125

Matrix Spike Dup (BGK0215-MSD1)

Source: 2310322-03

Prepared: 11/07/23 Analyzed: 11/10/23

Boron 4.74 2.00 mg/L 5.00 0.454 85.7 75-125 4.57 25

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BGK0171 - General Preparation

Blank (BGK0171-BLK1)

Prepared: 11/06/23 Analyzed: 11/08/23

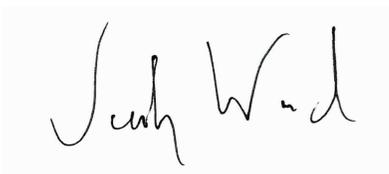
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BGK0171-BS1)

Prepared: 11/06/23 Analyzed: 11/08/23

Calcium	4.72	0.0500	mg/L wet	5.00	94.5	70-130				
Magnesium	5.09	0.0500	"	5.00	102	70-130				
Sodium	5.44	0.0500	"	5.00	109	70-130				

Summit Scientific



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Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 11/10/23 13:18

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BGK0166 - General Preparation

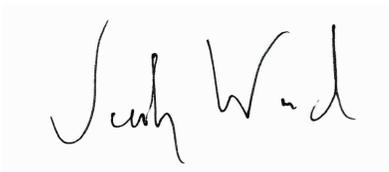
Duplicate (BGK0166-DUP1)

Source: 2310572-01

Prepared: 11/06/23 Analyzed: 11/07/23

% Solids	86.6		%		86.3			0.347		20	
----------	------	--	---	--	------	--	--	-------	--	----	--

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limits	RPD	Limit		

Batch BGK0191 - General Preparation

Blank (BGK0191-BLK1)

Prepared & Analyzed: 11/07/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGK0191-BS1)

Prepared & Analyzed: 11/07/23

Specific Conductance (EC) 0.157 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BGK0191-DUP1)

Source: 2310582-01

Prepared & Analyzed: 11/07/23

Specific Conductance (EC) 0.0446 0.0100 mmhos/cm 0.0446 0.00 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGK0190 - General Preparation

LCS (BGK0190-BS1)

Prepared & Analyzed: 11/07/23

pH	9.07	pH Units	9.18	98.8	95-105
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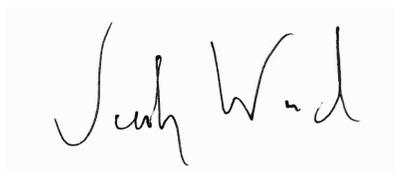
Duplicate (BGK0190-DUP1)

Source: 2310582-01

Prepared & Analyzed: 11/07/23

pH	6.77	pH Units	6.77	0.00	20
----	------	----------	------	------	----

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/10/23 13:18

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 09, 2023

Mark Longhurst

Tasman Geosciences

6855 W. 119th Ave.

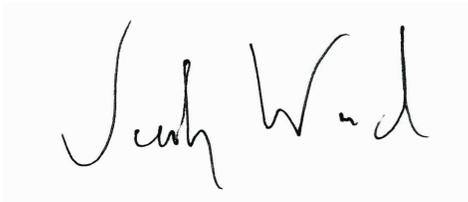
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2310607

Enclosed are the results of analyses for samples received by Summit Scientific on 10/31/23 17:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WC01@4'	2310607-01	Soil	10/31/23 09:18	10/31/23 17:55
GW01@6.5'	2310607-02	Water	10/31/23 11:50	10/31/23 17:55

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



4653 Table Mountain Drive
 Golden, CO 80403
 303-277-9310

Lab ID	Page 1 of 1
2310607	

Client: PDC / Tasman		Send Data To: Project Manager: Mark Longhurst		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: mark.longhurst@PDCE.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020				AFE#:	
Phone: 303-487-1228		Project Name: Ikenoye F29-22,23 Tank Battery		PO/Billing Codes:	
Sampler Name: R. Yavinsky		Project Number:		Contact: Mark Longhurst	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested					Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS		pH, EC, SAR
1	WCO1 @ 4'	10/31/23	0918	2			2			X							X Full 915 suite*	
2	GW01 @ 6.5'	↓	1150	3	3				X			X	X					
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by: <i>[Signature]</i>	Date/Time: 10/31/23 1605	Received by: Tasman Lockbox	Date/Time: 10/31/23 1605	TAT Business Days	Field DO	Notes: * PAHs and Inorganics on 48 hour turnaround
Relinquished by: Tasman Lockbox	Date/Time: 10/31/23 1755	Received by: <i>[Signature]</i>	Date/Time: 10/31/23 1755	Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Temperature Upon Receipt: 8.8	Corrected Temperature: <i>e</i>	IR gun #: 1	HNO3 lot #:	Standard	Field Turb.	

S₂

Sample Receipt Checklist

S2 Work Order# 2310407

Client: Rodtasman

Client Project ID: Kenouye F29-22,23

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #: Tank Battery

Matrix (Check all that apply)

Air

Soil/Solid

Water

Other

Temp (°C)

8.8

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ICE</u>
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Sameday</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>HCl</u>
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ IF NO, then contact the client before proceeding with analysis and note in case narrative.

AS

Custodian Printed Name

10/31/23

Date/Time

0000



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

WC01@4'
2310607-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	0.17	0.0020		mg/kg	1	BGJ1270	10/31/23	10/31/23	EPA 8260B	
Toluene	0.048	0.0050		"	"	"	"	"	"	
Ethylbenzene	5.6	0.050		"	10	"	"	"	"	
Xylenes (total)	52	0.10		"	"	"	"	"	"	E
1,2,4-Trimethylbenzene	12	0.050		"	"	"	"	"	"	E
1,3,5-Trimethylbenzene	8.4	0.050		"	"	"	"	"	"	E
Naphthalene	0.22	0.0038		"	1	"	"	"	"	E
Gasoline Range Hydrocarbons	2000	5.0		"	10	"	"	"	"	E

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0568	142 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0357	89.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0628	157 %		50-150		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	160	50		mg/kg	1	BGJ1271	10/31/23	10/31/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.18	73.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

WC01@4'
2310607-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0008	11/01/23	11/02/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.119	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.270	0.00500	"	"	"	"	"	"	E

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0164	49.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0136	40.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0108	11/03/23	11/07/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

WC01@4'
2310607-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.45	0.200	mg/kg dry	1	BGK0144	11/05/23	11/08/23	EPA 6020B
Barium	75.1	0.400	"	"	"	"	"	"
Cadmium	0.592	0.200	"	"	"	"	"	"
Copper	37.3	0.400	"	"	"	"	"	"
Lead	57.6	0.200	"	"	"	"	"	"
Nickel	1.81	0.400	"	"	"	"	"	"
Silver	1.01	0.0200	"	"	"	"	"	"
Zinc	55.7	0.400	"	"	"	"	"	"
Selenium	0.266	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0065	11/02/23	11/02/23	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	38.0	0.0500	mg/L dry	1	BGJ1253	10/31/23	11/03/23	EPA 6020B	
Magnesium	6.16	0.0500	"	"	"	"	"	"	
Sodium	10.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.405	0.00100	units	1	BGK0123	11/03/23	11/03/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

WC01@4'
2310607-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.1	%	1	BGK0054	11/02/23	11/02/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.241	0.0100	mmhos/cm	1	BGK0005	11/01/23	11/02/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **10/31/23 09:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.34		pH Units	1	BGK0006	11/01/23	11/02/23	EPA 9045D	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

GW01@6.5'
2310607-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/31/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	670	100		ug/l	100	BGJ1272	10/31/23	10/31/23	EPA 8260B	
Toluene	11	1.0		"	1	"	"	"	"	
Ethylbenzene	6300	100		"	100	"	"	"	"	
Xylenes (total)	54000	200		"	"	"	"	"	"	
Naphthalene	38	1.0		"	1	"	"	"	"	
1,2,4-Trimethylbenzene	6500	100		"	100	"	"	"	"	
1,3,5-Trimethylbenzene	3700	100		"	"	"	"	"	"	

Date Sampled: **10/31/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	19.3	145 %		23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	14.2	107 %		20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	15.2	114 %		21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGJ1270 - EPA 5030 Soil MS

Blank (BGJ1270-BLK1)

Prepared: 10/31/23 Analyzed: 11/01/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0406		"	0.0400		102	50-150			
<i>Surrogate: Toluene-d8</i>	0.0436		"	0.0400		109	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0422		"	0.0400		105	50-150			

LCS (BGJ1270-BS1)

Prepared: 10/31/23 Analyzed: 11/01/23

Benzene	0.111	0.0020	mg/kg	0.100		111	70-130			
Toluene	0.104	0.0050	"	0.100		104	70-130			
Ethylbenzene	0.110	0.0050	"	0.100		110	70-130			
m,p-Xylene	0.216	0.010	"	0.200		108	70-130			
o-Xylene	0.106	0.0050	"	0.100		106	70-130			
1,2,4-Trimethylbenzene	0.110	0.0050	"	0.100		110	70-130			
1,3,5-Trimethylbenzene	0.101	0.0050	"	0.100		101	70-130			
Naphthalene	0.125	0.0038	"	0.100		125	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0399		"	0.0400		99.8	50-150			
<i>Surrogate: Toluene-d8</i>	0.0373		"	0.0400		93.3	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0411		"	0.0400		103	50-150			

Matrix Spike (BGJ1270-MS1)

Source: 2310592-01

Prepared: 10/31/23 Analyzed: 11/01/23

Benzene	0.0945	0.0020	mg/kg	0.100	ND	94.5	70-130			
Toluene	0.0960	0.0050	"	0.100	ND	96.0	70-130			
Ethylbenzene	0.0866	0.0050	"	0.100	ND	86.6	70-130			
m,p-Xylene	0.169	0.010	"	0.200	ND	84.4	70-130			
o-Xylene	0.0823	0.0050	"	0.100	ND	82.3	70-130			
1,2,4-Trimethylbenzene	0.0845	0.0050	"	0.100	ND	84.5	70-130			
1,3,5-Trimethylbenzene	0.0829	0.0050	"	0.100	ND	82.9	70-130			
Naphthalene	0.120	0.0038	"	0.100	ND	120	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0443		"	0.0400		111	50-150			
<i>Surrogate: Toluene-d8</i>	0.0436		"	0.0400		109	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0411		"	0.0400		103	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

Batch BGJ1270 - EPA 5030 Soil MS

Matrix Spike Dup (BGJ1270-MSD1)

Source: 2310592-01

Prepared: 10/31/23 Analyzed: 11/01/23

Benzene	0.0930	0.0020	mg/kg	0.100	ND	93.0	70-130	1.66	30
Toluene	0.101	0.0050	"	0.100	ND	101	70-130	4.76	30
Ethylbenzene	0.0809	0.0050	"	0.100	ND	80.9	70-130	6.70	30
m,p-Xylene	0.166	0.010	"	0.200	ND	83.2	70-130	1.38	30
o-Xylene	0.0988	0.0050	"	0.100	ND	98.8	70-130	18.2	30
1,2,4-Trimethylbenzene	0.0759	0.0050	"	0.100	ND	75.9	70-130	10.7	30
1,3,5-Trimethylbenzene	0.0742	0.0050	"	0.100	ND	74.2	70-130	11.0	30
Naphthalene	0.123	0.0038	"	0.100	ND	123	70-130	2.49	30
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0400		106	50-150		
Surrogate: Toluene-d8	0.0464		"	0.0400		116	50-150		
Surrogate: 4-Bromofluorobenzene	0.0342		"	0.0400		85.6	50-150		

Batch BGJ1272 - EPA 5030 Water MS

Blank (BGJ1272-BLK1)

Prepared & Analyzed: 10/31/23

Benzene	ND	1.0	ug/l						
Toluene	ND	1.0	"						
Ethylbenzene	ND	1.0	"						
Xylenes (total)	ND	2.0	"						
Naphthalene	ND	1.0	"						
1,2,4-Trimethylbenzene	ND	1.0	"						
1,3,5-Trimethylbenzene	ND	1.0	"						
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.3		105	23-173		
Surrogate: Toluene-d8	14.6		"	13.3		109	20-170		
Surrogate: 4-Bromofluorobenzene	14.7		"	13.3		110	21-167		

LCS (BGJ1272-BS1)

Prepared & Analyzed: 10/31/23

Benzene	33.5	1.0	ug/l	33.3		100	51-132		
Toluene	38.3	1.0	"	33.3		115	51-138		
Ethylbenzene	34.4	1.0	"	33.3		103	58-146		
m,p-Xylene	65.2	2.0	"	66.7		97.7	57-144		
o-Xylene	35.7	1.0	"	33.3		107	53-146		
Naphthalene	31.4	1.0	"	33.3		94.2	70-130		
1,2,4-Trimethylbenzene	29.4	1.0	"	33.3		88.1	70-130		
1,3,5-Trimethylbenzene	31.4	1.0	"	33.3		94.3	70-130		
Surrogate: 1,2-Dichloroethane-d4	15.6		"	13.3		117	23-173		
Surrogate: Toluene-d8	14.4		"	13.3		108	20-170		
Surrogate: 4-Bromofluorobenzene	14.8		"	13.3		111	21-167		

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BGJ1272 - EPA 5030 Water MS

LCS Dup (BGJ1272-BSD1)

Prepared & Analyzed: 10/31/23

Benzene	33.9	1.0	ug/l	33.3	102	51-132	1.13	20	
Toluene	39.8	1.0	"	33.3	119	51-138	3.77	20	
Ethylbenzene	35.6	1.0	"	33.3	107	58-146	3.20	20	
m,p-Xylene	70.2	2.0	"	66.7	105	57-144	7.48	20	
o-Xylene	37.1	1.0	"	33.3	111	53-146	3.85	20	
Naphthalene	26.3	1.0	"	33.3	79.0	70-130	17.6	20	
1,2,4-Trimethylbenzene	31.4	1.0	"	33.3	94.3	70-130	6.77	20	
1,3,5-Trimethylbenzene	33.0	1.0	"	33.3	99.0	70-130	4.84	20	
Surrogate: 1,2-Dichloroethane-d4	16.4		"	13.3	123	23-173			
Surrogate: Toluene-d8	14.4		"	13.3	108	20-170			
Surrogate: 4-Bromofluorobenzene	14.5		"	13.3	109	21-167			

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BGJ1271 - EPA 3550A

Blank (BGJ1271-BLK1)

Prepared & Analyzed: 10/31/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.8		"	12.5		110		30-150			

LCS (BGJ1271-BS1)

Prepared & Analyzed: 10/31/23

C10-C28 (DRO)	534	50	mg/kg	500		107		70-130			
Surrogate: <i>o</i> -Terphenyl	13.7		"	12.5		110		30-150			

Matrix Spike (BGJ1271-MS1)

Source: 2310592-01

Prepared: 10/31/23 Analyzed: 11/01/23

C10-C28 (DRO)	496	50	mg/kg	500	ND	99.3		70-130			
Surrogate: <i>o</i> -Terphenyl	9.76		"	12.5		78.1		30-150			

Matrix Spike Dup (BGJ1271-MSD1)

Source: 2310592-01

Prepared: 10/31/23 Analyzed: 11/01/23

C10-C28 (DRO)	475	50	mg/kg	500	ND	95.1		70-130	4.33	20	
Surrogate: <i>o</i> -Terphenyl	8.77		"	12.5		70.2		30-150			

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGK0008 - EPA 5030 Soil MS

Blank (BGK0008-BLK1)

Prepared & Analyzed: 11/01/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0248		"	0.0333		74.4	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0246		"	0.0333		73.7	40-150			

LCS (BGK0008-BS1)

Prepared & Analyzed: 11/01/23

Acenaphthene	0.0283	0.00500	mg/kg	0.0333		84.9	31-137			
Anthracene	0.0254	0.00500	"	0.0333		76.3	30-120			
Benzo (a) anthracene	0.0240	0.00500	"	0.0333		71.9	30-120			
Benzo (a) pyrene	0.0238	0.00500	"	0.0333		71.5	30-120			
Benzo (b) fluoranthene	0.0243	0.00500	"	0.0333		72.8	30-120			
Benzo (k) fluoranthene	0.0243	0.00500	"	0.0333		73.0	30-120			
Chrysene	0.0253	0.00500	"	0.0333		75.9	30-120			
Dibenz (a,h) anthracene	0.0224	0.00500	"	0.0333		67.2	30-120			
Fluoranthene	0.0261	0.00500	"	0.0333		78.3	30-120			
Fluorene	0.0268	0.00500	"	0.0333		80.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0152	0.00500	"	0.0333		45.5	30-120			
Pyrene	0.0246	0.00500	"	0.0333		73.7	35-142			
1-Methylnaphthalene	0.0257	0.00500	"	0.0333		77.2	35-142			
2-Methylnaphthalene	0.0265	0.00500	"	0.0333		79.4	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0268		"	0.0333		80.5	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0255		"	0.0333		76.6	40-150			

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGK0008 - EPA 5030 Soil MS

Matrix Spike (BGK0008-MS1)

Source: 2310537-01

Prepared & Analyzed: 11/01/23

Acenaphthene	0.0141	0.00500	mg/kg	0.0333	ND	42.3	31-137			
Anthracene	0.0153	0.00500	"	0.0333	ND	46.0	30-120			
Benzo (a) anthracene	0.0150	0.00500	"	0.0333	ND	45.1	30-120			
Benzo (a) pyrene	0.0137	0.00500	"	0.0333	ND	41.2	30-120			
Benzo (b) fluoranthene	0.0136	0.00500	"	0.0333	ND	40.8	30-120			
Benzo (k) fluoranthene	0.0142	0.00500	"	0.0333	ND	42.6	30-120			
Chrysene	0.0153	0.00500	"	0.0333	ND	46.0	30-120			
Dibenz (a,h) anthracene	0.0163	0.00500	"	0.0333	ND	48.9	30-120			
Fluoranthene	0.0169	0.00500	"	0.0333	ND	50.7	30-120			
Fluorene	0.0146	0.00500	"	0.0333	ND	43.8	30-120			
Indeno (1,2,3-cd) pyrene	0.0143	0.00500	"	0.0333	ND	43.0	30-120			
Pyrene	0.0160	0.00500	"	0.0333	ND	47.9	35-142			
1-Methylnaphthalene	0.0158	0.00500	"	0.0333	ND	47.4	15-130			
2-Methylnaphthalene	0.0149	0.00500	"	0.0333	ND	44.8	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0157		"	0.0333		47.0	40-150			
Surrogate: Fluoranthene-d10	0.0171		"	0.0333		51.4	40-150			

Matrix Spike Dup (BGK0008-MSD1)

Source: 2310537-01

Prepared & Analyzed: 11/01/23

Acenaphthene	0.0149	0.00500	mg/kg	0.0333	ND	44.6	31-137	5.26	30
Anthracene	0.0150	0.00500	"	0.0333	ND	45.1	30-120	1.95	30
Benzo (a) anthracene	0.0151	0.00500	"	0.0333	ND	45.3	30-120	0.542	30
Benzo (a) pyrene	0.0136	0.00500	"	0.0333	ND	40.7	30-120	1.15	30
Benzo (b) fluoranthene	0.0136	0.00500	"	0.0333	ND	40.7	30-120	0.275	30
Benzo (k) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.5	30-120	24.4	30
Chrysene	0.0149	0.00500	"	0.0333	ND	44.8	30-120	2.77	30
Dibenz (a,h) anthracene	0.0136	0.00500	"	0.0333	ND	40.7	30-120	18.4	30
Fluoranthene	0.0157	0.00500	"	0.0333	ND	47.2	30-120	7.23	30
Fluorene	0.0149	0.00500	"	0.0333	ND	44.8	30-120	2.25	30
Indeno (1,2,3-cd) pyrene	0.0181	0.00500	"	0.0333	ND	54.4	30-120	23.4	30
Pyrene	0.0162	0.00500	"	0.0333	ND	48.7	35-142	1.67	30
1-Methylnaphthalene	0.0147	0.00500	"	0.0333	ND	44.1	15-130	7.03	50
2-Methylnaphthalene	0.0145	0.00500	"	0.0333	ND	43.6	15-130	2.71	50
Surrogate: 2-Methylnaphthalene-d10	0.0153		"	0.0333		45.9	40-150		
Surrogate: Fluoranthene-d10	0.0158		"	0.0333		47.5	40-150		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGK0108 - EPA 3050B

Blank (BGK0108-BLK1)

Prepared: 11/03/23 Analyzed: 11/07/23

Boron ND 2.00 mg/L

LCS (BGK0108-BS1)

Prepared: 11/03/23 Analyzed: 11/07/23

Boron 5.59 2.00 mg/L 5.00 112 80-120

Duplicate (BGK0108-DUP1)

Source: 2309572-01

Prepared: 11/03/23 Analyzed: 11/07/23

Boron ND 2.00 mg/L ND 20

Matrix Spike (BGK0108-MS1)

Source: 2309572-01

Prepared: 11/03/23 Analyzed: 11/07/23

Boron 5.63 2.00 mg/L 5.00 ND 113 75-125

Matrix Spike Dup (BGK0108-MSD1)

Source: 2309572-01

Prepared: 11/03/23 Analyzed: 11/07/23

Boron 5.67 2.00 mg/L 5.00 ND 113 75-125 0.709 25

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BGK0144 - EPA 3050B

Blank (BGK0144-BLK1)

Prepared: 11/05/23 Analyzed: 11/08/23

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

LCS (BGK0144-BS1)

Prepared: 11/05/23 Analyzed: 11/08/23

Arsenic	37.5	0.200	mg/kg wet	40.0	93.7	80-120				
Barium	37.6	0.400	"	40.0	94.1	80-120				
Cadmium	1.82	0.200	"	2.00	91.1	80-120				
Copper	40.7	0.400	"	40.0	102	80-120				
Lead	18.5	0.200	"	20.0	92.5	80-120				
Nickel	40.2	0.400	"	40.0	100	80-120				
Silver	1.86	0.0200	"	2.00	92.9	80-120				
Zinc	39.6	0.400	"	40.0	99.0	80-120				
Selenium	4.11	0.260	"	4.00	103	80-120				

Duplicate (BGK0144-DUP1)

Source: 2310526-21

Prepared: 11/05/23 Analyzed: 11/08/23

Arsenic	1.05	0.200	mg/kg dry	1.01	4.57	20				
Barium	36.1	0.400	"	35.7	0.925	20				QR-04
Cadmium	0.103	0.200	"	0.111	8.28	20				QR-01
Copper	2.55	0.400	"	2.58	1.05	20				
Lead	6.75	0.200	"	6.76	0.0759	20				
Nickel	3.47	0.400	"	3.53	1.57	20				
Silver	0.0191	0.0200	"	0.0214	11.5	20				
Zinc	9.97	0.400	"	10.1	1.06	20				
Selenium	ND	0.260	"	ND		20				

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BGK0144 - EPA 3050B

Matrix Spike (BGK0144-MS1)

Source: 2310526-21

Prepared: 11/05/23 Analyzed: 11/08/23

Arsenic	18.2	0.200	mg/kg dry	46.6	1.01	37.0	75-125				QM-07
Barium	97.0	0.400	"	46.6	35.7	131	75-125				QM-07
Cadmium	2.15	0.200	"	2.33	0.111	87.6	75-125				
Copper	20.4	0.400	"	46.6	2.58	38.2	75-125				QM-07
Lead	26.6	0.200	"	23.3	6.76	85.0	75-125				
Nickel	20.8	0.400	"	46.6	3.53	37.1	75-125				QM-07
Silver	2.10	0.0200	"	2.33	0.0214	89.1	75-125				
Zinc	27.8	0.400	"	46.6	10.1	38.1	75-125				QM-07
Selenium	4.73	0.260	"	4.66	ND	101	75-125				

Matrix Spike Dup (BGK0144-MSD1)

Source: 2310526-21

Prepared: 11/05/23 Analyzed: 11/08/23

Arsenic	18.7	0.200	mg/kg dry	46.6	1.01	38.0	75-125	2.73	25		QM-07
Barium	101	0.400	"	46.6	35.7	139	75-125	3.63	25		QM-07
Cadmium	2.23	0.200	"	2.33	0.111	90.7	75-125	3.30	25		
Copper	21.0	0.400	"	46.6	2.58	39.5	75-125	2.88	25		QM-07
Lead	27.5	0.200	"	23.3	6.76	89.1	75-125	3.47	25		
Nickel	21.2	0.400	"	46.6	3.53	38.0	75-125	1.82	25		QM-07
Silver	2.20	0.0200	"	2.33	0.0214	93.3	75-125	4.56	25		
Zinc	28.4	0.400	"	46.6	10.1	39.3	75-125	1.99	25		QM-07
Selenium	4.66	0.260	"	4.66	ND	100	75-125	1.42	25		

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BGK0065 - 3060A Mod

Blank (BGK0065-BLK1)

Prepared & Analyzed: 11/02/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGK0065-BS1)

Prepared & Analyzed: 11/02/23

Chromium, Hexavalent 24.6 0.30 mg/kg wet 25.0 98.4 80-120

Duplicate (BGK0065-DUP1)

Source: 2310141-05

Prepared & Analyzed: 11/02/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGK0065-MS1)

Source: 2310141-05

Prepared & Analyzed: 11/02/23

Chromium, Hexavalent 27.5 0.30 mg/kg dry 27.6 ND 99.4 75-125

Matrix Spike Dup (BGK0065-MSD1)

Source: 2310141-05

Prepared & Analyzed: 11/02/23

Chromium, Hexavalent 27.6 0.30 mg/kg dry 27.6 ND 99.8 75-125 0.402 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BGJ1253 - General Preparation

Blank (BGJ1253-BLK1)

Prepared: 10/31/23 Analyzed: 11/02/23

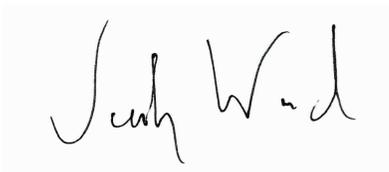
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BGJ1253-BS1)

Prepared: 10/31/23 Analyzed: 11/02/23

Calcium	5.01	0.0500	mg/L wet	5.00	100	70-130				
Magnesium	4.91	0.0500	"	5.00	98.2	70-130				
Sodium	4.61	0.0500	"	5.00	92.1	70-130				

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 11/09/23 09:13

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BGK0054 - General Preparation

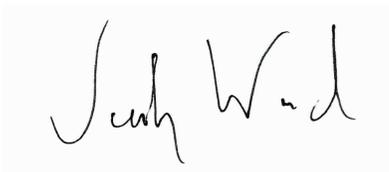
Duplicate (BGK0054-DUP1)

Source: 2310577-01

Prepared & Analyzed: 11/02/23

% Solids	83.2		%		85.9			3.17	20	
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BGK0005 - General Preparation

Blank (BGK0005-BLK1)

Prepared: 11/01/23 Analyzed: 11/02/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGK0005-BS1)

Prepared: 11/01/23 Analyzed: 11/02/23

Specific Conductance (EC) 0.151 0.0100 mmhos/cm 0.150 101 95-105

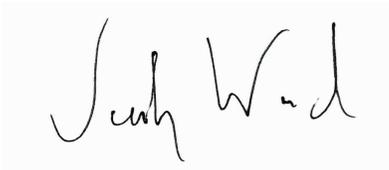
Duplicate (BGK0005-DUP1)

Source: 2310490-01

Prepared: 11/01/23 Analyzed: 11/02/23

Specific Conductance (EC) 0.142 0.0100 mmhos/cm 0.142 0.00 20

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGK0006 - General Preparation

LCS (BGK0006-BS1)

Prepared: 11/01/23 Analyzed: 11/02/23

pH	9.03	pH Units	9.18	98.4	95-105
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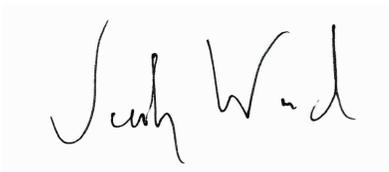
Duplicate (BGK0006-DUP1)

Source: 2310490-01

Prepared: 11/01/23 Analyzed: 11/02/23

pH	7.74	pH Units	7.74	0.00	20
----	------	----------	------	------	----

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
11/09/23 09:13

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 12, 2024

Mark Longhurst

Tasman Geosciences

6855 W. 119th Ave.

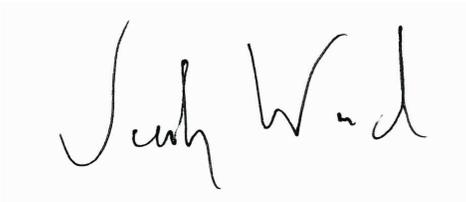
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2401149

Enclosed are the results of analyses for samples received by Summit Scientific on 01/09/24 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and "W".

Jacob Wood For Paul Shrewsbury
President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@7'	2401149-01	Soil	01/09/24 10:30	01/09/24 17:45
SS02@4'	2401149-02	Soil	01/09/24 12:50	01/09/24 17:45
SS03@6'	2401149-03	Soil	01/09/24 12:55	01/09/24 17:45
SS04@7'	2401149-04	Soil	01/09/24 13:05	01/09/24 17:45
SS05@4'	2401149-05	Soil	01/09/24 14:35	01/09/24 17:45
SS06@6'	2401149-06	Soil	01/09/24 14:30	01/09/24 17:45

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SUMMIT SCIENTIFIC

4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2401149	

Client: PDC / Tasman		Send Data To: Project Manager: Mark Longhurst		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: mark.longhurst@PDCE.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80220		Project Name: <u>Ikouye FL9-22,23 Tank Battery</u>		AFE#:	
Phone: 303-487-1228		Project Number:		PO/Billing Codes:	
Sampler Name: <u>D. Vigil, C. Lovell</u>		Contact: Mark Longhurst			

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested						Special Instructions				
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS		pH, EC, SAR	PAH - 915	Metals - 915	
1	5501 @ 7'	1/9/24	1030	2			X			X											
2	5502 @ 4'		1250	2			X			X											
3	5503 @ 6'		1255	2			X			X											
4	5504 @ 7'		1309	2			X			X											
5	5505 @ 4'		1435	2			X			X											
6	5506 @ 6'		1430	2			X			X											
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <u>[Signature]</u>	Date/Time: <u>1/9/24</u> <u>1630</u>	Received by: <u>Tasman lock box</u>	Date/Time: <u>1/9/24</u> <u>1630</u>	TAT Business Days	Field DO	Notes: * PAHs: 1-M, 2-M on 48-hr TAT
Relinquished by: <u>Tasman lock box</u>	Date/Time: <u>1/9/24</u> <u>1745</u>	Received by: <u>[Signature]</u>	Date/Time: <u>1/9/24</u> <u>1745</u>	Same Day <input checked="" type="checkbox"/>	Field EC	
				1 Day <input type="checkbox"/>	Field ORP	
				2 Days <input type="checkbox"/>	Field pH	
				3 Days <input type="checkbox"/>	Field Temp.	
				Standard <input type="checkbox"/>	Field Turb.	
Temperature Upon Receipt: <u>8.4</u>	Corrected Temperature: <u>6</u>	IR gun #: <u>1</u>	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2401149

Client: Portman Client Project ID: Kenawy Tank Battery F2922,23

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #:

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) 8.4 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on 7CE
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sameday
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water - is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column - HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AS
Custodian Printed Name

1/9/24
Date/Time

11 11 11



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS01@7'
2401149-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0340	01/09/24	01/09/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/09/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0347	86.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0440	110 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0437	109 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0341	01/09/24	01/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/09/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.12	48.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS01@7'
2401149-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

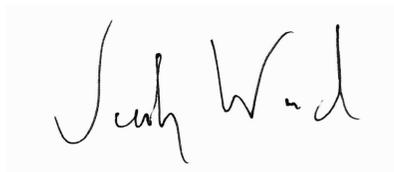
Date Sampled: **01/09/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0348	01/10/24	01/10/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/09/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0178	53.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0229	68.7 %		40-150		"	"	"	"	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS02@4'
2401149-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/24 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0340	01/09/24	01/09/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/09/24 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0382	95.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0441	110 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0435	109 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/24 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0341	01/09/24	01/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/09/24 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	4.62	36.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS02@4'
2401149-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

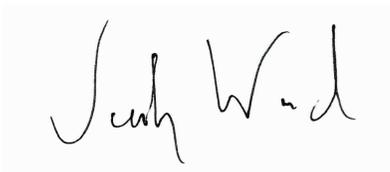
Date Sampled: **01/09/24 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0348	01/10/24	01/10/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/09/24 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0158	47.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0195	58.6 %		40-150		"	"	"	"	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS03@6'
2401149-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/24 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0340	01/09/24	01/09/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/09/24 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0339	84.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0439	110 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0428	107 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/24 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0341	01/09/24	01/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/09/24 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.07	48.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS03@6'
2401149-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/09/24 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0348	01/10/24	01/10/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/09/24 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0162	48.7 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0194	58.1 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS04@7'
2401149-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0340	01/09/24	01/09/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/09/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0392	97.9 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0432	108 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0445	111 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0341	01/09/24	01/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/09/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.31	66.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS04@7'
2401149-04 (Soil)

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PAH by EPA Method 8270D SIM

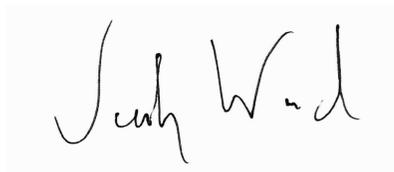
Date Sampled: **01/09/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0348	01/10/24	01/10/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/09/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0170	51.1 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0234	70.3 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS05@4'
2401149-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/24 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0340	01/09/24	01/09/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/09/24 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0397	99.2 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0431	108 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0424	106 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/24 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0341	01/09/24	01/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/09/24 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	4.80	38.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS05@4'
2401149-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

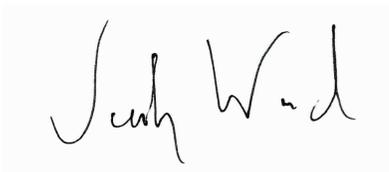
Date Sampled: **01/09/24 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0348	01/10/24	01/10/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/09/24 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0165	49.6 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0194	58.2 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS06@6'
2401149-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/09/24 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0340	01/09/24	01/09/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/09/24 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0316	79.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0443	111 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0431	108 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/09/24 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0341	01/09/24	01/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/09/24 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.46	67.7 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

SS06@6'
2401149-06 (Soil)

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PAH by EPA Method 8270D SIM

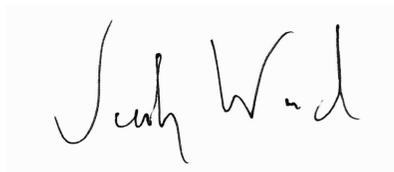
Date Sampled: **01/09/24 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0348	01/10/24	01/10/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/09/24 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0145	43.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0192	57.7 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BHA0340 - EPA 5030 Soil MS

Blank (BHA0340-BLK1)

Prepared: 01/09/24 Analyzed: 01/10/24

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0339		"	0.0400		84.8	50-150				
<i>Surrogate: Toluene-d8</i>	0.0443		"	0.0400		111	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0421		"	0.0400		105	50-150				

LCS (BHA0340-BS1)

Prepared: 01/09/24 Analyzed: 01/10/24

Benzene	0.0809	0.0020	mg/kg	0.100		80.9	70-130				
Toluene	0.108	0.0050	"	0.100		108	70-130				
Ethylbenzene	0.0968	0.0050	"	0.100		96.8	70-130				
m,p-Xylene	0.201	0.010	"	0.200		101	70-130				
o-Xylene	0.0984	0.0050	"	0.100		98.4	70-130				
1,2,4-Trimethylbenzene	0.0979	0.0050	"	0.100		97.9	70-130				
1,3,5-Trimethylbenzene	0.0977	0.0050	"	0.100		97.7	70-130				
Naphthalene	0.0825	0.0038	"	0.100		82.5	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0304		"	0.0400		76.1	50-150				
<i>Surrogate: Toluene-d8</i>	0.0434		"	0.0400		109	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0420		"	0.0400		105	50-150				

Matrix Spike (BHA0340-MS1)

Source: 2401146-01

Prepared: 01/09/24 Analyzed: 01/10/24

Benzene	0.0568	0.0020	mg/kg	0.100	ND	56.8	70-130				QM-07
Toluene	0.0771	0.0050	"	0.100	ND	77.1	70-130				
Ethylbenzene	0.0873	0.0050	"	0.100	ND	87.3	70-130				
m,p-Xylene	0.177	0.010	"	0.200	ND	88.5	70-130				
o-Xylene	0.0900	0.0050	"	0.100	ND	90.0	70-130				
1,2,4-Trimethylbenzene	0.0844	0.0050	"	0.100	ND	84.4	70-130				
1,3,5-Trimethylbenzene	0.0870	0.0050	"	0.100	ND	87.0	70-130				
Naphthalene	0.0683	0.0038	"	0.100	ND	68.3	70-130				QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0326		"	0.0400		81.4	50-150				
<i>Surrogate: Toluene-d8</i>	0.0427		"	0.0400		107	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0421		"	0.0400		105	50-150				

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0340 - EPA 5030 Soil MS

Matrix Spike Dup (BHA0340-MSD1)	Source: 2401146-01			Prepared: 01/09/24 Analyzed: 01/10/24						
Benzene	0.0661	0.0020	mg/kg	0.100	ND	66.1	70-130	15.1	30	QM-07
Toluene	0.0880	0.0050	"	0.100	ND	88.0	70-130	13.3	30	
Ethylbenzene	0.0891	0.0050	"	0.100	ND	89.1	70-130	2.01	30	
m,p-Xylene	0.182	0.010	"	0.200	ND	90.8	70-130	2.56	30	
o-Xylene	0.0906	0.0050	"	0.100	ND	90.6	70-130	0.731	30	
1,2,4-Trimethylbenzene	0.0847	0.0050	"	0.100	ND	84.7	70-130	0.319	30	
1,3,5-Trimethylbenzene	0.0890	0.0050	"	0.100	ND	89.0	70-130	2.28	30	
Naphthalene	0.0653	0.0038	"	0.100	ND	65.3	70-130	4.49	30	QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0342</i>		<i>"</i>	<i>0.0400</i>		<i>85.6</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0446</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0421</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>50-150</i>			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limits	RPD	Limit		

Batch BHA0341 - EPA 3550A

Blank (BHA0341-BLK1)

Prepared: 01/09/24 Analyzed: 01/10/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	9.69		"	12.5		77.5	30-150			

LCS (BHA0341-BS1)

Prepared: 01/09/24 Analyzed: 01/10/24

C10-C28 (DRO)	474	50	mg/kg	500	14.9	89.5	70-130			
Surrogate: <i>o</i> -Terphenyl	10.2		"	12.5		81.2	30-150			

Matrix Spike (BHA0341-MS1)

Source: 2401146-01

Prepared: 01/09/24 Analyzed: 01/10/24

C10-C28 (DRO)	462	50	mg/kg	500	14.9	85.1	70-130	4.92	20	
Surrogate: <i>o</i> -Terphenyl	7.19		"	12.5		57.6	30-150			

Matrix Spike Dup (BHA0341-MSD1)

Source: 2401146-01

Prepared: 01/09/24 Analyzed: 01/10/24

C10-C28 (DRO)	440	50	mg/kg	500	14.9	85.1	70-130	4.92	20	
Surrogate: <i>o</i> -Terphenyl	6.79		"	12.5		54.3	30-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0348 - EPA 5030 Soil MS

Blank (BHA0348-BLK1)

Prepared & Analyzed: 01/10/24

1-Methylnaphthalene	ND	0.00500	mg/kg							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0151		"	0.0333		45.2	40-150			
Surrogate: Fluoranthene-d10	0.0299		"	0.0333		89.8	40-150			

LCS (BHA0348-BS1)

Prepared & Analyzed: 01/10/24

1-Methylnaphthalene	0.0181	0.00500	mg/kg	0.0333		54.4	35-142			
2-Methylnaphthalene	0.0241	0.00500	"	0.0333		72.4	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0171		"	0.0333		51.2	40-150			
Surrogate: Fluoranthene-d10	0.0236		"	0.0333		70.8	40-150			

Matrix Spike (BHA0348-MS1)

Source: 2401139-01

Prepared & Analyzed: 01/10/24

1-Methylnaphthalene	0.0163	0.00500	mg/kg	0.0333	ND	48.9	15-130			
2-Methylnaphthalene	0.0214	0.00500	"	0.0333	ND	64.2	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0153		"	0.0333		45.8	40-150			
Surrogate: Fluoranthene-d10	0.0196		"	0.0333		58.7	40-150			

Matrix Spike Dup (BHA0348-MSD1)

Source: 2401139-01

Prepared & Analyzed: 01/10/24

1-Methylnaphthalene	0.0143	0.00500	mg/kg	0.0333	ND	43.0	15-130	12.9	50	
2-Methylnaphthalene	0.0187	0.00500	"	0.0333	ND	56.1	15-130	13.4	50	
Surrogate: 2-Methylnaphthalene-d10	0.0137		"	0.0333		41.2	40-150			
Surrogate: Fluoranthene-d10	0.0179		"	0.0333		53.8	40-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
01/12/24 13:11

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 19, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2401175

Enclosed are the results of analyses for samples received by Summit Scientific on 01/10/24 17:46. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS07@4'	2401175-01	Soil	01/10/24 09:00	01/10/24 17:46
SS08@6'	2401175-02	Soil	01/10/24 08:55	01/10/24 17:46
SS09@7'	2401175-03	Soil	01/10/24 09:10	01/10/24 17:46
SS10@7'	2401175-04	Soil	01/10/24 09:15	01/10/24 17:46
SS11@7'	2401175-05	Soil	01/10/24 11:15	01/10/24 17:46
SS12@4'	2401175-06	Soil	01/10/24 11:25	01/10/24 17:46
SS13@6'	2401175-07	Soil	01/10/24 11:30	01/10/24 17:46
SS14@7'	2401175-08	Soil	01/10/24 13:00	01/10/24 17:46
SS15@4'	2401175-09	Soil	01/10/24 13:10	01/10/24 17:46
SS16@6'	2401175-10	Soil	01/10/24 13:05	01/10/24 17:46
SS17@7'	2401175-11	Soil	01/10/24 13:35	01/10/24 17:46
SS18@4'	2401175-12	Soil	01/10/24 13:30	01/10/24 17:46
SS19@6'	2401175-13	Soil	01/10/24 13:25	01/10/24 17:46
SS20@7'	2401175-14	Soil	01/10/24 15:30	01/10/24 17:46
SS21@2.5'	2401175-15	Soil	01/10/24 15:25	01/10/24 17:46
SS22@4'	2401175-16	Soil	01/10/24 15:20	01/10/24 17:46
SS23@6'	2401175-17	Soil	01/10/24 15:15	01/10/24 17:46

Case Narrative

Jesse Marcus requested pH, EC, SAR, & Boron be added to SS21@2.5' on 1/10/2024.

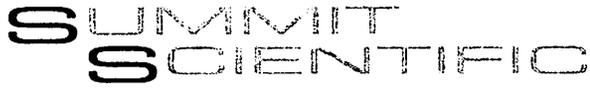
Jesse Marcus cancelled Table 915 Organics for SS21@2.5' on 1/10/2024.

This report includes those results.

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



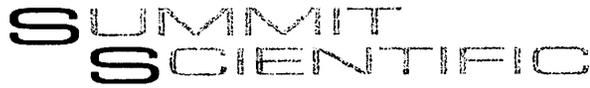
4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 2
240175.1	

Client: PDC / Tasman		Send Data To: Project Manager: Mark Longhurst		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: mark.longhurst@PDCE.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020				AFE#:	
Phone: 303-487-1228		Project Name: Kenoye F 29-22, 23 Tank Battery		PO/Billing Codes:	
Sampler Name: Coner Lovell		Project Number:		Contact: Mark Longhurst	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested					Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	1,2,4 & 1,3,5-TMB	TDS, Cl, SO4		TPH - (66-c36)	PAH-915 *
1	SS07 C 4'	1/10/24	900	2			X			X			X	X				
2	SS08 C 6'		855															
3	SS09 C 7'		910															
4	SS10 C 7'		915															
5	SS11 C 7'		1115															
6	SS12 C 4'		1125															
7	SS13 C 6'		1130															
8	SS14 C 7'		1300															
9	SS15 C 4'		1310															
10	SS16 C 6'		1305															
11	SS17 C 7'		1335															
12	SS18 C 4'		1330															
13	SS19 C 6'		1325															
14	SS20 C 7'		1530															
15	SS21 C 2.5'		1525															

Relinquished by: <i>LJH</i>	Date/Time: 1/10/24 1720	Received by: Tasman Lockbox	Date/Time: 1/10/24 1720	TAT Business Days	Field DO	Notes: *PAHs: 1-M, 2-M on 48 hr TAT
Relinquished by: Tasman Lockbox	Date/Time: 1/10/24 1740	Received by: <i>[Signature]</i>	Date/Time: 1/10/24 1740	Same Day <input checked="" type="checkbox"/>	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	Field Turb.	
Temperature Upon Receipt: 79	Corrected Temperature: <i>[Signature]</i>	IR gun #:		HNO3 lot #:		



4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 2 of 2
2401175-2	

		Send Data To:	Send Invoice To:
Client: PDC / Tasman	Project Manager: Mark Longhurst	Company: PDC Energy	
Address: 6855 W 119th Ave	E-Mail: mark.longhurst@PDCE.com	Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020		AFE#:	
Phone: 303-487-1228	Project Name: <i>Kenoye F29-22, 23 Tank Battery</i>	PO/Billing Codes:	
Sampler Name: <i>Conor Lovell</i>	Project Number:	Contact: Mark Longhurst	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested					Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	1,2,4 & 1,3,5-TMB	TDS, Cl, SO4	TPH-(CC-C3C)		PAH - 7/5*
1	SS22 C4'	1/10/24	1520	2			X			X			X	X	X	X		
2	SS23 C6'	1	1515	1			1			1			1	1	1	1		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by: <i>[Signature]</i> 1/10/24 1720	Received by: <i>Tasman Lovell</i> 1/10/24 1720	TAT Business Days	Field DO	Notes: * PAHs: 1-M, 2-M on 48 hr TAT	
		Same Day	X		Field EC
Relinquished by: <i>Tasman Lovell</i> 1/10/24 1740	Received by: <i>[Signature]</i> 1/10/24 1740	1 Day			Field ORP
		2 Days			Field pH
Relinquished by:	Received by:	3 Days			Field Temp.
		Standard		Field Turb.	
Temperature Upon Receipt: <u>7.9</u>	Corrected Temperature: <u>8</u>	IR gun #: <u>1</u>	HNO3 lot #: _____		

S₂

2/2
Sample Receipt Checklist

S2 Work Order# 2401175

Client: Pactasman Client Project ID: FKenauye F29-22,23 Tank Battery

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON ICE
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AS
Custodian Printed Name
1/10/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS07@4'
2401175-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0396	01/10/24	01/10/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/10/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0400	99.9 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0424	106 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0435	109 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0399	01/10/24	01/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/10/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.83	70.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS07@4'
2401175-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

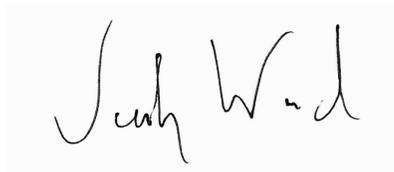
Date Sampled: **01/10/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0164	49.2 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0153	45.9 %		40-150		"	"	"	"	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS08@6'
2401175-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0396	01/10/24	01/10/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/10/24 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0355	88.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0449	112 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0456	114 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0399	01/10/24	01/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/10/24 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.10	72.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS08@6'
2401175-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

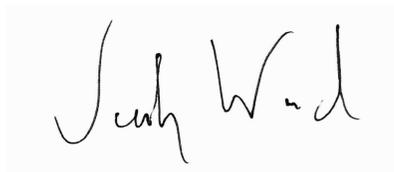
Date Sampled: **01/10/24 08:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 08:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0145	43.4 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0163	48.8 %		40-150		"	"	"	"	

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS09@7'
2401175-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 09:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0396	01/10/24	01/10/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/10/24 09:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0371	92.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0457	114 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0430	107 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 09:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0399	01/10/24	01/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/10/24 09:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.50	52.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS09@7'
2401175-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

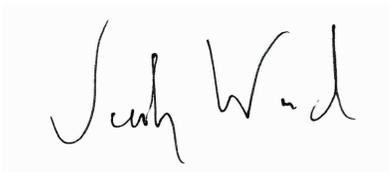
Date Sampled: **01/10/24 09:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 09:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0138	41.3 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0143	42.9 %		40-150		"	"	"	"	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS10@7'
2401175-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 09:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0396	01/10/24	01/10/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/10/24 09:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0344	86.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0431	108 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0439	110 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 09:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0399	01/10/24	01/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/10/24 09:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.32	66.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS10@7'
2401175-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

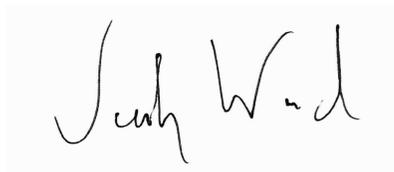
Date Sampled: **01/10/24 09:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 09:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0162	48.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0157	47.1 %		40-150		"	"	"	"	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS11@7'
2401175-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0396	01/10/24	01/10/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/10/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0328	82.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0451	113 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0399	01/10/24	01/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/10/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.47	51.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS11@7'
2401175-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

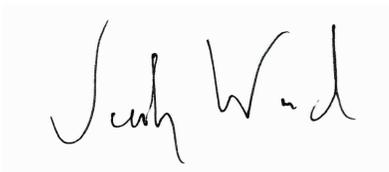
Date Sampled: **01/10/24 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0136	40.7 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0139	41.8 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS12@4'
2401175-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0396	01/10/24	01/10/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/10/24 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0304	76.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0434	108 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0444	111 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0399	01/10/24	01/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/10/24 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	5.80	46.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS12@4'
2401175-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

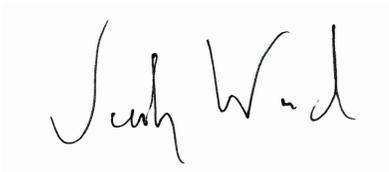
Date Sampled: **01/10/24 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0138	41.4 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0163	48.8 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS13@6'
2401175-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0396	01/10/24	01/10/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/10/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0293	73.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0422	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0436	109 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0399	01/10/24	01/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/10/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.70	69.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS13@6'
2401175-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

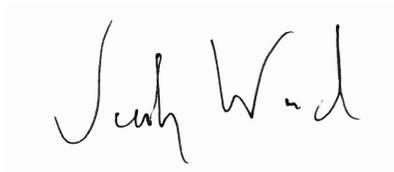
Date Sampled: **01/10/24 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0164	49.2 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0166	49.8 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS14@7'
2401175-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0396	01/10/24	01/10/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0291	72.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0444	111 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0447	112 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0399	01/10/24	01/10/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/10/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.61	76.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS14@7'
2401175-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

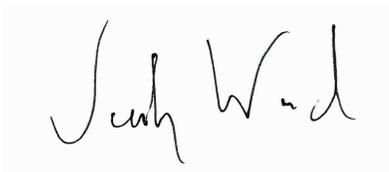
Date Sampled: **01/10/24 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0169	50.7 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0201	60.4 %		40-150		"	"	"	"	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS15@4'
2401175-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0396	01/10/24	01/10/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0322	80.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0451	113 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0430	108 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0399	01/10/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.13	65.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS15@4'
2401175-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/10/24 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	0.00664	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0159	47.6 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0185	55.4 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS16@6'
2401175-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0396	01/10/24	01/10/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0268	67.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0432	108 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0417	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0399	01/10/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.81	70.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS16@6'
2401175-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

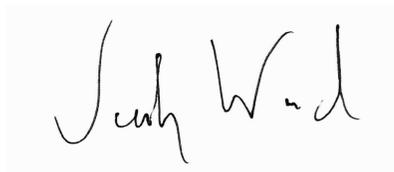
Date Sampled: **01/10/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0168	50.4 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0197	59.1 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS17@7'
2401175-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0396	01/10/24	01/10/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0388	97.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0428	107 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0435	109 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0399	01/10/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.32	50.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS17@7'
2401175-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

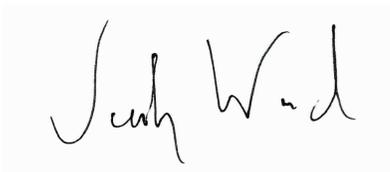
Date Sampled: **01/10/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0164	49.1 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0174	52.2 %		40-150		"	"	"	"	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS18@4'
2401175-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0396	01/10/24	01/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0300	75.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0459	115 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0446	111 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0399	01/10/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.15	49.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS18@4'
2401175-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

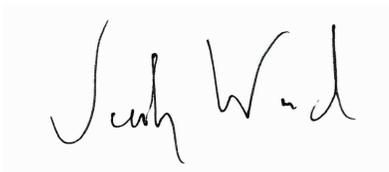
Date Sampled: **01/10/24 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0165	49.4 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0179	53.6 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS19@6'
2401175-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0396	01/10/24	01/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0346	86.5 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0447	112 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	106 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0399	01/10/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.10	48.8 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS19@6'
2401175-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

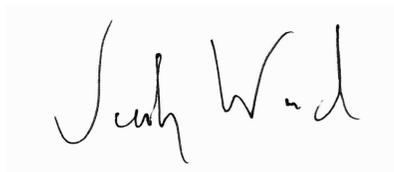
Date Sampled: **01/10/24 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0166	49.9 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0169	50.7 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS20@7'
2401175-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0396	01/10/24	01/11/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/10/24 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0318	79.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0458	114 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0440	110 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0399	01/10/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/10/24 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	4.29	34.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS20@7'
2401175-14 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

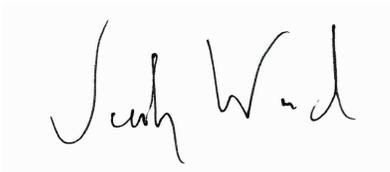
Date Sampled: **01/10/24 15:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 15:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0162	48.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0136	40.8 %		40-150		"	"	"	"	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS21@2.5'
2401175-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/10/24 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0517	01/15/24	01/18/24	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **01/10/24 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	19.7	0.0500	mg/L dry	1	BHA0501	01/12/24	01/16/24	EPA 6020B	
Magnesium	4.83	0.0500	"	"	"	"	"	"	
Sodium	8.72	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/10/24 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.457	0.00100	units	1	BHA0617	01/17/24	01/17/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/10/24 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.0		%	1	BHA0421	01/11/24	01/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/10/24 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.191	0.0100	mmhos/cm	1	BHA0537	01/15/24	01/16/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

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Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Karen Olson

Reported:
 01/19/24 09:49

SS21@2.5'
2401175-15 (Soil)

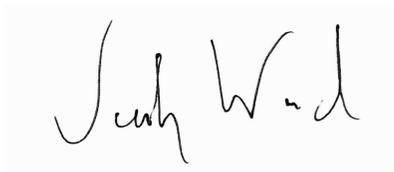
Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/10/24 15:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.62		pH Units	1	BHA0538	01/15/24	01/16/24	EPA 9045D	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS22@4'
2401175-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0396	01/10/24	01/11/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/10/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0449	112 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0437	109 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0399	01/10/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/10/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.34	50.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS22@4'
2401175-16 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

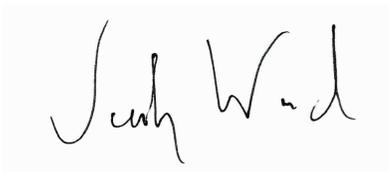
Date Sampled: **01/10/24 15:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 15:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0151	45.4 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0151	45.4 %		40-150		"	"	"	"	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS23@6'
2401175-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/10/24 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0396	01/10/24	01/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/10/24 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0336	84.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0448	112 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0419	105 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/10/24 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0399	01/10/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/10/24 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	5.32	42.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

SS23@6'
2401175-17 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

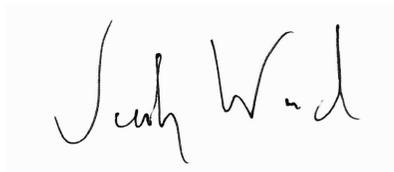
Date Sampled: **01/10/24 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0411	01/11/24	01/12/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/10/24 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0150	44.9 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0166	49.8 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHA0396 - EPA 5030 Soil MS

Blank (BHA0396-BLK1)

Prepared: 01/10/24 Analyzed: 01/11/24

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0367</i>		<i>"</i>	<i>0.0400</i>		<i>91.7</i>	<i>50-150</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0424</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0410</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>50-150</i>				

LCS (BHA0396-BS1)

Prepared: 01/10/24 Analyzed: 01/11/24

Benzene	0.0914	0.0020	mg/kg	0.100		91.4	70-130				
Toluene	0.108	0.0050	"	0.100		108	70-130				
Ethylbenzene	0.101	0.0050	"	0.100		101	70-130				
1,2,4-Trimethylbenzene	0.0969	0.0050	"	0.100		96.9	70-130				
1,3,5-Trimethylbenzene	0.0962	0.0050	"	0.100		96.2	70-130				
Naphthalene	0.0902	0.0038	"	0.100		90.2	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0327</i>		<i>"</i>	<i>0.0400</i>		<i>81.8</i>	<i>50-150</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0444</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>50-150</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>				

Matrix Spike (BHA0396-MS1)

Source: 2401175-01

Prepared: 01/10/24 Analyzed: 01/11/24

Benzene	0.0768	0.0020	mg/kg	0.100	ND	76.8	70-130				
Toluene	0.0921	0.0050	"	0.100	ND	92.1	70-130				
Ethylbenzene	0.0885	0.0050	"	0.100	ND	88.5	70-130				
1,2,4-Trimethylbenzene	0.0825	0.0050	"	0.100	ND	82.5	70-130				
1,3,5-Trimethylbenzene	0.0845	0.0050	"	0.100	ND	84.5	70-130				
Naphthalene	0.0754	0.0038	"	0.100	ND	75.4	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0309</i>		<i>"</i>	<i>0.0400</i>		<i>77.2</i>	<i>50-150</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0412</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>50-150</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>99.0</i>	<i>50-150</i>				

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limit	RPD	Limit	RPD	

Batch BHA0396 - EPA 5030 Soil MS

Matrix Spike Dup (BHA0396-MSD1)	Source: 2401175-01			Prepared: 01/10/24 Analyzed: 01/11/24						
Benzene	0.0992	0.0020	mg/kg	0.100	ND	99.2	70-130	25.5	30	
Toluene	0.114	0.0050	"	0.100	ND	114	70-130	21.5	30	
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130	16.7	30	
1,2,4-Trimethylbenzene	0.0978	0.0050	"	0.100	ND	97.8	70-130	17.0	30	
1,3,5-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	17.4	30	
Naphthalene	0.0777	0.0038	"	0.100	ND	77.7	70-130	2.98	30	
Surrogate: 1,2-Dichloroethane-d4	0.0371		"	0.0400		92.7	50-150			
Surrogate: Toluene-d8	0.0423		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0427		"	0.0400		107	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHA0399 - EPA 3550A

Blank (BHA0399-BLK1)

Prepared: 01/10/24 Analyzed: 01/11/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	10.8		"	12.5		86.5	30-150				

LCS (BHA0399-BS1)

Prepared: 01/10/24 Analyzed: 01/11/24

C10-C28 (DRO)	446	50	mg/kg	500		89.2	70-130				
Surrogate: <i>o</i> -Terphenyl	9.87		"	12.5		79.0	30-150				

Matrix Spike (BHA0399-MS1)

Source: 2401175-01

Prepared: 01/10/24 Analyzed: 01/11/24

C10-C28 (DRO)	406	50	mg/kg	500	19.5	77.3	70-130				
Surrogate: <i>o</i> -Terphenyl	10.1		"	12.5		81.1	30-150				

Matrix Spike Dup (BHA0399-MSD1)

Source: 2401175-01

Prepared: 01/10/24 Analyzed: 01/11/24

C10-C28 (DRO)	446	50	mg/kg	500	19.5	85.2	70-130	9.31	20		
Surrogate: <i>o</i> -Terphenyl	10.2		"	12.5		82.0	30-150				

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0411 - EPA 5030 Soil MS

Blank (BHA0411-BLK1)

Prepared: 01/11/24 Analyzed: 01/12/24

1-Methylnaphthalene	ND	0.00500	mg/kg							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0163		"	0.0333		49.0	40-150			
Surrogate: Fluoranthene-d10	0.0211		"	0.0333		63.4	40-150			

LCS (BHA0411-BS1)

Prepared: 01/11/24 Analyzed: 01/12/24

1-Methylnaphthalene	0.0313	0.00500	mg/kg	0.0333		93.9	35-142			
2-Methylnaphthalene	0.0266	0.00500	"	0.0333		79.7	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0309		"	0.0333		92.6	40-150			
Surrogate: Fluoranthene-d10	0.0240		"	0.0333		72.0	40-150			

Matrix Spike (BHA0411-MS1)

Source: 2401175-01

Prepared: 01/11/24 Analyzed: 01/12/24

1-Methylnaphthalene	0.0162	0.00500	mg/kg	0.0333	ND	48.6	15-130			
2-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.7	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0146		"	0.0333		43.8	40-150			
Surrogate: Fluoranthene-d10	0.0187		"	0.0333		56.0	40-150			

Matrix Spike Dup (BHA0411-MSD1)

Source: 2401175-01

Prepared: 01/11/24 Analyzed: 01/12/24

1-Methylnaphthalene	0.0151	0.00500	mg/kg	0.0333	ND	45.4	15-130	6.70	50	
2-Methylnaphthalene	0.0136	0.00500	"	0.0333	ND	40.9	15-130	34.0	50	
Surrogate: 2-Methylnaphthalene-d10	0.0219		"	0.0333		65.6	40-150			
Surrogate: Fluoranthene-d10	0.0150		"	0.0333		45.0	40-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0517 - EPA 3050B

Blank (BHA0517-BLK1)

Prepared: 01/15/24 Analyzed: 01/18/24

Boron ND 2.00 mg/L

LCS (BHA0517-BS1)

Prepared: 01/15/24 Analyzed: 01/18/24

Boron 4.97 2.00 mg/L 5.00 99.5 80-120

Duplicate (BHA0517-DUP1)

Source: 2312418-04

Prepared: 01/15/24 Analyzed: 01/18/24

Boron 0.0897 2.00 mg/L 0.0944 5.13 20

Matrix Spike (BHA0517-MS1)

Source: 2312418-04

Prepared: 01/15/24 Analyzed: 01/18/24

Boron 5.05 2.00 mg/L 5.00 0.0944 99.1 75-125

Matrix Spike Dup (BHA0517-MSD1)

Source: 2312418-04

Prepared: 01/15/24 Analyzed: 01/18/24

Boron 5.02 2.00 mg/L 5.00 0.0944 98.5 75-125 0.579 25

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHA0501 - General Preparation

Blank (BHA0501-BLK1)

Prepared: 01/12/24 Analyzed: 01/16/24

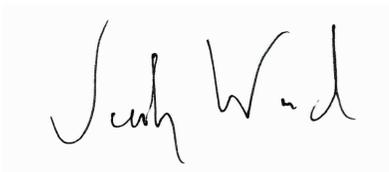
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BHA0501-BS1)

Prepared: 01/12/24 Analyzed: 01/16/24

Calcium	5.61	0.0500	mg/L wet	5.00		112	70-130			
Magnesium	5.49	0.0500	"	5.00		110	70-130			
Sodium	5.59	0.0500	"	5.00		112	70-130			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHA0421 - General Preparation

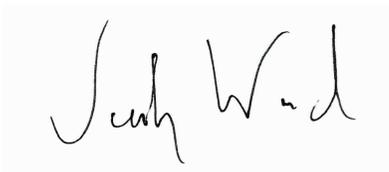
Duplicate (BHA0421-DUP1)

Source: 2401168-01

Prepared: 01/11/24 Analyzed: 01/12/24

% Solids	99.0	%	99.1	0.107	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0538 - General Preparation

LCS (BHA0538-BS1)

Prepared: 01/15/24 Analyzed: 01/16/24

pH	9.18	pH Units	9.18	100	95-105
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Duplicate (BHA0538-DUP1)

Source: 2312418-04

Prepared: 01/15/24 Analyzed: 01/16/24

pH	7.43	pH Units	7.41	0.270	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 09:49

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 13, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

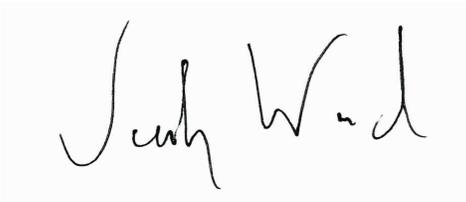
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2401207

Enclosed are the results of analyses for samples received by Summit Scientific on 01/11/24 17:36. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS25@4'	2401207-01	Soil	01/11/24 09:00	01/11/24 17:36
SS26@6'	2401207-02	Soil	01/11/24 09:05	01/11/24 17:36
SS27@7'	2401207-03	Soil	01/11/24 09:10	01/11/24 17:36
SS28@4'	2401207-04	Soil	01/11/24 11:10	01/11/24 17:36
SS29@6'	2401207-05	Soil	01/11/24 11:15	01/11/24 17:36
SS30@7'	2401207-06	Soil	01/11/24 11:20	01/11/24 17:36
BKG03@2.5'	2401207-07	Soil	01/11/24 12:04	01/11/24 17:36
BKG03@4'	2401207-08	Soil	01/11/24 12:06	01/11/24 17:36
BKG03@6'	2401207-09	Soil	01/11/24 12:08	01/11/24 17:36
BKG03@7'	2401207-10	Soil	01/11/24 12:10	01/11/24 17:36
BKG02@2.5'	2401207-11	Soil	01/11/24 12:16	01/11/24 17:36
BKG02@4'	2401207-12	Soil	01/11/24 12:18	01/11/24 17:36
BKG02@6'	2401207-13	Soil	01/11/24 12:20	01/11/24 17:36
BKG02@7'	2401207-14	Soil	01/11/24 12:22	01/11/24 17:36

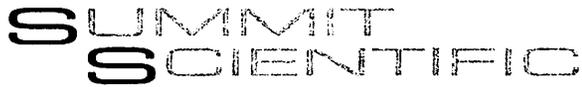
Case Narrative

Bryce Goldade requested pH be added to BKG02 & BKG03 samples on 2/23/2024.
This report includes those results.

Summit Scientific



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4653 Table Mountain Drive
 Golden, CO 80403
 303-277-9310

Lab ID	Page 1 of 1
2401207	

Send Data To:		Send Invoice To:	
Client: PDC / Tasman	Project Manager: Mark Longhurst	Company: PDC Energy	
Address: 6855 W 119th Ave	E-Mail: mark.longhurst@PDCE.com	Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020		AFE#:	
Phone: 303-487-1228	Project Name: Kenouye F29-22, 23 Tank Battery	PO/Billing Codes:	
Sampler Name: Conor Lovell	Project Number:	Contact: Mark Longhurst	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	1,2,4 & 1,3,5-TMB	TDS, Cl, SO4	TPH (G-C-30)		PAH - 915 *
1	SS24 @ 2.5'	1/11/24	855															
2	SS25 @ 4'	1/11/24	900	2			X			X		X	X	X	X			
3	SS26 @ 6'		905															
4	SS27 @ 7'		910															
5	SS28 @ 4'		1110															
6	SS29 @ 6'		1115															
7	SS30 @ 7'		1120															
8	BK603 @ 2.5'		1204														X	
9	BK603 @ 4'		1206															
10	BK603 @ 6'		1208															
11	BK603 @ 7'		1210															
12	BK602 @ 2.5'		1216															
13	BK602 @ 4'		1218															
14	BK602 @ 6'		1220															
15	BK602 @ 7'		1222															

Relinquished by: <u>C 2/11</u>	Date/Time: <u>1/11/24 1525</u>	Received by: <u>Tasman Lockbox</u>	Date/Time: <u>1/11/24 1525</u>	TAT Business Days	Field DO	Notes: *PAHs: 1-M, 2-M on 48hr TAT
				Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by: <u>Tasman Lockbox</u>	Date/Time: <u>1/11/24 1730</u>	Received by: <u>[Signature]</u>	Date/Time: <u>1/11/24 1730</u>	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: <u>00.1</u>	Corrected Temperature: <u>0</u>	IR gun #: <u>1</u>	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2401207

Client: Pc Tasman Client Project ID: I Kenauye F29-22,23 ^{Tank Battery}

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

AS

Custodian Printed Name

1/11/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS25@4'
2401207-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/11/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0451	01/11/24	01/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/11/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0363	90.7 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0439	110 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/11/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0452	01/11/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/11/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.48	59.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS25@4'
2401207-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/11/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0455	01/12/24	01/13/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/11/24 09:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0155	46.6 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0162	48.5 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS26@6'
2401207-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/11/24 09:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0451	01/11/24	01/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/11/24 09:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0372	93.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0436	109 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0444	111 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/11/24 09:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0452	01/11/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/11/24 09:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.94	55.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS26@6'
2401207-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/11/24 09:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0455	01/12/24	01/13/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/11/24 09:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0160	47.9 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0173	52.0 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS27@7'
2401207-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/11/24 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0451	01/11/24	01/11/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/11/24 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0352	88.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0438	110 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0421	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/11/24 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0452	01/11/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/11/24 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.60	60.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS27@7'
2401207-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

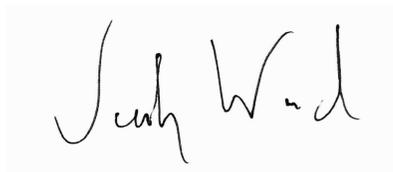
Date Sampled: **01/11/24 09:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0455	01/12/24	01/13/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/11/24 09:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0144	43.3 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0155	46.4 %		40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS28@4'
2401207-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/11/24 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0451	01/11/24	01/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/11/24 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0387	96.7 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0436	109 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0430	108 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/11/24 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0452	01/11/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/11/24 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.51	52.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS28@4'
2401207-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

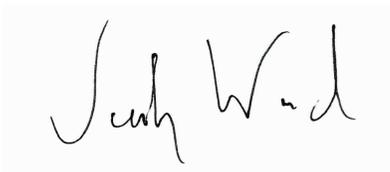
Date Sampled: **01/11/24 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0455	01/12/24	01/13/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/11/24 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0153	46.0 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	45.0 %		40-150		"	"	"	"	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS29@6'
2401207-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/11/24 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0451	01/11/24	01/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/11/24 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0324	81.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0434	108 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/11/24 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0452	01/11/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/11/24 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.94	71.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS29@6'
2401207-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

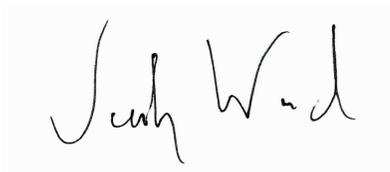
Date Sampled: **01/11/24 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.00500		mg/kg	1	BHA0455	01/12/24	01/13/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/11/24 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0150	44.9 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0158	47.4 %		40-150		"	"	"	"	

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS30@7'
2401207-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/11/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0451	01/11/24	01/11/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/11/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0344	86.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0433	108 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0421	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/11/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0452	01/11/24	01/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/11/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.27	74.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

SS30@7'
2401207-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

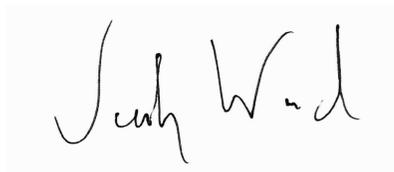
Date Sampled: **01/11/24 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
1-Methylnaphthalene	ND	0.00500	mg/kg	1	BHA0455	01/12/24	01/13/24	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/11/24 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0154	46.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0142	42.6 %	40-150		"	"	"	"	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

BKG03@2.5'
2401207-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/11/24 12:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.35		pH Units	1	BHC0283	03/11/24	03/13/24	EPA 9045D	I-04

Summit Scientific



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Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Karen Olson

Reported:
 03/13/24 16:23

BKG03@4'
2401207-08 (Soil)

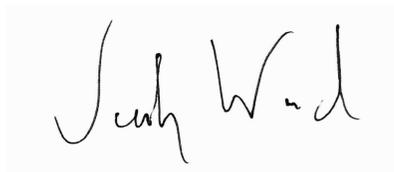
Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/11/24 12:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.26		pH Units	1	BHC0283	03/11/24	03/13/24	EPA 9045D	I-04

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Karen Olson

Reported:
 03/13/24 16:23

BKG03@6'
2401207-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/11/24 12:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.82		pH Units	1	BHC0283	03/11/24	03/13/24	EPA 9045D	I-04

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Karen Olson

Reported:
 03/13/24 16:23

BKG03@7'
2401207-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/11/24 12:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.60		pH Units	1	BHC0283	03/11/24	03/13/24	EPA 9045D	I-04

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Karen Olson

Reported:
 03/13/24 16:23

BKG02@2.5'
2401207-11 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/11/24 12:16**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.65		pH Units	1	BHC0283	03/11/24	03/13/24	EPA 9045D	I-04

Summit Scientific



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Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Karen Olson

Reported:
 03/13/24 16:23

BKG02@4'
2401207-12 (Soil)

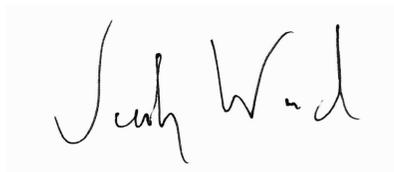
Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/11/24 12:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.10		pH Units	1	BHC0283	03/11/24	03/13/24	EPA 9045D	I-04

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

BKG02@6'
2401207-13 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/11/24 12:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.92		pH Units	1	BHC0283	03/11/24	03/13/24	EPA 9045D	I-04

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

BKG02@7'
2401207-14 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/11/24 12:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.52		pH Units	1	BHC0283	03/11/24	03/13/24	EPA 9045D	I-04

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BHA0451 - EPA 5030 Soil MS

Blank (BHA0451-BLK1)

Prepared: 01/11/24 Analyzed: 01/12/24

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0320		"	0.0400		80.0	50-150				
<i>Surrogate: Toluene-d8</i>	0.0444		"	0.0400		111	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0406		"	0.0400		101	50-150				

LCS (BHA0451-BS1)

Prepared: 01/11/24 Analyzed: 01/12/24

Benzene	0.0888	0.0020	mg/kg	0.100		88.8	70-130				
Toluene	0.106	0.0050	"	0.100		106	70-130				
Ethylbenzene	0.0972	0.0050	"	0.100		97.2	70-130				
m,p-Xylene	0.199	0.010	"	0.200		99.3	70-130				
o-Xylene	0.100	0.0050	"	0.100		100	70-130				
1,2,4-Trimethylbenzene	0.0938	0.0050	"	0.100		93.8	70-130				
1,3,5-Trimethylbenzene	0.0938	0.0050	"	0.100		93.8	70-130				
Naphthalene	0.0835	0.0038	"	0.100		83.5	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0281		"	0.0400		70.4	50-150				
<i>Surrogate: Toluene-d8</i>	0.0441		"	0.0400		110	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0406		"	0.0400		101	50-150				

Matrix Spike (BHA0451-MS1)

Source: 2401206-01

Prepared: 01/11/24 Analyzed: 01/12/24

Benzene	0.0776	0.0020	mg/kg	0.100	ND	77.6	70-130				
Toluene	0.0914	0.0050	"	0.100	ND	91.4	70-130				
Ethylbenzene	0.106	0.0050	"	0.100	0.0238	82.0	70-130				
m,p-Xylene	0.182	0.010	"	0.200	ND	91.1	70-130				
o-Xylene	0.0843	0.0050	"	0.100	ND	84.3	70-130				
1,2,4-Trimethylbenzene	0.0905	0.0050	"	0.100	0.0110	79.5	70-130				
1,3,5-Trimethylbenzene	0.0894	0.0050	"	0.100	0.00930	80.1	70-130				
Naphthalene	0.0888	0.0038	"	0.100	0.0101	78.7	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0284		"	0.0400		70.9	50-150				
<i>Surrogate: Toluene-d8</i>	0.0439		"	0.0400		110	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0417		"	0.0400		104	50-150				

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

Batch BHA0451 - EPA 5030 Soil MS

Matrix Spike Dup (BHA0451-MSD1)	Source: 2401206-01			Prepared: 01/11/24 Analyzed: 01/12/24						
Benzene	0.0732	0.0020	mg/kg	0.100	ND	73.2	70-130	5.81	30	
Toluene	0.0827	0.0050	"	0.100	ND	82.7	70-130	10.0	30	
Ethylbenzene	0.0962	0.0050	"	0.100	0.0238	72.5	70-130	9.39	30	
m,p-Xylene	0.169	0.010	"	0.200	ND	84.7	70-130	7.30	30	
o-Xylene	0.0795	0.0050	"	0.100	ND	79.5	70-130	5.90	30	
1,2,4-Trimethylbenzene	0.0846	0.0050	"	0.100	0.0110	73.6	70-130	6.71	30	
1,3,5-Trimethylbenzene	0.0842	0.0050	"	0.100	0.00930	74.8	70-130	6.05	30	
Naphthalene	0.0875	0.0038	"	0.100	0.0101	77.4	70-130	1.40	30	
Surrogate: 1,2-Dichloroethane-d4	0.0270		"	0.0400		67.5	50-150			
Surrogate: Toluene-d8	0.0417		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHA0452 - EPA 3550A

Blank (BHA0452-BLK1)

Prepared: 01/11/24 Analyzed: 01/12/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.5		98.0	30-150				

LCS (BHA0452-BS1)

Prepared: 01/11/24 Analyzed: 01/12/24

C10-C28 (DRO)	459	50	mg/kg	500		91.9	70-130				
Surrogate: <i>o</i> -Terphenyl	10.4		"	12.5		82.9	30-150				

Matrix Spike (BHA0452-MS1)

Source: 2401206-01

Prepared: 01/11/24 Analyzed: 01/12/24

C10-C28 (DRO)	484	50	mg/kg	500	23.8	92.0	70-130				
Surrogate: <i>o</i> -Terphenyl	8.98		"	12.5		71.8	30-150				

Matrix Spike Dup (BHA0452-MSD1)

Source: 2401206-01

Prepared: 01/11/24 Analyzed: 01/12/24

C10-C28 (DRO)	440	50	mg/kg	500	23.8	83.2	70-130	9.53	20		
Surrogate: <i>o</i> -Terphenyl	7.81		"	12.5		62.5	30-150				

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0455 - EPA 5030 Soil MS

Blank (BHA0455-BLK1)

Prepared: 01/12/24 Analyzed: 01/13/24

1-Methylnaphthalene	ND	0.00500	mg/kg							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0152		"	0.0333		45.7	40-150			
Surrogate: Fluoranthene-d10	0.0217		"	0.0333		65.2	40-150			

LCS (BHA0455-BS1)

Prepared: 01/12/24 Analyzed: 01/13/24

1-Methylnaphthalene	0.0265	0.00500	mg/kg	0.0333		79.4	35-142			
2-Methylnaphthalene	0.0247	0.00500	"	0.0333		74.1	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0271		"	0.0333		81.2	40-150			
Surrogate: Fluoranthene-d10	0.0241		"	0.0333		72.3	40-150			

Matrix Spike (BHA0455-MS1)

Source: 2312418-04

Prepared: 01/12/24 Analyzed: 01/13/24

1-Methylnaphthalene	0.0207	0.00500	mg/kg	0.0333	ND	62.1	15-130			
2-Methylnaphthalene	0.0191	0.00500	"	0.0333	ND	57.3	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0215		"	0.0333		64.5	40-150			
Surrogate: Fluoranthene-d10	0.0193		"	0.0333		57.8	40-150			

Matrix Spike Dup (BHA0455-MSD1)

Source: 2312418-04

Prepared: 01/12/24 Analyzed: 01/13/24

1-Methylnaphthalene	0.0183	0.00500	mg/kg	0.0333	ND	54.9	15-130	12.4	50	
2-Methylnaphthalene	0.0173	0.00500	"	0.0333	ND	51.8	15-130	10.1	50	
Surrogate: 2-Methylnaphthalene-d10	0.0206		"	0.0333		61.8	40-150			
Surrogate: Fluoranthene-d10	0.0195		"	0.0333		58.4	40-150			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0283 - General Preparation

LCS (BHC0283-BS1)

Prepared: 03/11/24 Analyzed: 03/13/24

pH	9.26	pH Units	9.18	101	95-105
----	------	----------	------	-----	--------

Duplicate (BHC0283-DUP1)

Source: 2401051-03

Prepared: 03/11/24 Analyzed: 03/13/24

pH	8.12	pH Units	8.12	0.00	20
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Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/13/24 16:23

Notes and Definitions

I-04 Sample was analyzed out of recommended holding time per clients request.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 19, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

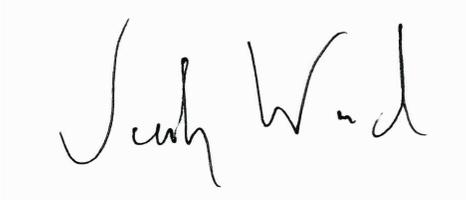
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2401220

Enclosed are the results of analyses for samples received by Summit Scientific on 01/11/24 17:36. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 10:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS24@2.5'	2401220-01	Soil	01/11/24 08:55	01/11/24 17:36

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

S₂

2401220

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: PDC / Tasman Project Manager: Mark Longhurst
Address: 6855 W 119th Ave E-Mail: mark.longhurst@PDCE.com
City/State/Zip: Broomfield/ CO/ 80020
Phone: 303-487-1228 Project Name: Kenouye F29-22, 23 Tank Battery
Sampler Name: ~~Matthew Wentzel~~ Conor Lovell Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAH	
1	SS 24 @ 2.5'	1/11/24	855	2			X			X					X	X			pH, EC, SAR by saturated paste
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by: <i>CL</i> 1/11/24 1525	Date/Time: 1/11/24 1525	Received by: Tasman's Lock Box 1/11/24	Date/Time: 1/11/24 1525	Turn Around Time (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____ Sample Integrity: Temperature Upon Receipt: <u>u.l</u> Samples Intact: <input checked="" type="checkbox"/> Yes No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 1/11/24 1730	Received by: <i>[Signature]</i>	Date/Time: 1/11/24 1730		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 2401220

Client: Pactasman

Client Project ID: Tank Bottom

F29-22,23

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #: _____

Matrix (Check all that apply)

Air

Soil/Solid

Water

Other

Temp (°C)

Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AS
Custodian Printed Name

1/11/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 10:16

SS24@2.5'
2401220-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/11/24 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0517	01/15/24	01/18/24	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **01/11/24 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	469	0.0500	mg/L dry	1	BHA0583	01/16/24	01/17/24	EPA 6020B	
Magnesium	150	0.0500	"	"	"	"	"	"	
Sodium	221	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/11/24 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.27	0.00100	units	1	BHA0651	01/18/24	01/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/11/24 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.9		%	1	BHA0485	01/12/24	01/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/11/24 08:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.52	0.0100	mmhos/cm	1	BHA0608	01/17/24	01/17/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Karen Olson

Reported:
 01/19/24 10:16

SS24@2.5'
2401220-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/11/24 08:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.27		pH Units	1	BHA0609	01/17/24	01/17/24	EPA 9045D	

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 10:16

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limits	RPD	Limit		

Batch BHA0517 - EPA 3050B

Blank (BHA0517-BLK1)

Prepared: 01/15/24 Analyzed: 01/18/24

Boron ND 2.00 mg/L

LCS (BHA0517-BS1)

Prepared: 01/15/24 Analyzed: 01/18/24

Boron 4.97 2.00 mg/L 5.00 99.5 80-120

Duplicate (BHA0517-DUP1)

Source: 2312418-04

Prepared: 01/15/24 Analyzed: 01/18/24

Boron 0.0897 2.00 mg/L 0.0944 5.13 20

Matrix Spike (BHA0517-MS1)

Source: 2312418-04

Prepared: 01/15/24 Analyzed: 01/18/24

Boron 5.05 2.00 mg/L 5.00 0.0944 99.1 75-125

Matrix Spike Dup (BHA0517-MSD1)

Source: 2312418-04

Prepared: 01/15/24 Analyzed: 01/18/24

Boron 5.02 2.00 mg/L 5.00 0.0944 98.5 75-125 0.579 25

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 10:16

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHA0583 - General Preparation

Blank (BHA0583-BLK1)

Prepared: 01/16/24 Analyzed: 01/17/24

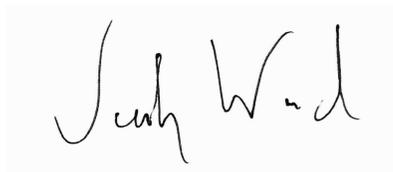
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BHA0583-BS1)

Prepared: 01/16/24 Analyzed: 01/17/24

Calcium	5.57	0.0500	mg/L wet	5.00	111	70-130				
Magnesium	5.36	0.0500	"	5.00	107	70-130				
Sodium	5.34	0.0500	"	5.00	107	70-130				

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 10:16

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHA0485 - General Preparation

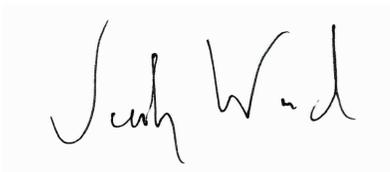
Duplicate (BHA0485-DUP1)

Source: 2401203-01

Prepared & Analyzed: 01/12/24

% Solids	90.1	%	90.1	0.0897	20
----------	------	---	------	--------	----

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 10:16

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHA0608 - General Preparation

Blank (BHA0608-BLK1)

Prepared & Analyzed: 01/17/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHA0608-BS1)

Prepared & Analyzed: 01/17/24

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 100 95-105

Duplicate (BHA0608-DUP1)

Source: 2312142-01

Prepared & Analyzed: 01/17/24

Specific Conductance (EC) 0.136 0.0100 mmhos/cm 0.136 0.442 20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 10:16

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0609 - General Preparation

LCS (BHA0609-BS1)

Prepared & Analyzed: 01/17/24

pH 9.12 pH Units 9.18 99.3 95-105

Duplicate (BHA0609-DUP1)

Source: 2401219-01

Prepared & Analyzed: 01/17/24

pH 8.04 pH Units 8.15 1.36 20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 10:16

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 19, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2401268

Enclosed are the results of analyses for samples received by Summit Scientific on 01/17/24 19:16. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS31@4'	2401268-01	Soil	01/17/24 09:25	01/17/24 19:16
SS32@6'	2401268-02	Soil	01/17/24 09:30	01/17/24 19:16
SS33@7'	2401268-03	Soil	01/17/24 09:35	01/17/24 19:16
SS34@4'	2401268-04	Soil	01/17/24 09:45	01/17/24 19:16
SS35@6'	2401268-05	Soil	01/17/24 09:50	01/17/24 19:16
SS36@7'	2401268-06	Soil	01/17/24 09:55	01/17/24 19:16
SS37@4'	2401268-07	Soil	01/17/24 10:05	01/17/24 19:16
SS38@6'	2401268-08	Soil	01/17/24 10:10	01/17/24 19:16
SS39@7'	2401268-09	Soil	01/17/24 10:15	01/17/24 19:16
SS40@7'	2401268-10	Soil	01/17/24 10:42	01/17/24 19:16
SS41@4'	2401268-11	Soil	01/17/24 13:15	01/17/24 19:16
SS42@6'	2401268-12	Soil	01/17/24 13:20	01/17/24 19:16
SS43@7'	2401268-13	Soil	01/17/24 13:25	01/17/24 19:16
SS45@4'	2401268-14	Soil	01/17/24 14:50	01/17/24 19:16
SS46@6'	2401268-15	Soil	01/17/24 14:55	01/17/24 19:16
SS48@4'	2401268-16	Soil	01/17/24 15:05	01/17/24 19:16
SS49@6'	2401268-17	Soil	01/17/24 15:10	01/17/24 19:16
SS50@7'	2401268-18	Soil	01/17/24 15:15	01/17/24 19:16
SS51@6"	2401268-19	Soil	01/17/24 16:05	01/17/24 19:16
SS52@6"	2401268-20	Soil	01/17/24 16:10	01/17/24 19:16
SS53@6"	2401268-21	Soil	01/17/24 16:15	01/17/24 19:16
SS54@6"	2401268-22	Soil	01/17/24 16:20	01/17/24 19:16

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

S₂

24 01268.1

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Client: PDC / Tasman Project Manager: Mark Longhurst
Address: 6855 W. 119th Ave E-Mail: mark.longhurst@PDCE.com
City/State/Zip: Broomfield / CO/ 80020
Phone: 303-487-1228 Project Name: *Kenoye F29-22723 Tank Battery*
Sampler Name: *Conor Lovell* Project Number: N/A

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 TMB	1,3,5 TMB	Boron	Cl, SO4, TDS	TPH		PAH*	
1	SS31C4'	1/17/24	925	2			X			X				X	X	X			X	X	
2	SS32C6'		930																		
3	SS33C7'		935																		
4	SS34C4'		945																		
5	SS35C6'		950																		
6	SS36C7'		955																		
7	SS37C4'		1005																		
8	SS38C6'		1010																		
9	SS39C7'		1015																		
10	SS40C7'		1042																		

Relinquished by: <i>Conor Lovell</i> 1/17/24 19:15	Date/Time:	Received by: Tasman's Lock Box 1/17/24	Date/Time:	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___	Notes: <i>*PAHs on 48hr turn</i>
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: <i>[Signature]</i> 1/17/24 19:16	Date/Time:	Sample Integrity: Temperature Upon Receipt: <i>2.5°C</i>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

Summit Scientific

S₂

24 01268.2

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 2 of 3

Client: PDC / Tasman Project Manager: Mark Longhurst
Address: 6855 W. 119th Ave E-Mail: mark.longhurst@PDCE.com
City/State/Zip: Broomfield / CO / 80020
Phone: 303-487-1228 Project Name: *Kenoye F29-22, 23 Tank Battery*
Sampler Name: *Conor Lovell* Project Number: N/A

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 TMB	1,3,5 TMB	Boron	Cl, SO4, TDS	TPH		PAH*	
1	SS4104'	1/17/24	1315	2			X			X				X	X	X			X	X	
2	SS4206'		1320																		
3	SS4307'		1325																		
4	SS4504'		1450																		
5	SS4606'		1455																		
6	SS4804'		1505																		
7	SS4906'		1510																		
8	SS5007'		1515																		
9	SS5106"		1605																		
10	SS5206"		1610																		

Relinquished by: <i>[Signature]</i> Date/Time: 1/17/24 1915	Received by: Tasman's Lock Box <i>[Signature]</i> Date/Time: 1/17/24	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___	Notes: * PAHs on 48hr turn
Relinquished by: Tasman's Lock Box Date/Time:	Received by: <i>[Signature]</i> Date/Time: 1/17/24 19:16	Sample Integrity: Temperature Upon Receipt: 2.5	
Relinquished by: Date/Time:	Received by: Date/Time:	Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

S₂

Sample Receipt Checklist

S2 Work Order# 2401268

Client: QPL/Tasman

Client Project ID: Kenouge F29-22,23 Tank Battery

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) 2.50 Thermometer # 02

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
If custody seals are present, are they intact? ⁽¹⁾	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):
Last 2 samples were crossed off but we did receive them - AS

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

GTC

Custodian Printed Name

1/17/24 19:16

Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS31@4'
2401268-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 09:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/17/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 09:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0402	100 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.2 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 09:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 09:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.0	88.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS31@4'
2401268-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 09:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.0304	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.0325	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.0294	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	0.00930	0.00500	"	"	"	"	"	"	"
Chrysene	0.0244	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.0331	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	0.0155	0.00500	"	"	"	"	"	"	"
Pyrene	0.0474	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/17/24 09:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0142	42.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0171	51.2 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS32@6'
2401268-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/17/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0427	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0389	97.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/24 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	4.60	36.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS32@6'
2401268-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 09:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.00949	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.00948	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.00842	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	0.00643	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.0103	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	0.0121	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/17/24 09:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0159	47.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0166	49.7 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS33@7'
2401268-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0396	98.9 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.5 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.48	51.8 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS33@7'
2401268-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/17/24 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0134	40.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0184	55.2 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS34@4'
2401268-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0417	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	96.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.75	54.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS34@4'
2401268-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/18/24	EPA 8270D SIM	
Anthracene	0.00676	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.0337	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.0339	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.0311	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	0.0104	0.00500	"	"	"	"	"	"	"
Chrysene	0.0296	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.0471	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	0.0165	0.00500	"	"	"	"	"	"	"
Pyrene	0.0695	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/17/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0156	46.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0192	57.7 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS35@6'
2401268-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0392	97.9 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0390	97.5 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.0	87.8 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS35@6'
2401268-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 09:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/24 09:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0149	44.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0217	65.0 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS36@7'
2401268-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0419	105 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0375	93.7 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.68	69.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS36@7'
2401268-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/24 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0135	40.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0138	41.5 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS37@4'
2401268-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.90	0.50	"	"	"	"	"	"	

Date Sampled: **01/17/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0403	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	5.94	47.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS37@4'
2401268-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Acenaphthene	ND	0.00500		mg/kg	1	BHA0644	01/18/24	01/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	"
Benzo (a) anthracene	0.00822	0.00500		"	"	"	"	"	"	"
Benzo (a) pyrene	0.0108	0.00500		"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.00976	0.00500		"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	"
Chrysene	0.00657	0.00500		"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	"
Fluoranthene	0.00964	0.00500		"	"	"	"	"	"	"
Fluorene	ND	0.00500		"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	0.00599	0.00500		"	"	"	"	"	"	"
Pyrene	0.0134	0.00500		"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	"

Date Sampled: **01/17/24 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0217	65.0 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0158	47.4 %		40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS38@6'
2401268-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/17/24 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0436	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0364	90.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/24 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	4.96	39.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS38@6'
2401268-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Acenaphthene	ND	0.00500		mg/kg	1	BHA0644	01/18/24	01/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	0.00536	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	0.00793	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **01/17/24 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0170	51.0 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0173	51.8 %		40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS39@7'
2401268-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 10:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 10:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0410	103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 10:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 10:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.07	64.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS39@7'
2401268-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 10:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/17/24 10:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0141	42.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0188	56.3 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS40@7'
2401268-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 10:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 10:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0417	104 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0371	92.7 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 10:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 10:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.50	60.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS40@7'
2401268-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/24 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0166	49.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0176	52.7 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS41@4'
2401268-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0416	104 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.5 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	5.76	46.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS41@4'
2401268-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Acenaphthene	ND	0.00500		mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	"
Benzo (a) anthracene	0.0192	0.00500		"	"	"	"	"	"	"
Benzo (a) pyrene	0.0208	0.00500		"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.0180	0.00500		"	"	"	"	"	"	"
Benzo (k) fluoranthene	0.00590	0.00500		"	"	"	"	"	"	"
Chrysene	0.0153	0.00500		"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	"
Fluoranthene	0.0229	0.00500		"	"	"	"	"	"	"
Fluorene	ND	0.00500		"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	0.00961	0.00500		"	"	"	"	"	"	"
Pyrene	0.0310	0.00500		"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	"

Date Sampled: **01/17/24 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0146	43.9 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0160	48.0 %		40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS42@6'
2401268-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/17/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0405	101 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0379	94.6 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0637	"	01/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.11	56.9 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS42@6'
2401268-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/24 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0140	42.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0156	46.7 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS43@7'
2401268-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/17/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0402	100 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.64	61.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS43@7'
2401268-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0154	46.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0174	52.3 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS45@4'
2401268-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/17/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0421	105 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.09	48.7 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS45@4'
2401268-14 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Acenaphthene	ND	0.00500		mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	"
Benzo (a) anthracene	0.0285	0.00500		"	"	"	"	"	"	"
Benzo (a) pyrene	0.0374	0.00500		"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.0312	0.00500		"	"	"	"	"	"	"
Benzo (k) fluoranthene	0.0104	0.00500		"	"	"	"	"	"	"
Chrysene	0.0216	0.00500		"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	"
Fluoranthene	0.0212	0.00500		"	"	"	"	"	"	"
Fluorene	ND	0.00500		"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	0.0157	0.00500		"	"	"	"	"	"	"
Pyrene	0.0284	0.00500		"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	"

Date Sampled: **01/17/24 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0158	47.4 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0164	49.2 %		40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS46@6'
2401268-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 14:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/17/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 14:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0406	102 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 14:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 14:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.93	63.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS46@6'
2401268-15 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0166	49.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0193	57.9 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS48@4'
2401268-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 15:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 15:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0407	102 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 15:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 15:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	5.69	45.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS48@4'
2401268-16 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.00901	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.00989	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.00815	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	0.00585	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.0102	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	0.0115	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/17/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0169	50.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0160	48.1 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS49@6'
2401268-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0429	107 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0418	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.48	51.8 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS49@6'
2401268-17 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0145	43.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0163	48.9 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS50@7'
2401268-18 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/17/24 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0412	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0419	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/24 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.33	74.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS50@7'
2401268-18 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/24 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0149	44.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0202	60.7 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS51@6"
2401268-19 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 16:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 16:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0399	99.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 16:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 16:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.02	56.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS51@6"
2401268-19 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 16:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/17/24 16:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0153	45.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0155	46.6 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS52@6"
2401268-20 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 16:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/17/24 16:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0420	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 16:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/24 16:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.16	57.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS52@6"
2401268-20 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 16:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0644	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/24 16:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0139	41.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	45.1 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS53@6"
2401268-21 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 16:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	0.080	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.071	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.052	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.2	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 16:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0412	103 %		50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0401	100 %		50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0420	105 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 16:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/17/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 16:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: o-Terphenyl</i>	6.56	52.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS53@6"
2401268-21 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 16:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Acenaphthene	ND	0.00500		mg/kg	1	BHA0643	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	"
Benzo (a) anthracene	0.0389	0.00500		"	"	"	"	"	"	"
Benzo (a) pyrene	0.0284	0.00500		"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.0386	0.00500		"	"	"	"	"	"	"
Benzo (k) fluoranthene	0.0162	0.00500		"	"	"	"	"	"	"
Chrysene	0.0346	0.00500		"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	"
Fluoranthene	0.0413	0.00500		"	"	"	"	"	"	"
Fluorene	ND	0.00500		"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	0.0185	0.00500		"	"	"	"	"	"	"
Pyrene	0.0428	0.00500		"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	"

Date Sampled: **01/17/24 16:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0230	69.0 %		40-150		"	"	"	"	"
Surrogate: Fluoranthene-d10	0.0206	61.9 %		40-150		"	"	"	"	"

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS54@6"
2401268-22 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/24 16:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0636	01/17/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/24 16:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0417	104 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0411	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/24 16:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0637	"	01/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/24 16:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.91	55.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

SS54@6"
2401268-22 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/24 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0643	01/18/24	01/19/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00540	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/24 16:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0231	69.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0206	61.9 %	40-150		"	"	"	"	

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0636 - EPA 5030 Soil MS

Blank (BHA0636-BLK1)

Prepared: 01/17/24 Analyzed: 01/18/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0393		"	0.0400		98.2	50-150			
<i>Surrogate: Toluene-d8</i>	0.0398		"	0.0400		99.5	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0374		"	0.0400		93.4	50-150			

LCS (BHA0636-BS1)

Prepared: 01/17/24 Analyzed: 01/18/24

Benzene	0.0873	0.0020	mg/kg	0.100		87.3	70-130			
Toluene	0.0855	0.0050	"	0.100		85.5	70-130			
Ethylbenzene	0.0892	0.0050	"	0.100		89.2	70-130			
m,p-Xylene	0.178	0.010	"	0.200		89.0	70-130			
o-Xylene	0.0904	0.0050	"	0.100		90.4	70-130			
1,2,4-Trimethylbenzene	0.0917	0.0050	"	0.100		91.7	70-130			
1,3,5-Trimethylbenzene	0.0895	0.0050	"	0.100		89.5	70-130			
Naphthalene	0.0910	0.0038	"	0.100		91.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0401		"	0.0400		100	50-150			
<i>Surrogate: Toluene-d8</i>	0.0387		"	0.0400		96.8	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0409		"	0.0400		102	50-150			

Matrix Spike (BHA0636-MS1)

Source: 2401268-01

Prepared: 01/17/24 Analyzed: 01/18/24

Benzene	0.0740	0.0020	mg/kg	0.100	ND	74.0	70-130			
Toluene	0.0726	0.0050	"	0.100	ND	72.6	70-130			
Ethylbenzene	0.0756	0.0050	"	0.100	ND	75.6	70-130			
m,p-Xylene	0.149	0.010	"	0.200	ND	74.5	70-130			
o-Xylene	0.0758	0.0050	"	0.100	ND	75.8	70-130			
1,2,4-Trimethylbenzene	0.0749	0.0050	"	0.100	ND	74.9	70-130			
1,3,5-Trimethylbenzene	0.0735	0.0050	"	0.100	ND	73.5	70-130			
Naphthalene	0.0724	0.0038	"	0.100	ND	72.4	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0407		"	0.0400		102	50-150			
<i>Surrogate: Toluene-d8</i>	0.0377		"	0.0400		94.3	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0411		"	0.0400		103	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch BHA0636 - EPA 5030 Soil MS

Matrix Spike Dup (BHA0636-MSD1)	Source: 2401268-01			Prepared: 01/17/24 Analyzed: 01/18/24						
Benzene	0.0836	0.0020	mg/kg	0.100	ND	83.6	70-130	12.1	30	
Toluene	0.0631	0.0050	"	0.100	ND	63.1	70-130	14.1	30	QM-07
Ethylbenzene	0.0788	0.0050	"	0.100	ND	78.8	70-130	4.12	30	
m,p-Xylene	0.157	0.010	"	0.200	ND	78.7	70-130	5.58	30	
o-Xylene	0.0784	0.0050	"	0.100	ND	78.4	70-130	3.39	30	
1,2,4-Trimethylbenzene	0.0694	0.0050	"	0.100	ND	69.4	70-130	7.56	30	QM-07
1,3,5-Trimethylbenzene	0.0703	0.0050	"	0.100	ND	70.3	70-130	4.51	30	
Naphthalene	0.0717	0.0038	"	0.100	ND	71.7	70-130	0.999	30	
Surrogate: 1,2-Dichloroethane-d4	0.0474		"	0.0400		118	50-150			
Surrogate: Toluene-d8	0.0303		"	0.0400		75.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0378		"	0.0400		94.5	50-150			

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Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHA0637 - EPA 3550A

Blank (BHA0637-BLK1)

Prepared: 01/17/24 Analyzed: 01/18/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.3		"	12.5		107		30-150			

LCS (BHA0637-BS1)

Prepared: 01/17/24 Analyzed: 01/18/24

C10-C28 (DRO)	568	50	mg/kg	500		114		70-130			
Surrogate: <i>o</i> -Terphenyl	14.4		"	12.5		115		30-150			

Matrix Spike (BHA0637-MS1)

Source: 2401268-01

Prepared: 01/17/24 Analyzed: 01/18/24

C10-C28 (DRO)	397	50	mg/kg	500	41.3	71.1		70-130			
Surrogate: <i>o</i> -Terphenyl	9.31		"	12.5		74.5		30-150			

Matrix Spike Dup (BHA0637-MSD1)

Source: 2401268-01

Prepared: 01/17/24 Analyzed: 01/18/24

C10-C28 (DRO)	397	50	mg/kg	500	41.3	71.2		70-130	0.143	20	
Surrogate: <i>o</i> -Terphenyl	9.38		"	12.5		75.0		30-150			

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0643 - EPA 5030 Soil MS

Blank (BHA0643-BLK1)

Prepared & Analyzed: 01/18/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0284</i>		"	<i>0.0333</i>		<i>85.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0270</i>		"	<i>0.0333</i>		<i>81.0</i>	<i>40-150</i>			

LCS (BHA0643-BS1)

Prepared & Analyzed: 01/18/24

Acenaphthene	0.0327	0.00500	mg/kg	0.0333		98.0	31-137			
Anthracene	0.0330	0.00500	"	0.0333		98.9	30-120			
Benzo (a) anthracene	0.0309	0.00500	"	0.0333		92.8	30-120			
Benzo (a) pyrene	0.0302	0.00500	"	0.0333		90.5	30-120			
Benzo (b) fluoranthene	0.0342	0.00500	"	0.0333		102	30-120			
Benzo (k) fluoranthene	0.0351	0.00500	"	0.0333		105	30-120			
Chrysene	0.0328	0.00500	"	0.0333		98.5	30-120			
Dibenz (a,h) anthracene	0.0283	0.00500	"	0.0333		85.0	30-120			
Fluoranthene	0.0338	0.00500	"	0.0333		101	30-120			
Fluorene	0.0328	0.00500	"	0.0333		98.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0223	0.00500	"	0.0333		66.9	30-120			
Pyrene	0.0357	0.00500	"	0.0333		107	35-142			
1-Methylnaphthalene	0.0333	0.00500	"	0.0333		100	35-142			
2-Methylnaphthalene	0.0346	0.00500	"	0.0333		104	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0316</i>		"	<i>0.0333</i>		<i>94.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0349</i>		"	<i>0.0333</i>		<i>105</i>	<i>40-150</i>			

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0643 - EPA 5030 Soil MS

Matrix Spike (BHA0643-MS1)

Source: 2401265-01

Prepared & Analyzed: 01/18/24

Acenaphthene	0.0207	0.00500	mg/kg	0.0333	ND	62.2	31-137			
Anthracene	0.0213	0.00500	"	0.0333	ND	63.9	30-120			
Benzo (a) anthracene	0.0212	0.00500	"	0.0333	ND	63.7	30-120			
Benzo (a) pyrene	0.0198	0.00500	"	0.0333	ND	59.5	30-120			
Benzo (b) fluoranthene	0.0225	0.00500	"	0.0333	ND	67.4	30-120			
Benzo (k) fluoranthene	0.0234	0.00500	"	0.0333	ND	70.2	30-120			
Chrysene	0.0218	0.00500	"	0.0333	ND	65.5	30-120			
Dibenz (a,h) anthracene	0.0213	0.00500	"	0.0333	ND	63.9	30-120			
Fluoranthene	0.0227	0.00500	"	0.0333	ND	68.0	30-120			
Fluorene	0.0227	0.00500	"	0.0333	ND	68.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0155	0.00500	"	0.0333	ND	46.6	30-120			
Pyrene	0.0254	0.00500	"	0.0333	ND	76.2	35-142			
1-Methylnaphthalene	0.0211	0.00500	"	0.0333	ND	63.3	15-130			
2-Methylnaphthalene	0.0217	0.00500	"	0.0333	ND	65.1	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0201		"	0.0333		60.2	40-150			
Surrogate: Fluoranthene-d10	0.0233		"	0.0333		70.0	40-150			

Matrix Spike Dup (BHA0643-MSD1)

Source: 2401265-01

Prepared & Analyzed: 01/18/24

Acenaphthene	0.0238	0.00500	mg/kg	0.0333	ND	71.5	31-137	13.8	30	
Anthracene	0.0242	0.00500	"	0.0333	ND	72.5	30-120	12.6	30	
Benzo (a) anthracene	0.0244	0.00500	"	0.0333	ND	73.3	30-120	14.0	30	
Benzo (a) pyrene	0.0215	0.00500	"	0.0333	ND	64.6	30-120	8.21	30	
Benzo (b) fluoranthene	0.0255	0.00500	"	0.0333	ND	76.5	30-120	12.6	30	
Benzo (k) fluoranthene	0.0261	0.00500	"	0.0333	ND	78.3	30-120	10.8	30	
Chrysene	0.0248	0.00500	"	0.0333	ND	74.3	30-120	12.6	30	
Dibenz (a,h) anthracene	0.0225	0.00500	"	0.0333	ND	67.5	30-120	5.39	30	
Fluoranthene	0.0259	0.00500	"	0.0333	ND	77.6	30-120	13.1	30	
Fluorene	0.0254	0.00500	"	0.0333	ND	76.3	30-120	11.1	30	
Indeno (1,2,3-cd) pyrene	0.0166	0.00500	"	0.0333	ND	49.9	30-120	6.88	30	
Pyrene	0.0291	0.00500	"	0.0333	ND	87.2	35-142	13.5	30	
1-Methylnaphthalene	0.0234	0.00500	"	0.0333	ND	70.3	15-130	10.5	50	
2-Methylnaphthalene	0.0231	0.00500	"	0.0333	ND	69.4	15-130	6.40	50	
Surrogate: 2-Methylnaphthalene-d10	0.0231		"	0.0333		69.4	40-150			
Surrogate: Fluoranthene-d10	0.0265		"	0.0333		79.5	40-150			

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0644 - EPA 5030 Soil MS

Blank (BHA0644-BLK1)

Prepared & Analyzed: 01/18/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0283</i>		"	<i>0.0333</i>		<i>85.0</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0318</i>		"	<i>0.0333</i>		<i>95.4</i>		<i>40-150</i>		

LCS (BHA0644-BS1)

Prepared & Analyzed: 01/18/24

Acenaphthene	0.0310	0.00500	mg/kg	0.0333		93.1		31-137		
Anthracene	0.0299	0.00500	"	0.0333		89.7		30-120		
Benzo (a) anthracene	0.0276	0.00500	"	0.0333		82.7		30-120		
Benzo (a) pyrene	0.0258	0.00500	"	0.0333		77.4		30-120		
Benzo (b) fluoranthene	0.0261	0.00500	"	0.0333		78.3		30-120		
Benzo (k) fluoranthene	0.0296	0.00500	"	0.0333		88.9		30-120		
Chrysene	0.0315	0.00500	"	0.0333		94.4		30-120		
Dibenz (a,h) anthracene	0.0278	0.00500	"	0.0333		83.4		30-120		
Fluoranthene	0.0300	0.00500	"	0.0333		89.9		30-120		
Fluorene	0.0307	0.00500	"	0.0333		92.0		30-120		
Indeno (1,2,3-cd) pyrene	0.0281	0.00500	"	0.0333		84.2		30-120		
Pyrene	0.0308	0.00500	"	0.0333		92.3		35-142		
1-Methylnaphthalene	0.0336	0.00500	"	0.0333		101		35-142		
2-Methylnaphthalene	0.0395	0.00500	"	0.0333		119		35-142		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0316</i>		"	<i>0.0333</i>		<i>94.7</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0301</i>		"	<i>0.0333</i>		<i>90.4</i>		<i>40-150</i>		

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0644 - EPA 5030 Soil MS

Matrix Spike (BHA0644-MS1)	Source: 2401268-01			Prepared & Analyzed: 01/18/24							
Acenaphthene	0.0166	0.00500	mg/kg	0.0333	ND	49.7	31-137				
Anthracene	0.0138	0.00500	"	0.0333	ND	41.4	30-120				
Benzo (a) anthracene	0.0195	0.00500	"	0.0333	0.0304	NR	30-120				QR-02
Benzo (a) pyrene	0.0151	0.00500	"	0.0333	0.0325	NR	30-120				QR-02
Benzo (b) fluoranthene	0.0166	0.00500	"	0.0333	0.0294	NR	30-120				QR-02
Benzo (k) fluoranthene	0.0140	0.00500	"	0.0333	0.00930	14.0	30-120				QR-02
Chrysene	0.0173	0.00500	"	0.0333	0.0244	NR	30-120				QR-02
Dibenz (a,h) anthracene	0.0156	0.00500	"	0.0333	ND	46.9	30-120				
Fluoranthene	0.0181	0.00500	"	0.0333	0.0331	NR	30-120				QR-02
Fluorene	0.0135	0.00500	"	0.0333	ND	40.5	30-120				
Indeno (1,2,3-cd) pyrene	0.0154	0.00500	"	0.0333	0.0155	NR	30-120				QR-02
Pyrene	0.0200	0.00500	"	0.0333	0.0474	NR	35-142				QR-02
1-Methylnaphthalene	0.0151	0.00500	"	0.0333	ND	45.3	15-130				
2-Methylnaphthalene	0.0150	0.00500	"	0.0333	ND	44.9	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0191</i>		"	<i>0.0333</i>		<i>57.3</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0141</i>		"	<i>0.0333</i>		<i>42.4</i>	<i>40-150</i>				

Matrix Spike Dup (BHA0644-MSD1)	Source: 2401268-01			Prepared & Analyzed: 01/18/24							
Acenaphthene	0.0166	0.00500	mg/kg	0.0333	ND	49.9	31-137	0.360	30		
Anthracene	0.0135	0.00500	"	0.0333	ND	40.6	30-120	2.05	30		
Benzo (a) anthracene	0.0187	0.00500	"	0.0333	0.0304	NR	30-120	4.22	30		QR-02
Benzo (a) pyrene	0.0191	0.00500	"	0.0333	0.0325	NR	30-120	23.4	30		QR-02
Benzo (b) fluoranthene	0.0156	0.00500	"	0.0333	0.0294	NR	30-120	5.99	30		QR-02
Benzo (k) fluoranthene	0.0148	0.00500	"	0.0333	0.00930	16.5	30-120	5.67	30		QR-02
Chrysene	0.0162	0.00500	"	0.0333	0.0244	NR	30-120	6.78	30		QR-02
Dibenz (a,h) anthracene	0.0159	0.00500	"	0.0333	ND	47.8	30-120	1.79	30		
Fluoranthene	0.0190	0.00500	"	0.0333	0.0331	NR	30-120	4.79	30		QR-02
Fluorene	0.0144	0.00500	"	0.0333	ND	43.1	30-120	6.41	30		
Indeno (1,2,3-cd) pyrene	0.0140	0.00500	"	0.0333	0.0155	NR	30-120	9.52	30		QR-02
Pyrene	0.0225	0.00500	"	0.0333	0.0474	NR	35-142	11.8	30		QR-02
1-Methylnaphthalene	0.0136	0.00500	"	0.0333	ND	40.7	15-130	10.9	50		
2-Methylnaphthalene	0.0169	0.00500	"	0.0333	ND	50.8	15-130	12.2	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0173</i>		"	<i>0.0333</i>		<i>52.0</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0142</i>		"	<i>0.0333</i>		<i>42.5</i>	<i>40-150</i>				

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/19/24 15:55

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 23, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

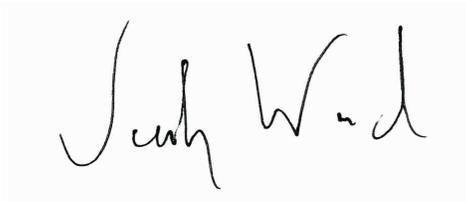
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2401278

Enclosed are the results of analyses for samples received by Summit Scientific on 01/17/24 19:17. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 10:38

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS44@2.5'	2401278-01	Soil	01/17/24 14:25	01/17/24 19:17
SS47@2.5'	2401278-02	Soil	01/17/24 15:00	01/17/24 19:17

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

S₂

2401278

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: PDC / Tasman Project Manager: Mark Longhurst
Address: 6855 W. 119th Ave E-Mail: mark.longhurst@PDCE.com
City/State/Zip: Broomfield / CO/ 80020
Phone: 303-487-1228 Project Name: *1Kchoye F29-22,23 Tank Battery*
Sampler Name: *Conor Lovell* Project Number: N/A

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 TMB	1,3,5 TMB	Boron	Cl, SO4, TDS		PH, EC, SAR
1	<i>SS44 @ 2.5'</i>	<i>1/17/24</i>	<i>1425</i>	<i>2</i>			<i>X</i>			<i>X</i>					<i>X</i>		<i>X</i>		
2	<i>SS47 @ 2.5'</i>	<i>1/17/24</i>	<i>1500</i>	<i>2</i>			<i>X</i>			<i>X</i>					<i>X</i>		<i>X</i>		
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by: <i>Conor Lovell</i> Date/Time: <i>1/17/24 1915</i>	Received by: Tasman's Lock Box Date/Time: <i>1/17/24</i>	Turn Around Time (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____ Sample Integrity: Temperature Upon Receipt: <i>2.5°C</i> Samples Intact: <input checked="" type="radio"/> Yes No	Notes:
Relinquished by: Tasman's Lock Box Date/Time:	Received by: <i>Shirley</i> Date/Time: <i>1/17/24 19:17</i>		
Relinquished by: Date/Time:	Received by: Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 2401278

Client: PDC/Tasman Client Project ID: Venoge F29.22, 23 Tank Bottom

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other [] Airbill #: []

[x] [] [] [] []

Matrix (Check all that apply) Air [] Soil/Solid [x] Water [] Other []

Temp (°C) 25.0 Thermometer # []

Table with 4 columns: Yes, No, N/A, Comments (if any). Rows include: If samples require cooling, is the temperature < 6°C? (1) [x] [] [] on ice; If custody seals are present, are they intact? (1) [] [] [x]; Are samples due within 48 hours present? [] [x] []; Are water samples with short hold times present? [] [x] []; Is a chain-of-custody (COC) form present and filled out Completely? (1) [x] [] []; Is the COC properly relinquished by the client w/ date and time recorded? (1) [x] [] []; Were all samples received intact? (1) [x] [] []; Was adequate sample volume provided? (1) [x] [] []; Does the COC agree with the number and type of sample bottles received? (1) [x] [] []; Do the sample IDs on the bottle labels match the COC? (1) [x] [] []; For volatiles in water - is there headspace present? If yes, contact client and note in narrative. [] [] [x]; Are samples preserved that require preservation (excluding cooling)? (1) Note the type of preservative in the comments column - HCl, H2SO4, NaOH, HNO3, etc. [] [] [x]; If samples are acid preserved for metals, is the pH <= 2? (1) Record the pH in Comments. [] [] [x]; If dissolved metals are requested, were samples field filtered? [] [] [x]

Additional Comments (if any):

(1) If NO, then contact the client before proceeding with analysis and note in case narrative.

GAC

Custodian Printed Name

1/17/24 19:17

Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 10:38

SS44@2.5'
2401278-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/17/24 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0625	01/17/24	01/19/24	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **01/17/24 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	26.5	0.0500	mg/L dry	1	BHA0656	01/18/24	01/19/24	EPA 6020B	
Magnesium	9.22	0.0500	"	"	"	"	"	"	
Sodium	18.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/17/24 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.772	0.00100	units	1	BHA0733	01/22/24	01/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/17/24 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.7		%	1	BHA0694	01/19/24	01/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/17/24 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.245	0.0100	mmhos/cm	1	BHA0687	01/19/24	01/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 10:38

SS44@2.5'
2401278-01 (Soil)

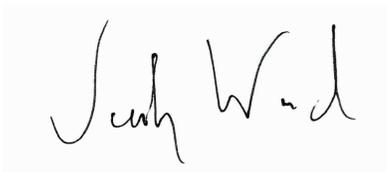
Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/17/24 14:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.28		pH Units	1	BHA0688	01/19/24	01/19/24	EPA 9045D	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 10:38

SS47@2.5'
2401278-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/17/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0625	01/17/24	01/19/24	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **01/17/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	59.7	0.0500	mg/L dry	1	BHA0656	01/18/24	01/19/24	EPA 6020B	
Magnesium	19.0	0.0500	"	"	"	"	"	"	
Sodium	26.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/17/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.774	0.00100	units	1	BHA0733	01/22/24	01/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/17/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.9		%	1	BHA0694	01/19/24	01/19/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/17/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.267	0.0100	mmhos/cm	1	BHA0687	01/19/24	01/19/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Karen Olson

Reported:
 01/23/24 10:38

SS47@2.5'
2401278-02 (Soil)

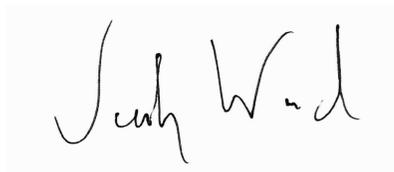
Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **01/17/24 15:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.00		pH Units	1	BHA0688	01/19/24	01/19/24	EPA 9045D	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 10:38

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHA0625 - EPA 3050B

Blank (BHA0625-BLK1)

Prepared: 01/17/24 Analyzed: 01/19/24

Boron ND 2.00 mg/L

LCS (BHA0625-BS1)

Prepared: 01/17/24 Analyzed: 01/19/24

Boron 4.23 2.00 mg/L 5.00 84.6 80-120

Duplicate (BHA0625-DUP1)

Source: 2401059-02

Prepared: 01/17/24 Analyzed: 01/19/24

Boron 5.97 2.00 mg/L 5.35 11.0 20

Matrix Spike (BHA0625-MS1)

Source: 2401059-02

Prepared: 01/17/24 Analyzed: 01/19/24

Boron 9.33 2.00 mg/L 5.00 5.35 79.7 75-125

Matrix Spike Dup (BHA0625-MSD1)

Source: 2401059-02

Prepared: 01/17/24 Analyzed: 01/19/24

Boron 10.0 2.00 mg/L 5.00 5.35 93.1 75-125 6.93 25

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 10:38

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHA0656 - General Preparation

Blank (BHA0656-BLK1)

Prepared: 01/18/24 Analyzed: 01/19/24

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BHA0656-BS1)

Prepared: 01/18/24 Analyzed: 01/19/24

Calcium	5.65	0.0500	mg/L wet	5.00		113	70-130			
Magnesium	5.70	0.0500	"	5.00		114	70-130			
Sodium	5.60	0.0500	"	5.00		112	70-130			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
 Project Manager: Karen Olson

Reported:
 01/23/24 10:38

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limit	RPD	Limit	RPD	

Batch BHA0694 - General Preparation

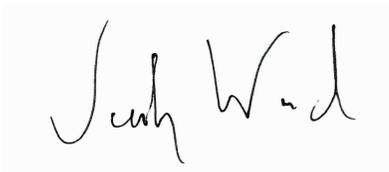
Duplicate (BHA0694-DUP1)

Source: 2401277-01

Prepared & Analyzed: 01/19/24

% Solids	89.4		%		89.5			0.114	20	
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Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 10:38

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHA0687 - General Preparation

Blank (BHA0687-BLK1)

Prepared & Analyzed: 01/19/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHA0687-BS1)

Prepared & Analyzed: 01/19/24

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 100 95-105

Duplicate (BHA0687-DUP1)

Source: 2401265-01

Prepared & Analyzed: 01/19/24

Specific Conductance (EC) 0.0873 0.0100 mmhos/cm 0.0873 0.00 20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 10:38

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0688 - General Preparation

LCS (BHA0688-BS1)

Prepared & Analyzed: 01/19/24

pH 9.03 pH Units 9.18 98.4 95-105

Duplicate (BHA0688-DUP1)

Source: 2401265-01

Prepared & Analyzed: 01/19/24

pH 6.57 pH Units 6.57 0.00 20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 10:38

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 23, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

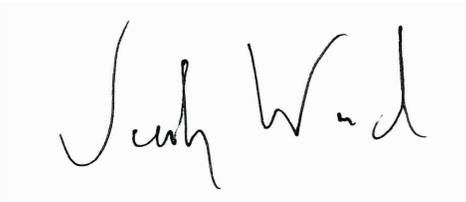
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2401294

Enclosed are the results of analyses for samples received by Summit Scientific on 01/18/24 17:56. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 09:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS55@1'	2401294-01	Soil	01/18/24 10:35	01/18/24 17:56
SS56@6"	2401294-02	Soil	01/18/24 10:45	01/18/24 17:56

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

S₂

2401294

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: PDC / Tasman Project Manager: Mark Longhurst
Address: 6855 W. 119th Ave E-Mail: mark.longhurst@PDCE.com
City/State/Zip: Broomfield / CO/ 80020
Phone: 303-487-1228 Project Name: *Kenogze F29-22, 23 Tank Battery*
Sampler Name: *Conor Lovell* Project Number: N/A

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 TMB	1,3,5 TMB	Boron	Cl, SO4, TDS	TPH		PAH *	
1	<i>SS 55 c 2'</i>	<i>1/18/24</i>	<i>1035</i>	<i>2</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	<i>SS 56 c 6"</i>	<i>1/18/24</i>	<i>1045</i>	<i>2</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <i>Conor Lovell</i> Date/Time: <i>1/18/24 1220</i>	Received by: <i>Tasman's Lock Box</i> Date/Time: <i>1/18/24 1220</i>	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___	Notes: <i>* PAHs on 48 hr turn</i>
Relinquished by: <i>Tasman's Lock Box</i> Date/Time: <i>1/18/24 1750</i>	Received by: <i>[Signature]</i> Date/Time: <i>1/18/24 1750</i>	Sample Integrity: Temperature Upon Receipt: <i>8.0</i>	
Relinquished by:	Received by:	Samples Intact: <input checked="" type="checkbox"/> Yes No	

S₂

Sample Receipt Checklist

S2 Work Order# 2401294

Client: Doctasman

Client Project ID: Ikenoye F29-22,23

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #: _____

Tank battery

-

Matrix (Check all that apply)

Air

Soil/Solid

Water

Other

Temp (°C)

Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>NIIE</u>
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

AS

Custodian Printed Name

1/21/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 09:14

SS55@1'
2401294-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/18/24 10:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHA0668	01/18/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/18/24 10:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0410	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/18/24 10:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0669	01/18/24	01/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/18/24 10:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	6.69	53.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 09:14

SS55@1'
2401294-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/18/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0681	01/19/24	01/20/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.00651	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.00747	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.00603	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.00736	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	0.0100	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/18/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0154	46.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0169	50.6 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 09:14

SS56@6"
2401294-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/18/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0668	01/18/24	01/18/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/18/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0397	99.3 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/18/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0669	01/18/24	01/18/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/18/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	5.02	40.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 09:14

SS56@6"
2401294-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/18/24 10:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHA0681	01/19/24	01/20/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/18/24 10:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0159	47.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0201	60.4 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 09:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0668 - EPA 5030 Soil MS

Blank (BHA0668-BLK1)

Prepared: 01/18/24 Analyzed: 01/19/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0388		"	0.0400		96.9	50-150			
<i>Surrogate: Toluene-d8</i>	0.0399		"	0.0400		99.7	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0418		"	0.0400		104	50-150			

LCS (BHA0668-BS1)

Prepared: 01/18/24 Analyzed: 01/19/24

Benzene	0.104	0.0020	mg/kg	0.100		104	70-130			
Toluene	0.0985	0.0050	"	0.100		98.5	70-130			
Ethylbenzene	0.0978	0.0050	"	0.100		97.8	70-130			
m,p-Xylene	0.199	0.010	"	0.200		99.5	70-130			
o-Xylene	0.0984	0.0050	"	0.100		98.4	70-130			
1,2,4-Trimethylbenzene	0.0953	0.0050	"	0.100		95.3	70-130			
1,3,5-Trimethylbenzene	0.0951	0.0050	"	0.100		95.1	70-130			
Naphthalene	0.0784	0.0038	"	0.100		78.4	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0400		"	0.0400		100	50-150			
<i>Surrogate: Toluene-d8</i>	0.0400		"	0.0400		100	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0413		"	0.0400		103	50-150			

Matrix Spike (BHA0668-MS1)

Source: 2401284-01

Prepared: 01/18/24 Analyzed: 01/19/24

Benzene	0.0942	0.0020	mg/kg	0.100	ND	94.2	70-130			
Toluene	0.0903	0.0050	"	0.100	ND	90.3	70-130			
Ethylbenzene	0.0867	0.0050	"	0.100	ND	86.7	70-130			
m,p-Xylene	0.176	0.010	"	0.200	ND	88.1	70-130			
o-Xylene	0.0876	0.0050	"	0.100	ND	87.6	70-130			
1,2,4-Trimethylbenzene	0.0831	0.0050	"	0.100	ND	83.1	70-130			
1,3,5-Trimethylbenzene	0.0821	0.0050	"	0.100	ND	82.1	70-130			
Naphthalene	0.0735	0.0038	"	0.100	ND	73.5	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0398		"	0.0400		99.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0406		"	0.0400		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0412		"	0.0400		103	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 09:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0668 - EPA 5030 Soil MS

Matrix Spike Dup (BHA0668-MSD1)	Source: 2401284-01			Prepared: 01/18/24 Analyzed: 01/19/24						
Benzene	0.0902	0.0020	mg/kg	0.100	ND	90.2	70-130	4.30	30	
Toluene	0.0861	0.0050	"	0.100	ND	86.1	70-130	4.76	30	
Ethylbenzene	0.0826	0.0050	"	0.100	ND	82.6	70-130	4.86	30	
m,p-Xylene	0.165	0.010	"	0.200	ND	82.6	70-130	6.43	30	
o-Xylene	0.0828	0.0050	"	0.100	ND	82.8	70-130	5.67	30	
1,2,4-Trimethylbenzene	0.0758	0.0050	"	0.100	ND	75.8	70-130	9.29	30	
1,3,5-Trimethylbenzene	0.0751	0.0050	"	0.100	ND	75.1	70-130	8.93	30	
Naphthalene	0.0683	0.0038	"	0.100	ND	68.3	70-130	7.32	30	QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.0</i>	<i>50-150</i>			

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Tasman Geosciences
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Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 09:14

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHA0669 - EPA 3550A

Blank (BHA0669-BLK1)

Prepared: 01/18/24 Analyzed: 01/19/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	11.3		"	12.5		90.2	30-150				

LCS (BHA0669-BS1)

Prepared: 01/18/24 Analyzed: 01/19/24

C10-C28 (DRO)	544	50	mg/kg	500		109	70-130				
Surrogate: <i>o</i> -Terphenyl	10.3		"	12.5		82.4	30-150				

Matrix Spike (BHA0669-MS1)

Source: 2401284-01

Prepared: 01/18/24 Analyzed: 01/19/24

C10-C28 (DRO)	553	50	mg/kg	500	10.4	109	70-130				
Surrogate: <i>o</i> -Terphenyl	7.97		"	12.5		63.7	30-150				

Matrix Spike Dup (BHA0669-MSD1)

Source: 2401284-01

Prepared: 01/18/24 Analyzed: 01/19/24

C10-C28 (DRO)	455	50	mg/kg	500	10.4	88.9	70-130	19.4	20		
Surrogate: <i>o</i> -Terphenyl	8.89		"	12.5		71.1	30-150				

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 09:14

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0681 - EPA 5030 Soil MS

Blank (BHA0681-BLK1)

Prepared & Analyzed: 01/19/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0155</i>		"	<i>0.0333</i>		<i>46.6</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0259</i>		"	<i>0.0333</i>		<i>77.8</i>	<i>40-150</i>			

LCS (BHA0681-BS1)

Prepared & Analyzed: 01/19/24

Acenaphthene	0.0272	0.00500	mg/kg	0.0333		81.6	31-137			
Anthracene	0.0275	0.00500	"	0.0333		82.5	30-120			
Benzo (a) anthracene	0.0249	0.00500	"	0.0333		74.7	30-120			
Benzo (a) pyrene	0.0228	0.00500	"	0.0333		68.4	30-120			
Benzo (b) fluoranthene	0.0246	0.00500	"	0.0333		73.9	30-120			
Benzo (k) fluoranthene	0.0281	0.00500	"	0.0333		84.4	30-120			
Chrysene	0.0317	0.00500	"	0.0333		95.0	30-120			
Dibenz (a,h) anthracene	0.0196	0.00500	"	0.0333		58.7	30-120			
Fluoranthene	0.0271	0.00500	"	0.0333		81.4	30-120			
Fluorene	0.0293	0.00500	"	0.0333		88.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0198	0.00500	"	0.0333		59.5	30-120			
Pyrene	0.0305	0.00500	"	0.0333		91.5	35-142			
1-Methylnaphthalene	0.0219	0.00500	"	0.0333		65.6	35-142			
2-Methylnaphthalene	0.0324	0.00500	"	0.0333		97.3	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0233</i>		"	<i>0.0333</i>		<i>69.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0272</i>		"	<i>0.0333</i>		<i>81.6</i>	<i>40-150</i>			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 09:14

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0681 - EPA 5030 Soil MS

Matrix Spike (BHA0681-MS1)

Source: 2401277-01

Prepared & Analyzed: 01/19/24

Acenaphthene	0.0150	0.00500	mg/kg	0.0333	ND	45.1	31-137			
Anthracene	0.0149	0.00500	"	0.0333	ND	44.6	30-120			
Benzo (a) anthracene	0.0156	0.00500	"	0.0333	ND	46.8	30-120			
Benzo (a) pyrene	0.0136	0.00500	"	0.0333	ND	40.7	30-120			
Benzo (b) fluoranthene	0.0134	0.00500	"	0.0333	ND	40.3	30-120			
Benzo (k) fluoranthene	0.0147	0.00500	"	0.0333	ND	44.2	30-120			
Chrysene	0.0139	0.00500	"	0.0333	ND	41.8	30-120			
Dibenz (a,h) anthracene	0.0150	0.00500	"	0.0333	ND	45.1	30-120			
Fluoranthene	0.0159	0.00500	"	0.0333	ND	47.7	30-120			
Fluorene	0.0149	0.00500	"	0.0333	ND	44.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0158	0.00500	"	0.0333	ND	47.5	30-120			
Pyrene	0.0140	0.00500	"	0.0333	ND	42.0	35-142			
1-Methylnaphthalene	0.0139	0.00500	"	0.0333	ND	41.6	15-130			
2-Methylnaphthalene	0.0136	0.00500	"	0.0333	ND	40.9	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0167		"	0.0333		50.0	40-150			
Surrogate: Fluoranthene-d10	0.0135		"	0.0333		40.6	40-150			

Matrix Spike Dup (BHA0681-MSD1)

Source: 2401277-01

Prepared & Analyzed: 01/19/24

Acenaphthene	0.0144	0.00500	mg/kg	0.0333	ND	43.1	31-137	4.65	30	
Anthracene	0.0138	0.00500	"	0.0333	ND	41.3	30-120	7.73	30	
Benzo (a) anthracene	0.0136	0.00500	"	0.0333	ND	40.8	30-120	13.8	30	
Benzo (a) pyrene	0.0150	0.00500	"	0.0333	ND	44.9	30-120	9.67	30	
Benzo (b) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.3	30-120	14.0	30	
Benzo (k) fluoranthene	0.0142	0.00500	"	0.0333	ND	42.7	30-120	3.25	30	
Chrysene	0.0150	0.00500	"	0.0333	ND	44.9	30-120	7.07	30	
Dibenz (a,h) anthracene	0.0164	0.00500	"	0.0333	ND	49.3	30-120	8.99	30	
Fluoranthene	0.0144	0.00500	"	0.0333	ND	43.3	30-120	9.67	30	
Fluorene	0.0151	0.00500	"	0.0333	ND	45.4	30-120	1.91	30	
Indeno (1,2,3-cd) pyrene	0.0162	0.00500	"	0.0333	ND	48.6	30-120	2.25	30	
Pyrene	0.0139	0.00500	"	0.0333	ND	41.6	35-142	0.943	30	
1-Methylnaphthalene	0.0141	0.00500	"	0.0333	ND	42.3	15-130	1.54	50	
2-Methylnaphthalene	0.0155	0.00500	"	0.0333	ND	46.4	15-130	12.6	50	
Surrogate: 2-Methylnaphthalene-d10	0.0151		"	0.0333		45.2	40-150			
Surrogate: Fluoranthene-d10	0.0143		"	0.0333		43.0	40-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/23/24 09:14

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 25, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

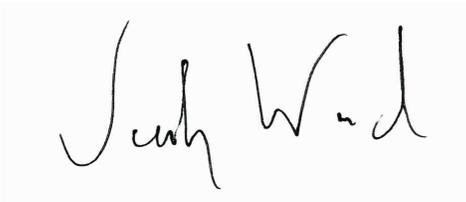
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2401358

Enclosed are the results of analyses for samples received by Summit Scientific on 01/22/24 17:56. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS57@4'	2401358-01	Soil	01/22/24 11:59	01/22/24 17:56
SS58@6'	2401358-02	Soil	01/22/24 11:50	01/22/24 17:56
SS59@4'	2401358-03	Soil	01/22/24 12:15	01/22/24 17:56
SS60@6'	2401358-04	Soil	01/22/24 12:10	01/22/24 17:56
SS61@4'	2401358-05	Soil	01/22/24 14:20	01/22/24 17:56
SS62@6'	2401358-06	Soil	01/22/24 14:15	01/22/24 17:56
SS63@4'	2401358-07	Soil	01/22/24 15:09	01/22/24 17:56
SS64@6'	2401358-08	Soil	01/22/24 15:01	01/22/24 17:56

Summit Scientific

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Summit Scientific

S₂

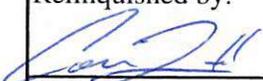
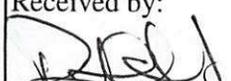
2401358

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: PDC / Tasman Project Manager: ~~Mark Longhurst~~ Karen Olson
 Address: 6855 W 119th Ave E-Mail: ~~mark.longhurst@pdce.com~~ Karen.Olson@pdce.com
 City/State/Zip: Broomfield/ CO/ 80020
 Phone: 303-487-1228 Project Name: Kenoye F29-22, 23 Tank Battery
 Sampler Name: ~~Matthew Wentzel~~ Conor Lovell Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAH*	METALS			
1	SS57 e4'	1/22/24	1159	2			x			x				x	x	x			x			pH, EC, SAR by saturated paste
2	SS58 e6'		1150																			
3	SS59 e4'		1215																			
4	SS60 e6'		1210																			
5	SS61 e4'		1420																			
6	SS62 e6'		1415																			
7	SS63 e4'		1509																			
8	SS64 e6'		1501																			
9																						
10																						

Relinquished by:  Date/Time: 1/22/24 1630	Received by: Tasman's Lock Box Date/Time: 1/22/24 1630	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ Sample Integrity: Temperature Upon Receipt: 8.9 Samples Intact: Yes <input checked="" type="checkbox"/> No ___	Notes: *PAHs on 48 hr turn
Relinquished by: Tasman's Lock Box Date/Time: 1/22/24 1750	Received by:  Date/Time: 1/22/24 1750		
Relinquished by:	Received by:		

S₂

AS

Sample Receipt Checklist

S2 Work Order# 2401358

Client: Portasman

Client Project ID: Ikenouye F29-22, 23

(Tank Battery)

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #: _____

Matrix (Check all that apply)

Air

Soil/Solid

Water

Other

Temp (°C)

Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

AS

Custodian Printed Name

1/22/24

Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS57@4'
2401358-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 11:59**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0767	01/22/24	01/22/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/22/24 11:59**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0388	97.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0421	105 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 11:59**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0768	01/22/24	01/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/22/24 11:59**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	5.78	46.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS57@4'
2401358-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0776	01/23/24	01/23/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.00610	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00575	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/22/24 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0142	42.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0185	55.4 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS58@6'
2401358-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0767	01/22/24	01/22/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/22/24 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0411	103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0768	01/22/24	01/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/22/24 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.08	56.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS58@6'
2401358-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 11:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHA0776	01/23/24	01/23/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/22/24 11:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0157	47.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0252	75.7 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS59@4'
2401358-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0767	01/22/24	01/23/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/22/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0383	95.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	99.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0768	01/22/24	01/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/22/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	5.53	44.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS59@4'
2401358-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHA0776	01/23/24	01/24/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/22/24 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0146	43.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0262	78.5 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS60@6'
2401358-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 12:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0767	01/22/24	01/23/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/22/24 12:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0381	95.2 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	98.9 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 12:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0768	01/22/24	01/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/22/24 12:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.92	55.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS60@6'
2401358-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 12:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHA0776	01/23/24	01/24/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/22/24 12:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0140	42.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0263	78.9 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS61@4'
2401358-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0767	01/22/24	01/23/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0417	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0421	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0768	01/22/24	01/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.05	48.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS61@4'
2401358-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0776	01/23/24	01/24/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.00562	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0180	54.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0212	63.6 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS62@6'
2401358-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0767	01/22/24	01/23/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0395	98.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0374	93.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0426	106 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0768	01/22/24	01/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	5.62	44.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS62@6'
2401358-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0776	01/23/24	01/24/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0226	67.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0311	93.2 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS63@4'
2401358-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 15:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0767	01/22/24	01/23/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/22/24 15:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0424	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0381	95.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0421	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 15:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0768	01/22/24	01/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/22/24 15:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.07	48.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS63@4'
2401358-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 15:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Acenaphthene	ND	0.00500		mg/kg	1	BHA0776	01/23/24	01/24/24	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	"
Benzo (a) anthracene	0.0274	0.00500		"	"	"	"	"	"	"
Benzo (a) pyrene	0.0319	0.00500		"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.0336	0.00500		"	"	"	"	"	"	"
Benzo (k) fluoranthene	0.0129	0.00500		"	"	"	"	"	"	"
Chrysene	0.0238	0.00500		"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	"
Fluoranthene	0.0304	0.00500		"	"	"	"	"	"	"
Fluorene	ND	0.00500		"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	0.0101	0.00500		"	"	"	"	"	"	"
Pyrene	0.0430	0.00500		"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	"

Date Sampled: **01/22/24 15:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0189	56.7 %		40-150		"	"	"	"	"
Surrogate: Fluoranthene-d10	0.0275	82.5 %		40-150		"	"	"	"	"

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS64@6'
2401358-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 15:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0767	01/22/24	01/23/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/22/24 15:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0434	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0390	97.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 15:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0768	01/22/24	01/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/22/24 15:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.64	61.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

SS64@6'
2401358-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 15:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0776	01/23/24	01/24/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **01/22/24 15:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0182	54.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0284	85.3 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0767 - EPA 5030 Soil MS

Blank (BHA0767-BLK1)

Prepared: 01/22/24 Analyzed: 01/23/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0360		"	0.0400		89.9	50-150			
<i>Surrogate: Toluene-d8</i>	0.0426		"	0.0400		106	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0408		"	0.0400		102	50-150			

LCS (BHA0767-BS1)

Prepared: 01/22/24 Analyzed: 01/23/24

Benzene	0.0823	0.0020	mg/kg	0.100		82.3	70-130			
Toluene	0.107	0.0050	"	0.100		107	70-130			
Ethylbenzene	0.0960	0.0050	"	0.100		96.0	70-130			
m,p-Xylene	0.196	0.010	"	0.200		97.9	70-130			
o-Xylene	0.0978	0.0050	"	0.100		97.8	70-130			
1,2,4-Trimethylbenzene	0.0933	0.0050	"	0.100		93.3	70-130			
1,3,5-Trimethylbenzene	0.0932	0.0050	"	0.100		93.2	70-130			
Naphthalene	0.0830	0.0038	"	0.100		83.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0342		"	0.0400		85.6	50-150			
<i>Surrogate: Toluene-d8</i>	0.0426		"	0.0400		106	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0401		"	0.0400		100	50-150			

Matrix Spike (BHA0767-MS1)

Source: 2401353-01

Prepared: 01/22/24 Analyzed: 01/23/24

Benzene	0.0652	0.0020	mg/kg	0.100	ND	65.2	70-130			QM-07
Toluene	0.0818	0.0050	"	0.100	ND	81.8	70-130			
Ethylbenzene	0.0763	0.0050	"	0.100	ND	76.3	70-130			
m,p-Xylene	0.152	0.010	"	0.200	ND	75.9	70-130			
o-Xylene	0.0775	0.0050	"	0.100	ND	77.5	70-130			
1,2,4-Trimethylbenzene	0.0696	0.0050	"	0.100	ND	69.6	70-130			QM-07
1,3,5-Trimethylbenzene	0.0697	0.0050	"	0.100	ND	69.7	70-130			QM-07
Naphthalene	0.0625	0.0038	"	0.100	ND	62.5	70-130			QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0341		"	0.0400		85.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0416		"	0.0400		104	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0402		"	0.0400		100	50-150			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch BHA0767 - EPA 5030 Soil MS

Matrix Spike Dup (BHA0767-MSD1)	Source: 2401353-01			Prepared: 01/22/24 Analyzed: 01/23/24						
Benzene	0.0688	0.0020	mg/kg	0.100	ND	68.8	70-130	5.38	30	QM-07
Toluene	0.0841	0.0050	"	0.100	ND	84.1	70-130	2.75	30	
Ethylbenzene	0.0773	0.0050	"	0.100	ND	77.3	70-130	1.33	30	
m,p-Xylene	0.158	0.010	"	0.200	ND	78.8	70-130	3.70	30	
o-Xylene	0.0776	0.0050	"	0.100	ND	77.6	70-130	0.155	30	
1,2,4-Trimethylbenzene	0.0678	0.0050	"	0.100	ND	67.8	70-130	2.71	30	QM-07
1,3,5-Trimethylbenzene	0.0681	0.0050	"	0.100	ND	68.1	70-130	2.26	30	QM-07
Naphthalene	0.0619	0.0038	"	0.100	ND	61.9	70-130	1.06	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0341		"	0.0400		85.4	50-150			
Surrogate: Toluene-d8	0.0424		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.3	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limits	RPD	Limit		

Batch BHA0768 - EPA 3550A

Blank (BHA0768-BLK1)

Prepared: 01/22/24 Analyzed: 01/23/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	10.5		"	12.5		83.7	30-150			

LCS (BHA0768-BS1)

Prepared: 01/22/24 Analyzed: 01/23/24

C10-C28 (DRO)	493	50	mg/kg	500	13.3	98.7	70-130			
Surrogate: <i>o</i> -Terphenyl	8.93		"	12.5		71.4	30-150			

Matrix Spike (BHA0768-MS1)

Source: 2401353-01

Prepared: 01/22/24 Analyzed: 01/23/24

C10-C28 (DRO)	486	50	mg/kg	500	13.3	94.6	70-130			
Surrogate: <i>o</i> -Terphenyl	5.44		"	12.5		43.5	30-150			

Matrix Spike Dup (BHA0768-MSD1)

Source: 2401353-01

Prepared: 01/22/24 Analyzed: 01/23/24

C10-C28 (DRO)	426	50	mg/kg	500	13.3	82.6	70-130	13.1	20	
Surrogate: <i>o</i> -Terphenyl	5.14		"	12.5		41.1	30-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHA0776 - EPA 5030 Soil MS

Blank (BHA0776-BLK1)

Prepared & Analyzed: 01/23/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0187</i>		"	<i>0.0333</i>		<i>56.0</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0373</i>		"	<i>0.0333</i>		<i>112</i>		<i>40-150</i>		

LCS (BHA0776-BS1)

Prepared & Analyzed: 01/23/24

Acenaphthene	0.0385	0.00500	mg/kg	0.0333		115		31-137		
Anthracene	0.0379	0.00500	"	0.0333		114		30-120		
Benzo (a) anthracene	0.0373	0.00500	"	0.0333		112		30-120		
Benzo (a) pyrene	0.0360	0.00500	"	0.0333		108		30-120		
Benzo (b) fluoranthene	0.0375	0.00500	"	0.0333		113		30-120		
Benzo (k) fluoranthene	0.0372	0.00500	"	0.0333		112		30-120		
Chrysene	0.0363	0.00500	"	0.0333		109		30-120		
Dibenz (a,h) anthracene	0.0313	0.00500	"	0.0333		93.8		30-120		
Fluoranthene	0.0394	0.00500	"	0.0333		118		30-120		
Fluorene	0.0398	0.00500	"	0.0333		119		30-120		
Indeno (1,2,3-cd) pyrene	0.0303	0.00500	"	0.0333		91.0		30-120		
Pyrene	0.0401	0.00500	"	0.0333		120		35-142		
1-Methylnaphthalene	0.0303	0.00500	"	0.0333		91.0		35-142		
2-Methylnaphthalene	0.0385	0.00500	"	0.0333		116		35-142		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0320</i>		"	<i>0.0333</i>		<i>95.9</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0368</i>		"	<i>0.0333</i>		<i>110</i>		<i>40-150</i>		

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHA0776 - EPA 5030 Soil MS

Matrix Spike (BHA0776-MS1)	Source: 2401353-01			Prepared & Analyzed: 01/23/24						
Acenaphthene	0.0188	0.00500	mg/kg	0.0333	ND	56.5	31-137			
Anthracene	0.0214	0.00500	"	0.0333	ND	64.2	30-120			
Benzo (a) anthracene	0.0225	0.00500	"	0.0333	ND	67.4	30-120			
Benzo (a) pyrene	0.0203	0.00500	"	0.0333	ND	60.8	30-120			
Benzo (b) fluoranthene	0.0210	0.00500	"	0.0333	ND	63.0	30-120			
Benzo (k) fluoranthene	0.0202	0.00500	"	0.0333	ND	60.7	30-120			
Chrysene	0.0214	0.00500	"	0.0333	ND	64.2	30-120			
Dibenz (a,h) anthracene	0.0182	0.00500	"	0.0333	ND	54.6	30-120			
Fluoranthene	0.0226	0.00500	"	0.0333	ND	67.7	30-120			
Fluorene	0.0215	0.00500	"	0.0333	ND	64.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0183	0.00500	"	0.0333	ND	54.9	30-120			
Pyrene	0.0238	0.00500	"	0.0333	ND	71.3	35-142			
1-Methylnaphthalene	0.0153	0.00500	"	0.0333	ND	46.0	15-130			
2-Methylnaphthalene	0.0210	0.00500	"	0.0333	ND	63.1	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0157</i>		<i>"</i>	<i>0.0333</i>		<i>47.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0229</i>		<i>"</i>	<i>0.0333</i>		<i>68.6</i>	<i>40-150</i>			

Matrix Spike Dup (BHA0776-MSD1)	Source: 2401353-01			Prepared & Analyzed: 01/23/24						
Acenaphthene	0.0154	0.00500	mg/kg	0.0333	ND	46.1	31-137	20.4	30	
Anthracene	0.0173	0.00500	"	0.0333	ND	52.0	30-120	21.0	30	
Benzo (a) anthracene	0.0177	0.00500	"	0.0333	ND	53.0	30-120	24.0	30	
Benzo (a) pyrene	0.0162	0.00500	"	0.0333	ND	48.5	30-120	22.5	30	
Benzo (b) fluoranthene	0.0172	0.00500	"	0.0333	ND	51.5	30-120	20.1	30	
Benzo (k) fluoranthene	0.0159	0.00500	"	0.0333	ND	47.7	30-120	23.9	30	
Chrysene	0.0165	0.00500	"	0.0333	ND	49.5	30-120	25.9	30	
Dibenz (a,h) anthracene	0.0139	0.00500	"	0.0333	ND	41.7	30-120	26.7	30	
Fluoranthene	0.0179	0.00500	"	0.0333	ND	53.7	30-120	23.2	30	
Fluorene	0.0170	0.00500	"	0.0333	ND	50.9	30-120	23.7	30	
Indeno (1,2,3-cd) pyrene	0.0140	0.00500	"	0.0333	ND	42.1	30-120	26.2	30	
Pyrene	0.0186	0.00500	"	0.0333	ND	55.7	35-142	24.5	30	
1-Methylnaphthalene	0.0153	0.00500	"	0.0333	ND	45.9	15-130	0.148	50	
2-Methylnaphthalene	0.0173	0.00500	"	0.0333	ND	51.8	15-130	19.6	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0136</i>		<i>"</i>	<i>0.0333</i>		<i>40.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0181</i>		<i>"</i>	<i>0.0333</i>		<i>54.3</i>	<i>40-150</i>			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
01/25/24 14:20

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 14, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

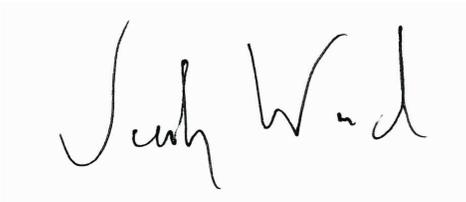
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2402201

Enclosed are the results of analyses for samples received by Summit Scientific on 02/09/24 18:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/14/24 16:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS65@4'	2402201-01	Soil	02/09/24 09:12	02/09/24 18:05
SS66@6'	2402201-02	Soil	02/09/24 09:16	02/09/24 18:05

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

S₂

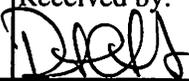
2402201

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: PDC / Tasman Project Manager: ~~Mark Longhurst~~ Karen Olson
Address: 6855 W 119th Ave E-Mail: ~~mark.longhurst@PDCE.com~~ Karen.Olson@chevron.com
City/State/Zip: Broomfield/ CO/ 80020 Project Name: IKanouye F29-22,23 TANK BATTERY
Phone: 303-487-1228 Project Number:
Sampler Name: Matthew Wentzel

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAH *	METALS		
1	SS65 @ 4'	02.9.24	0912	2			X			X				X	X	X			X		pH, EC, SAR by saturated paste *PAH analysis on 48hr TAT
2	SS66 @ 6'	02.9.24	0916	2			X			X				X	X	X			X		
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: 02.9.24 1115	Received by: Tasman's Lock Box	Date/Time: 02.9.24 1115	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: 6.7 Samples Intact: <input checked="" type="checkbox"/> No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 2924 1805	Received by: 	Date/Time: 2924 1805		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 2402201

Client: DeTasman

Client Project ID: Ikenouye

Tank Battery
F29,22,23

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #: _____

-

Matrix (Check all that apply)

Air

Soil/Solid

Water

Other

Temp (°C)

Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	at ICE
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AS

Custodian Printed Name

2/9/24

Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/14/24 16:04

SS65@4'
2402201-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/09/24 09:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHB0336	02/09/24	02/09/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/09/24 09:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0417	104 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.7 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/09/24 09:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHB0337	"	02/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/09/24 09:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.94	71.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/14/24 16:04

SS65@4'
2402201-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/09/24 09:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0364	02/12/24	02/13/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.00851	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.00760	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.00876	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	0.00821	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.00503	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	0.00505	0.00500	"	"	"	"	"	"	"
Pyrene	0.0106	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **02/09/24 09:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0292	87.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0186	55.9 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/14/24 16:04

SS66@6'
2402201-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/09/24 09:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHB0336	02/09/24	02/09/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/09/24 09:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0437	109 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/09/24 09:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHB0337	"	02/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/09/24 09:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.82	62.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/14/24 16:04

SS66@6'
2402201-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/09/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0364	02/12/24	02/13/24	EPA 8270D SIM	
Anthracene	0.00823	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0466	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0455	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0392	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0159	0.00500	"	"	"	"	"	"	
Chrysene	0.0388	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0519	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0238	0.00500	"	"	"	"	"	"	
Pyrene	0.0728	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/09/24 09:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0303	90.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0204	61.1 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/14/24 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHB0336 - EPA 5030 Soil MS

Blank (BHB0336-BLK1)

Prepared: 02/09/24 Analyzed: 02/10/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0392		"	0.0400		97.9	50-150			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.8	50-150			

LCS (BHB0336-BS1)

Prepared: 02/09/24 Analyzed: 02/10/24

Benzene	0.111	0.0020	mg/kg	0.100		111	70-130			
Toluene	0.108	0.0050	"	0.100		108	70-130			
Ethylbenzene	0.111	0.0050	"	0.100		111	70-130			
m,p-Xylene	0.220	0.010	"	0.200		110	70-130			
o-Xylene	0.0969	0.0050	"	0.100		96.9	70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.0996	0.0050	"	0.100		99.6	70-130			
Naphthalene	0.0977	0.0038	"	0.100		97.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0442		"	0.0400		111	50-150			
Surrogate: Toluene-d8	0.0396		"	0.0400		99.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400		92.2	50-150			

Matrix Spike (BHB0336-MS1)

Source: 2402139-01

Prepared: 02/09/24 Analyzed: 02/12/24

Benzene	0.0970	0.0020	mg/kg	0.100	ND	97.0	70-130			
Toluene	0.0922	0.0050	"	0.100	ND	92.2	70-130			
Ethylbenzene	0.0948	0.0050	"	0.100	ND	94.8	70-130			
m,p-Xylene	0.189	0.010	"	0.200	ND	94.3	70-130			
o-Xylene	0.0844	0.0050	"	0.100	ND	84.4	70-130			
1,2,4-Trimethylbenzene	0.0811	0.0050	"	0.100	ND	81.1	70-130			
1,3,5-Trimethylbenzene	0.0886	0.0050	"	0.100	ND	88.6	70-130			
Naphthalene	0.0673	0.0038	"	0.100	ND	67.3	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0437		"	0.0400		109	50-150			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.8	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/14/24 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHB0336 - EPA 5030 Soil MS

Matrix Spike Dup (BHB0336-MSD1)	Source: 2402139-01			Prepared: 02/09/24 Analyzed: 02/12/24						
Benzene	0.0971	0.0020	mg/kg	0.100	ND	97.1	70-130	0.155	30	
Toluene	0.0949	0.0050	"	0.100	ND	94.9	70-130	2.92	30	
Ethylbenzene	0.0970	0.0050	"	0.100	ND	97.0	70-130	2.38	30	
m,p-Xylene	0.192	0.010	"	0.200	ND	96.1	70-130	1.95	30	
o-Xylene	0.0844	0.0050	"	0.100	ND	84.4	70-130	0.0711	30	
1,2,4-Trimethylbenzene	0.0843	0.0050	"	0.100	ND	84.3	70-130	3.92	30	
1,3,5-Trimethylbenzene	0.0908	0.0050	"	0.100	ND	90.8	70-130	2.37	30	
Naphthalene	0.0711	0.0038	"	0.100	ND	71.1	70-130	5.55	30	
Surrogate: 1,2-Dichloroethane-d4	0.0442		"	0.0400		110	50-150			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.8	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/14/24 16:04

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limits	RPD	Limit		

Batch BHB0337 - EPA 3550A

Blank (BHB0337-BLK1)

Prepared: 02/09/24 Analyzed: 02/10/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	15.5		"	12.5		124		30-150		

LCS (BHB0337-BS1)

Prepared: 02/09/24 Analyzed: 02/10/24

C10-C28 (DRO)	487	50	mg/kg	500		97.4		70-130		
Surrogate: <i>o</i> -Terphenyl	14.2		"	12.5		114		30-150		

Matrix Spike (BHB0337-MS1)

Source: 2402139-01

Prepared: 02/09/24 Analyzed: 02/10/24

C10-C28 (DRO)	511	50	mg/kg	500	13.4	99.5		70-130		
Surrogate: <i>o</i> -Terphenyl	11.2		"	12.5		89.2		30-150		

Matrix Spike Dup (BHB0337-MSD1)

Source: 2402139-01

Prepared: 02/09/24 Analyzed: 02/10/24

C10-C28 (DRO)	455	50	mg/kg	500	13.4	88.3		70-130	11.5	20
Surrogate: <i>o</i> -Terphenyl	11.0		"	12.5		87.9		30-150		

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/14/24 16:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHB0364 - EPA 5030 Soil MS

Blank (BHB0364-BLK1)

Prepared & Analyzed: 02/12/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0330</i>		"	<i>0.0333</i>		<i>99.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0341</i>		"	<i>0.0333</i>		<i>102</i>	<i>40-150</i>			

LCS (BHB0364-BS1)

Prepared & Analyzed: 02/12/24

Acenaphthene	0.0315	0.00500	mg/kg	0.0333	94.4	31-137
Anthracene	0.0285	0.00500	"	0.0333	85.5	30-120
Benzo (a) anthracene	0.0242	0.00500	"	0.0333	72.6	30-120
Benzo (a) pyrene	0.0286	0.00500	"	0.0333	85.7	30-120
Benzo (b) fluoranthene	0.0298	0.00500	"	0.0333	89.5	30-120
Benzo (k) fluoranthene	0.0314	0.00500	"	0.0333	94.3	30-120
Chrysene	0.0311	0.00500	"	0.0333	93.4	30-120
Dibenz (a,h) anthracene	0.0254	0.00500	"	0.0333	76.3	30-120
Fluoranthene	0.0300	0.00500	"	0.0333	90.1	30-120
Fluorene	0.0318	0.00500	"	0.0333	95.4	30-120
Indeno (1,2,3-cd) pyrene	0.0349	0.00500	"	0.0333	105	30-120
Pyrene	0.0306	0.00500	"	0.0333	91.9	35-142
1-Methylnaphthalene	0.0350	0.00500	"	0.0333	105	35-142
2-Methylnaphthalene	0.0368	0.00500	"	0.0333	110	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0278</i>		"	<i>0.0333</i>	<i>83.4</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0316</i>		"	<i>0.0333</i>	<i>94.7</i>	<i>40-150</i>

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/14/24 16:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHB0364 - EPA 5030 Soil MS

Matrix Spike (BHB0364-MS1)	Source: 2402130-01			Prepared & Analyzed: 02/12/24							
Acenaphthene	0.0254	0.00500	mg/kg	0.0333	ND	76.2	31-137				
Anthracene	0.0228	0.00500	"	0.0333	ND	68.4	30-120				
Benzo (a) anthracene	0.0221	0.00500	"	0.0333	ND	66.2	30-120				
Benzo (a) pyrene	0.0241	0.00500	"	0.0333	ND	72.2	30-120				
Benzo (b) fluoranthene	0.0241	0.00500	"	0.0333	ND	72.4	30-120				
Benzo (k) fluoranthene	0.0263	0.00500	"	0.0333	ND	78.9	30-120				
Chrysene	0.0247	0.00500	"	0.0333	ND	74.1	30-120				
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333	ND	59.9	30-120				
Fluoranthene	0.0241	0.00500	"	0.0333	ND	72.3	30-120				
Fluorene	0.0253	0.00500	"	0.0333	ND	75.8	30-120				
Indeno (1,2,3-cd) pyrene	0.0273	0.00500	"	0.0333	ND	81.9	30-120				
Pyrene	0.0235	0.00500	"	0.0333	ND	70.4	35-142				
1-Methylnaphthalene	0.0277	0.00500	"	0.0333	ND	83.0	15-130				
2-Methylnaphthalene	0.0299	0.00500	"	0.0333	ND	89.7	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0235</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>70.6</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0254</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>76.3</i>	<i>40-150</i>				

Matrix Spike Dup (BHB0364-MSD1)	Source: 2402130-01			Prepared & Analyzed: 02/12/24							
Acenaphthene	0.0192	0.00500	mg/kg	0.0333	ND	57.5	31-137	27.9	30		
Anthracene	0.0182	0.00500	"	0.0333	ND	54.7	30-120	22.3	30		
Benzo (a) anthracene	0.0185	0.00500	"	0.0333	ND	55.6	30-120	17.3	30		
Benzo (a) pyrene	0.0195	0.00500	"	0.0333	ND	58.4	30-120	21.2	30		
Benzo (b) fluoranthene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	21.6	30		
Benzo (k) fluoranthene	0.0206	0.00500	"	0.0333	ND	61.9	30-120	24.2	30		
Chrysene	0.0196	0.00500	"	0.0333	ND	58.8	30-120	23.0	30		
Dibenz (a,h) anthracene	0.0148	0.00500	"	0.0333	ND	44.4	30-120	29.6	30		
Fluoranthene	0.0201	0.00500	"	0.0333	ND	60.4	30-120	17.8	30		
Fluorene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	26.2	30		
Indeno (1,2,3-cd) pyrene	0.0200	0.00500	"	0.0333	ND	59.9	30-120	31.0	30		QR-02
Pyrene	0.0183	0.00500	"	0.0333	ND	54.9	35-142	24.8	30		
1-Methylnaphthalene	0.0212	0.00500	"	0.0333	ND	63.5	15-130	26.7	50		
2-Methylnaphthalene	0.0217	0.00500	"	0.0333	ND	65.1	15-130	31.8	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0196</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>58.7</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0208</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>62.4</i>	<i>40-150</i>				

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/14/24 16:04

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 22, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

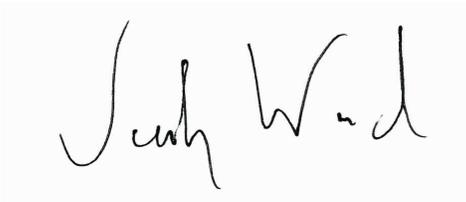
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2402316

Enclosed are the results of analyses for samples received by Summit Scientific on 02/16/24 17:34. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS67@3'	2402316-01	Soil	02/16/24 10:45	02/16/24 17:34
SS68@6'	2402316-02	Soil	02/16/24 10:50	02/16/24 17:34
SS69@7'	2402316-03	Soil	02/16/24 10:55	02/16/24 17:34
SS70@3'	2402316-04	Soil	02/16/24 11:00	02/16/24 17:34
SS71@6'	2402316-05	Soil	02/16/24 11:05	02/16/24 17:34
SS72@3'	2402316-06	Soil	02/16/24 11:10	02/16/24 17:34
SS73@6'	2402316-07	Soil	02/16/24 11:15	02/16/24 17:34

Summit Scientific

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Client: PDC / Tasman		Send Data To:		Send Invoice To:	
Address: 6855 W 119th Ave		Project Manager: Karen Olson		Company: PDC Energy	
City/State/Zip: Broomfield / CO / 80020		E-Mail: karen.olson@PDCE.com <i>chevron.com</i>		Project Name/Location:	
Phone: 303-487-1228		Project Name: <i>Kenoye F29-22,23 Tank Battery</i>		AFE#:	
Sampler Name: <i>Conor Lovell</i>		Project Number:		PO/Billing Codes:	
				Contact: Karen Olson	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested					Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	1,2,4 & 1,3,5-TMB	TDS, Cl, SO4		TPH
1	SS67 E3'	2/16/24	1045	2			X			X			X	X			
2	SS68 E6'		1050														
3	SS69 E7'		1055														
4	SS70 E3'		1100														
5	SS71 E6'		1105														
6	SS72 E3'		1110														
7	SS73 E6'		1115														
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	

Relinquished by: <i>[Signature]</i>	Date/Time: 2/16/24 1330	Received by: <i>Tasman Lockbox</i>	Date/Time: 2/16/24 1330	TAT Business Days	Field DO	Notes: *PAHs on 48 hr turn
Relinquished by: <i>Tasman Lockbox</i>	Date/Time: 2/16/24 1734	Received by: <i>[Signature]</i>	Date/Time: 2/16/24 1734	Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: 9.0	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:	Standard	Field Turb.	

S₂

Sample Receipt Checklist

S2 Work Order# 2402318

Client: ABC Trisman Client Project ID: TK Enouye F29-22,23 Tank Battery

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #:

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) 9.0 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on JOE
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sameday
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AS
Custodian Printed Name

2/18/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS67@3'
2402316-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/16/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHB0558	02/16/24	02/16/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/16/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0353	88.2 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	98.9 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0395	98.8 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/16/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHB0559	"	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/16/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	4.22	33.8 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS67@3'
2402316-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/16/24 10:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHB0651	02/20/24	02/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.0107	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.0100	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.0113	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	0.00831	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.0127	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	0.0165	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **02/16/24 10:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0189	56.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0135	40.6 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS68@6'
2402316-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/16/24 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHB0558	02/16/24	02/17/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/16/24 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0364	91.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/16/24 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHB0559	"	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/16/24 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.18	73.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS68@6'
2402316-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/16/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0651	02/20/24	02/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **02/16/24 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0195	58.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0143	42.8 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS69@7'
2402316-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/16/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHB0558	02/16/24	02/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/16/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0352	88.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0386	96.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/16/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0559	"	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/16/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.03	48.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS69@7'
2402316-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/16/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0651	02/20/24	02/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **02/16/24 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0162	48.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0214	64.1 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS70@3'
2402316-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/16/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHB0558	02/16/24	02/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/16/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0362	90.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	98.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/16/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0559	"	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/16/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	5.80	46.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS70@3'
2402316-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/16/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0651	02/20/24	02/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.0147	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.00979	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.0145	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	0.0114	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.0197	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	0.0248	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **02/16/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0166	49.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0147	44.2 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS71@6'
2402316-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/16/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHB0558	02/16/24	02/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/16/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0351	87.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0389	97.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/16/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0559	"	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/16/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.59	52.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS71@6'
2402316-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/16/24 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHB0651	02/20/24	02/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **02/16/24 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0159	47.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	45.0 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS72@3'
2402316-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/16/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHB0558	02/16/24	02/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/16/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0375	93.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/16/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0559	"	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/16/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	5.11	40.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS72@3'
2402316-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/16/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0651	02/20/24	02/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.0106	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.00978	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.0122	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	0.00832	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.0109	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	0.0158	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **02/16/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0211	63.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0146	43.9 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS73@6'
2402316-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/16/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHB0558	02/16/24	02/17/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/16/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0358	89.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0387	96.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/16/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0559	"	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/16/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.18	57.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

SS73@6'
2402316-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/16/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0651	02/20/24	02/21/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **02/16/24 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0153	46.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0171	51.4 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHB0558 - EPA 5030 Soil MS

Blank (BHB0558-BLK1)

Prepared & Analyzed: 02/16/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0374		"	0.0400		93.6	50-150			
<i>Surrogate: Toluene-d8</i>	0.0391		"	0.0400		97.6	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0396		"	0.0400		99.1	50-150			

LCS (BHB0558-BS1)

Prepared & Analyzed: 02/16/24

Benzene	0.100	0.0020	mg/kg	0.100		100	70-130			
Toluene	0.0952	0.0050	"	0.100		95.2	70-130			
Ethylbenzene	0.0916	0.0050	"	0.100		91.6	70-130			
m,p-Xylene	0.175	0.010	"	0.200		87.3	70-130			
o-Xylene	0.0885	0.0050	"	0.100		88.5	70-130			
1,2,4-Trimethylbenzene	0.0866	0.0050	"	0.100		86.6	70-130			
1,3,5-Trimethylbenzene	0.0836	0.0050	"	0.100		83.6	70-130			
Naphthalene	0.105	0.0038	"	0.100		105	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0382		"	0.0400		95.6	50-150			
<i>Surrogate: Toluene-d8</i>	0.0400		"	0.0400		100	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0400		"	0.0400		99.9	50-150			

Matrix Spike (BHB0558-MS1)

Source: 2402268-01

Prepared & Analyzed: 02/16/24

Benzene	0.0967	0.0020	mg/kg	0.100	ND	96.7	70-130			
Toluene	0.0975	0.0050	"	0.100	ND	97.5	70-130			
Ethylbenzene	0.0830	0.0050	"	0.100	ND	83.0	70-130			
m,p-Xylene	0.176	0.010	"	0.200	ND	88.0	70-130			
o-Xylene	0.0853	0.0050	"	0.100	ND	85.3	70-130			
1,2,4-Trimethylbenzene	0.0799	0.0050	"	0.100	ND	79.9	70-130			
1,3,5-Trimethylbenzene	0.0793	0.0050	"	0.100	ND	79.3	70-130			
Naphthalene	0.103	0.0038	"	0.100	ND	103	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0371		"	0.0400		92.8	50-150			
<i>Surrogate: Toluene-d8</i>	0.0394		"	0.0400		98.4	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0396		"	0.0400		99.1	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHB0558 - EPA 5030 Soil MS

Matrix Spike Dup (BHB0558-MSD1)	Source: 2402268-01			Prepared & Analyzed: 02/16/24						
Benzene	0.0979	0.0020	mg/kg	0.100	ND	97.9	70-130	1.20	30	
Toluene	0.0998	0.0050	"	0.100	ND	99.8	70-130	2.25	30	
Ethylbenzene	0.0870	0.0050	"	0.100	ND	87.0	70-130	4.70	30	
m,p-Xylene	0.179	0.010	"	0.200	ND	89.5	70-130	1.71	30	
o-Xylene	0.0856	0.0050	"	0.100	ND	85.6	70-130	0.386	30	
1,2,4-Trimethylbenzene	0.0826	0.0050	"	0.100	ND	82.6	70-130	3.32	30	
1,3,5-Trimethylbenzene	0.0806	0.0050	"	0.100	ND	80.6	70-130	1.58	30	
Naphthalene	0.102	0.0038	"	0.100	ND	102	70-130	1.11	30	
Surrogate: 1,2-Dichloroethane-d4	0.0355		"	0.0400		88.8	50-150			
Surrogate: Toluene-d8	0.0389		"	0.0400		97.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.4	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHB0559 - EPA 3550A

Blank (BHB0559-BLK1)

Prepared & Analyzed: 02/16/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	9.11		"	12.5		72.9	30-150				

LCS (BHB0559-BS1)

Prepared & Analyzed: 02/16/24

C10-C28 (DRO)	391	50	mg/kg	500		78.2	70-130				
Surrogate: <i>o</i> -Terphenyl	8.99		"	12.5		71.9	30-150				

Matrix Spike (BHB0559-MS1)

Source: 2402305-01

Prepared & Analyzed: 02/16/24

C10-C28 (DRO)	389	50	mg/kg	500	11.1	75.6	70-130				
Surrogate: <i>o</i> -Terphenyl	6.49		"	12.5		51.9	30-150				

Matrix Spike Dup (BHB0559-MSD1)

Source: 2402305-01

Prepared & Analyzed: 02/16/24

C10-C28 (DRO)	388	50	mg/kg	500	11.1	75.4	70-130	0.164	20		
Surrogate: <i>o</i> -Terphenyl	6.45		"	12.5		51.6	30-150				

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BHB0651 - EPA 5030 Soil MS

Blank (BHB0651-BLK1)

Prepared: 02/20/24 Analyzed: 02/21/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0157		"	0.0333		47.0	40-150			
Surrogate: Fluoranthene-d10	0.0269		"	0.0333		80.7	40-150			

LCS (BHB0651-BS1)

Prepared: 02/20/24 Analyzed: 02/21/24

Acenaphthene	0.0264	0.00500	mg/kg	0.0333		79.1	31-137			
Anthracene	0.0276	0.00500	"	0.0333		82.7	30-120			
Benzo (a) anthracene	0.0229	0.00500	"	0.0333		68.6	30-120			
Benzo (a) pyrene	0.0230	0.00500	"	0.0333		68.9	30-120			
Benzo (b) fluoranthene	0.0233	0.00500	"	0.0333		69.8	30-120			
Benzo (k) fluoranthene	0.0273	0.00500	"	0.0333		81.8	30-120			
Chrysene	0.0294	0.00500	"	0.0333		88.1	30-120			
Dibenz (a,h) anthracene	0.0212	0.00500	"	0.0333		63.7	30-120			
Fluoranthene	0.0268	0.00500	"	0.0333		80.4	30-120			
Fluorene	0.0281	0.00500	"	0.0333		84.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0202	0.00500	"	0.0333		60.7	30-120			
Pyrene	0.0279	0.00500	"	0.0333		83.8	35-142			
1-Methylnaphthalene	0.0255	0.00500	"	0.0333		76.5	35-142			
2-Methylnaphthalene	0.0273	0.00500	"	0.0333		82.0	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0262		"	0.0333		78.6	40-150			
Surrogate: Fluoranthene-d10	0.0274		"	0.0333		82.2	40-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHB0651 - EPA 5030 Soil MS

Matrix Spike (BHB0651-MS1)	Source: 2402251-01			Prepared: 02/20/24 Analyzed: 02/21/24						
Acenaphthene	0.0166	0.00500	mg/kg	0.0333	ND	49.7	31-137			
Anthracene	0.0171	0.00500	"	0.0333	ND	51.3	30-120			
Benzo (a) anthracene	0.0162	0.00500	"	0.0333	ND	48.7	30-120			
Benzo (a) pyrene	0.0147	0.00500	"	0.0333	ND	44.1	30-120			
Benzo (b) fluoranthene	0.0151	0.00500	"	0.0333	ND	45.4	30-120			
Benzo (k) fluoranthene	0.0165	0.00500	"	0.0333	ND	49.4	30-120			
Chrysene	0.0167	0.00500	"	0.0333	ND	50.2	30-120			
Dibenz (a,h) anthracene	0.0139	0.00500	"	0.0333	ND	41.6	30-120			
Fluoranthene	0.0162	0.00500	"	0.0333	ND	48.5	30-120			
Fluorene	0.0189	0.00500	"	0.0333	ND	56.7	30-120			
Indeno (1,2,3-cd) pyrene	0.0157	0.00500	"	0.0333	ND	47.2	30-120			
Pyrene	0.0178	0.00500	"	0.0333	ND	53.5	35-142			
1-Methylnaphthalene	0.0145	0.00500	"	0.0333	ND	43.5	15-130			
2-Methylnaphthalene	0.0196	0.00500	"	0.0333	ND	58.9	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0157</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>47.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0168</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>50.3</i>	<i>40-150</i>			

Matrix Spike Dup (BHB0651-MSD1)	Source: 2402251-01			Prepared: 02/20/24 Analyzed: 02/21/24						
Acenaphthene	0.0168	0.00500	mg/kg	0.0333	ND	50.5	31-137	1.58	30	
Anthracene	0.0178	0.00500	"	0.0333	ND	53.3	30-120	3.78	30	
Benzo (a) anthracene	0.0165	0.00500	"	0.0333	ND	49.4	30-120	1.36	30	
Benzo (a) pyrene	0.0139	0.00500	"	0.0333	ND	41.8	30-120	5.37	30	
Benzo (b) fluoranthene	0.0142	0.00500	"	0.0333	ND	42.7	30-120	6.08	30	
Benzo (k) fluoranthene	0.0155	0.00500	"	0.0333	ND	46.4	30-120	6.19	30	
Chrysene	0.0178	0.00500	"	0.0333	ND	53.3	30-120	5.89	30	
Dibenz (a,h) anthracene	0.0139	0.00500	"	0.0333	ND	41.6	30-120	0.0770	30	
Fluoranthene	0.0177	0.00500	"	0.0333	ND	53.2	30-120	9.12	30	
Fluorene	0.0191	0.00500	"	0.0333	ND	57.2	30-120	0.911	30	
Indeno (1,2,3-cd) pyrene	0.0157	0.00500	"	0.0333	ND	47.0	30-120	0.527	30	
Pyrene	0.0185	0.00500	"	0.0333	ND	55.6	35-142	3.72	30	
1-Methylnaphthalene	0.0147	0.00500	"	0.0333	ND	44.1	15-130	1.34	50	
2-Methylnaphthalene	0.0219	0.00500	"	0.0333	ND	65.8	15-130	11.0	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0151</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>45.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0183</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>54.8</i>	<i>40-150</i>			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
02/22/24 16:39

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 08, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

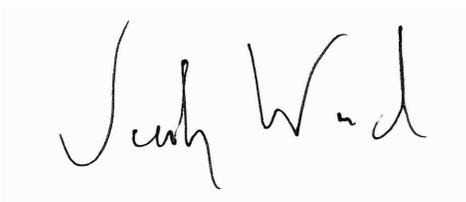
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2402503

Enclosed are the results of analyses for samples received by Summit Scientific on 02/28/24 17:58. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS74@3'	2402503-01	Soil	02/28/24 08:44	02/28/24 17:58
SS75@6'	2402503-02	Soil	02/28/24 08:56	02/28/24 17:58

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4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2402503	

Client: PDC / Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@PDCE.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020				AFE#:	
Phone: 303-487-1228		Project Name: <u>Ilhenoye F29-22,23 Tank</u>		PO/Billing Codes:	
Sampler Name: <u>Molly P.</u>		Project Number: <u>13479</u>		Contact: Karen Olson	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested							Special Instructions					
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH (C6-C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR		PAHs*	Metals	On Hold		
1	SS74@3'	2-28-24	844	2			X			X													
2	SS75@6'	2-28-24	856	2			X			X													
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							
13																							
14																							
15																							

Relinquished by: <u>MP</u>	Date/Time: <u>2-28-24 / 1105</u>	Received by: <u>Tasman lock box</u>	Date/Time: <u>2-28-24 / 1105</u>	TAT Business Days	Field DO	Notes: *PAHs 48 hr turnaround
				Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by: <u>Tasman lock box</u>	Date/Time: <u>2-28-24 / 1758</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2-28-24 / 1758</u>	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: <u>0.8</u>	Corrected Temperature: <u>0</u>	IR gun #:		HNO3 lot #:		



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

SS74@3'
2402503-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/24 08:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHB0896	02/28/24	02/28/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/28/24 08:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0373	93.2 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0420	105 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0424	106 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/24 08:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHB0895	02/28/24	02/28/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/28/24 08:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.69	53.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

SS74@3'
2402503-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/24 08:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHB0903	02/29/24	03/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.0265	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.0296	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	0.00951	0.00500	"	"	"	"	"	"	"
Chrysene	0.0221	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.0284	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	0.0157	0.00500	"	"	"	"	"	"	"
Pyrene	0.0452	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **02/28/24 08:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0273	81.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0222	66.7 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

SS74@3'
2402503-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

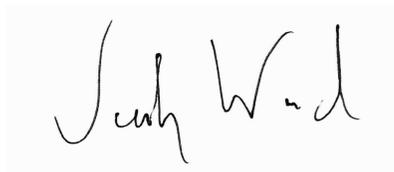
Date Sampled: **02/28/24 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	0.0115	0.00500	mg/kg	1	BHC0039	02/29/24	03/05/24	EPA 8270D SIM	

Date Sampled: **02/28/24 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0234	70.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0175	52.4 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

SS75@6'
2402503-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHB0896	02/28/24	02/28/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/28/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0376	93.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0428	107 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0895	02/28/24	02/28/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.58	52.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

SS75@6'
2402503-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/24 08:56**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHB0903	02/29/24	03/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.00745	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.00936	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.00689	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	0.00563	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.00759	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	0.00949	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **02/28/24 08:56**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0253	75.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0172	51.5 %	40-150		"	"	"	"	

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHB0896 - EPA 5030 Soil MS

Blank (BHB0896-BLK1)

Prepared: 02/28/24 Analyzed: 02/29/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0376		"	0.0400		94.0	50-150			
<i>Surrogate: Toluene-d8</i>	0.0425		"	0.0400		106	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0425		"	0.0400		106	50-150			

LCS (BHB0896-BS1)

Prepared: 02/28/24 Analyzed: 02/29/24

Benzene	0.130	0.0020	mg/kg	0.100		130	70-130			
Toluene	0.125	0.0050	"	0.100		125	70-130			
Ethylbenzene	0.103	0.0050	"	0.100		103	70-130			
m,p-Xylene	0.209	0.010	"	0.200		105	70-130			
o-Xylene	0.101	0.0050	"	0.100		101	70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.0701	0.0050	"	0.100		70.1	70-130			
Naphthalene	0.0969	0.0038	"	0.100		96.9	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0366		"	0.0400		91.5	50-150			
<i>Surrogate: Toluene-d8</i>	0.0434		"	0.0400		108	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0422		"	0.0400		105	50-150			

Matrix Spike (BHB0896-MS1)

Source: 2402497-07

Prepared: 02/28/24 Analyzed: 02/29/24

Benzene	0.101	0.0020	mg/kg	0.100	ND	101	70-130			
Toluene	0.0959	0.0050	"	0.100	ND	95.9	70-130			
Ethylbenzene	0.0802	0.0050	"	0.100	ND	80.2	70-130			
m,p-Xylene	0.161	0.010	"	0.200	ND	80.4	70-130			
o-Xylene	0.0778	0.0050	"	0.100	ND	77.8	70-130			
1,2,4-Trimethylbenzene	0.0766	0.0050	"	0.100	ND	76.6	70-130			
1,3,5-Trimethylbenzene	0.0767	0.0050	"	0.100	ND	76.7	70-130			
Naphthalene	0.0612	0.0038	"	0.100	ND	61.2	70-130			QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0387		"	0.0400		96.7	50-150			
<i>Surrogate: Toluene-d8</i>	0.0418		"	0.0400		104	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0425		"	0.0400		106	50-150			

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHB0896 - EPA 5030 Soil MS

Matrix Spike Dup (BHB0896-MSD1)	Source: 2402497-07			Prepared: 02/28/24 Analyzed: 02/29/24						
Benzene	0.113	0.0020	mg/kg	0.100	ND	113	70-130	10.8	30	
Toluene	0.110	0.0050	"	0.100	ND	110	70-130	13.4	30	
Ethylbenzene	0.0904	0.0050	"	0.100	ND	90.4	70-130	11.9	30	
m,p-Xylene	0.175	0.010	"	0.200	ND	87.7	70-130	8.64	30	
o-Xylene	0.0881	0.0050	"	0.100	ND	88.1	70-130	12.4	30	
1,2,4-Trimethylbenzene	0.0858	0.0050	"	0.100	ND	85.8	70-130	11.4	30	
1,3,5-Trimethylbenzene	0.0854	0.0050	"	0.100	ND	85.4	70-130	10.7	30	
Naphthalene	0.0604	0.0038	"	0.100	ND	60.4	70-130	1.43	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0382		"	0.0400		95.4	50-150			
Surrogate: Toluene-d8	0.0430		"	0.0400		108	50-150			
Surrogate: 4-Bromofluorobenzene	0.0426		"	0.0400		106	50-150			

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limits	RPD	Limit		

Batch BHB0895 - EPA 3550A

Blank (BHB0895-BLK1)

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	12.4		"	12.5		99.5	30-150			

LCS (BHB0895-BS1)

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	519	50	mg/kg	500	30.0	104	70-130			
Surrogate: <i>o</i> -Terphenyl	11.2		"	12.5		89.8	30-150			

Matrix Spike (BHB0895-MS1)

Source: 2402497-07

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	438	50	mg/kg	500	30.0	81.6	70-130			
Surrogate: <i>o</i> -Terphenyl	9.68		"	12.5		77.5	30-150			

Matrix Spike Dup (BHB0895-MSD1)

Source: 2402497-07

Prepared: 02/28/24 Analyzed: 02/29/24

C10-C28 (DRO)	418	50	mg/kg	500	30.0	77.7	70-130	4.58	20	
Surrogate: <i>o</i> -Terphenyl	9.40		"	12.5		75.2	30-150			

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHB0903 - EPA 5030 Soil MS

Blank (BHB0903-BLK1)

Prepared & Analyzed: 02/29/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0376		"	0.0333	113	40-150				
<i>Surrogate: Fluoranthene-d10</i>	0.0293		"	0.0333	87.8	40-150				

LCS (BHB0903-BS1)

Prepared & Analyzed: 02/29/24

Acenaphthene	0.0329	0.00500	mg/kg	0.0333	98.7	31-137				
Anthracene	0.0382	0.00500	"	0.0333	115	30-120				
Benzo (a) anthracene	0.0378	0.00500	"	0.0333	113	30-120				
Benzo (a) pyrene	0.0360	0.00500	"	0.0333	108	30-120				
Benzo (b) fluoranthene	0.0373	0.00500	"	0.0333	112	30-120				
Benzo (k) fluoranthene	0.0371	0.00500	"	0.0333	111	30-120				
Chrysene	0.0370	0.00500	"	0.0333	111	30-120				
Dibenz (a,h) anthracene	0.0279	0.00500	"	0.0333	83.8	30-120				
Fluoranthene	0.0376	0.00500	"	0.0333	113	30-120				
Fluorene	0.0373	0.00500	"	0.0333	112	30-120				
Indeno (1,2,3-cd) pyrene	0.0269	0.00500	"	0.0333	80.7	30-120				
Pyrene	0.0386	0.00500	"	0.0333	116	35-142				
1-Methylnaphthalene	0.0395	0.00500	"	0.0333	119	35-142				
2-Methylnaphthalene	0.0265	0.00500	"	0.0333	79.5	35-142				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0297		"	0.0333	89.0	40-150				
<i>Surrogate: Fluoranthene-d10</i>	0.0269		"	0.0333	80.8	40-150				

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHB0903 - EPA 5030 Soil MS

Matrix Spike (BHB0903-MS1)	Source: 2402497-07			Prepared & Analyzed: 02/29/24							
Acenaphthene	0.0199	0.00500	mg/kg	0.0333	ND	59.6	31-137				
Anthracene	0.0228	0.00500	"	0.0333	ND	68.4	30-120				
Benzo (a) anthracene	0.0203	0.00500	"	0.0333	ND	60.9	30-120				
Benzo (a) pyrene	0.0199	0.00500	"	0.0333	ND	59.8	30-120				
Benzo (b) fluoranthene	0.0170	0.00500	"	0.0333	ND	51.0	30-120				
Benzo (k) fluoranthene	0.0190	0.00500	"	0.0333	ND	57.1	30-120				
Chrysene	0.0205	0.00500	"	0.0333	ND	61.4	30-120				
Dibenz (a,h) anthracene	0.0171	0.00500	"	0.0333	ND	51.2	30-120				
Fluoranthene	0.0198	0.00500	"	0.0333	ND	59.5	30-120				
Fluorene	0.0203	0.00500	"	0.0333	ND	61.0	30-120				
Indeno (1,2,3-cd) pyrene	0.0161	0.00500	"	0.0333	ND	48.3	30-120				
Pyrene	0.0233	0.00500	"	0.0333	ND	69.8	35-142				
1-Methylnaphthalene	0.0241	0.00500	"	0.0333	ND	72.2	15-130				
2-Methylnaphthalene	0.0349	0.00500	"	0.0333	ND	105	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0180</i>		<i>"</i>	<i>0.0333</i>		<i>54.1</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0142</i>		<i>"</i>	<i>0.0333</i>		<i>42.5</i>	<i>40-150</i>				

Matrix Spike Dup (BHB0903-MSD1)	Source: 2402497-07			Prepared & Analyzed: 02/29/24							
Acenaphthene	0.0191	0.00500	mg/kg	0.0333	ND	57.3	31-137	3.89	30		
Anthracene	0.0227	0.00500	"	0.0333	ND	68.2	30-120	0.283	30		
Benzo (a) anthracene	0.0201	0.00500	"	0.0333	ND	60.3	30-120	1.07	30		
Benzo (a) pyrene	0.0191	0.00500	"	0.0333	ND	57.3	30-120	4.19	30		
Benzo (b) fluoranthene	0.0156	0.00500	"	0.0333	ND	46.8	30-120	8.67	30		
Benzo (k) fluoranthene	0.0177	0.00500	"	0.0333	ND	53.2	30-120	7.07	30		
Chrysene	0.0203	0.00500	"	0.0333	ND	60.8	30-120	0.890	30		
Dibenz (a,h) anthracene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	2.27	30		
Fluoranthene	0.0198	0.00500	"	0.0333	ND	59.4	30-120	0.276	30		
Fluorene	0.0196	0.00500	"	0.0333	ND	58.8	30-120	3.64	30		
Indeno (1,2,3-cd) pyrene	0.0165	0.00500	"	0.0333	ND	49.6	30-120	2.52	30		
Pyrene	0.0224	0.00500	"	0.0333	ND	67.2	35-142	3.73	30		
1-Methylnaphthalene	0.0294	0.00500	"	0.0333	ND	88.3	15-130	20.0	50		
2-Methylnaphthalene	0.0290	0.00500	"	0.0333	ND	87.0	15-130	18.5	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0178</i>		<i>"</i>	<i>0.0333</i>		<i>53.3</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0144</i>		<i>"</i>	<i>0.0333</i>		<i>43.1</i>	<i>40-150</i>				

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0039 - EPA 5030 Soil MS

Blank (BHC0039-BLK1)

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0390</i>		"	<i>0.0333</i>		<i>117</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0307</i>		"	<i>0.0333</i>		<i>92.1</i>	<i>40-150</i>			

LCS (BHC0039-BS1)

Prepared: 03/04/24 Analyzed: 03/05/24

Acenaphthene	0.0314	0.00500	mg/kg	0.0333	94.3	31-137
Anthracene	0.0234	0.00500	"	0.0333	70.2	30-120
Benzo (a) anthracene	0.0241	0.00500	"	0.0333	72.3	30-120
Benzo (a) pyrene	0.0266	0.00500	"	0.0333	79.8	30-120
Benzo (b) fluoranthene	0.0259	0.00500	"	0.0333	77.8	30-120
Benzo (k) fluoranthene	0.0327	0.00500	"	0.0333	98.0	30-120
Chrysene	0.0313	0.00500	"	0.0333	93.8	30-120
Dibenz (a,h) anthracene	0.0204	0.00500	"	0.0333	61.2	30-120
Fluoranthene	0.0301	0.00500	"	0.0333	90.4	30-120
Fluorene	0.0315	0.00500	"	0.0333	94.6	30-120
Indeno (1,2,3-cd) pyrene	0.0227	0.00500	"	0.0333	68.1	30-120
Pyrene	0.0300	0.00500	"	0.0333	90.0	35-142
1-Methylnaphthalene	0.0358	0.00500	"	0.0333	107	35-142
2-Methylnaphthalene	0.0356	0.00500	"	0.0333	107	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0254</i>		"	<i>0.0333</i>	<i>76.2</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0313</i>		"	<i>0.0333</i>	<i>93.8</i>	<i>40-150</i>

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0039 - EPA 5030 Soil MS

Matrix Spike (BHC0039-MS1)	Source: 2403028-01			Prepared: 03/04/24 Analyzed: 03/05/24						
Acenaphthene	0.0255	0.00500	mg/kg	0.0333	ND	76.4	31-137			
Anthracene	0.0192	0.00500	"	0.0333	ND	57.5	30-120			
Benzo (a) anthracene	0.0213	0.00500	"	0.0333	ND	63.8	30-120			
Benzo (a) pyrene	0.0223	0.00500	"	0.0333	ND	66.9	30-120			
Benzo (b) fluoranthene	0.0219	0.00500	"	0.0333	ND	65.8	30-120			
Benzo (k) fluoranthene	0.0277	0.00500	"	0.0333	ND	83.2	30-120			
Chrysene	0.0256	0.00500	"	0.0333	ND	76.9	30-120			
Dibenz (a,h) anthracene	0.0178	0.00500	"	0.0333	ND	53.4	30-120			
Fluoranthene	0.0248	0.00500	"	0.0333	ND	74.3	30-120			
Fluorene	0.0251	0.00500	"	0.0333	ND	75.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0194	0.00500	"	0.0333	ND	58.2	30-120			
Pyrene	0.0240	0.00500	"	0.0333	ND	71.9	35-142			
1-Methylnaphthalene	0.0278	0.00500	"	0.0333	ND	83.4	15-130			
2-Methylnaphthalene	0.0284	0.00500	"	0.0333	ND	85.3	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0220</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>65.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0252</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>75.7</i>	<i>40-150</i>			

Matrix Spike Dup (BHC0039-MSD1)	Source: 2403028-01			Prepared: 03/04/24 Analyzed: 03/05/24						
Acenaphthene	0.0239	0.00500	mg/kg	0.0333	ND	71.6	31-137	6.40	30	
Anthracene	0.0177	0.00500	"	0.0333	ND	53.0	30-120	8.17	30	
Benzo (a) anthracene	0.0197	0.00500	"	0.0333	ND	59.1	30-120	7.62	30	
Benzo (a) pyrene	0.0204	0.00500	"	0.0333	ND	61.3	30-120	8.75	30	
Benzo (b) fluoranthene	0.0201	0.00500	"	0.0333	ND	60.3	30-120	8.69	30	
Benzo (k) fluoranthene	0.0257	0.00500	"	0.0333	ND	77.1	30-120	7.52	30	
Chrysene	0.0241	0.00500	"	0.0333	ND	72.2	30-120	6.31	30	
Dibenz (a,h) anthracene	0.0160	0.00500	"	0.0333	ND	48.1	30-120	10.4	30	
Fluoranthene	0.0224	0.00500	"	0.0333	ND	67.2	30-120	10.1	30	
Fluorene	0.0235	0.00500	"	0.0333	ND	70.6	30-120	6.42	30	
Indeno (1,2,3-cd) pyrene	0.0168	0.00500	"	0.0333	ND	50.3	30-120	14.5	30	
Pyrene	0.0220	0.00500	"	0.0333	ND	66.1	35-142	8.36	30	
1-Methylnaphthalene	0.0244	0.00500	"	0.0333	ND	73.2	15-130	13.1	50	
2-Methylnaphthalene	0.0261	0.00500	"	0.0333	ND	78.4	15-130	8.40	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0208</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>62.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0229</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>68.8</i>	<i>40-150</i>			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/08/24 16:10

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 18, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

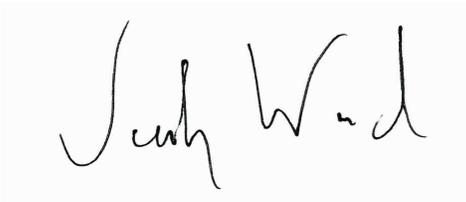
Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2403160

Enclosed are the results of analyses for samples received by Summit Scientific on 03/11/24 17:54. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS76@3'	2403160-01	Soil	03/11/24 09:43	03/11/24 17:54
SS77@6'	2403160-02	Soil	03/11/24 09:45	03/11/24 17:54
SS78@3'	2403160-03	Soil	03/11/24 09:48	03/11/24 17:54
SS79@6'	2403160-04	Soil	03/11/24 09:50	03/11/24 17:54
SS80@3'	2403160-05	Soil	03/11/24 10:00	03/11/24 17:54
SS81@6'	2403160-06	Soil	03/11/24 10:02	03/11/24 17:54

Summit Scientific

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4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2403100	

Client: PDC / Tasman		Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@PDCE.com ^{RT}		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020		E-Mail: karen.olson@chevron.com		AFE#:	
Phone: 303-487-1228		Project Name: Kenouge F29-22,23 Tank Battery		PO/Billing Codes:	
Sampler Name: RT, SB		Project Number:		Contact: Karen Olson	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested								Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 8260B	TPH (C6-C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAHs		Metals	On Hold
1	SS76 @ 3'	3/11/24	0943	2			X			X		X	X	X			X				
2	SS77 @ 6'		0945																		
3	SS78 @ 3'		0948																		
4	SS79 @ 6'		0950																		
5	SS80 @ 3'		1000																		
6	SS81 @ 6'		1002																		
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by:	Date/Time: 3/11/24 1220	Received by: Tasman Louckba	Date/Time: 3/11/24 1220	TAT Business Days	Field DO	Notes: PAHs on 98 hour turnaround
Relinquished by:	Date/Time: 3/11/24 1754	Received by:	Date/Time: 3/11/24 1754	Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: 12.5	Corrected Temperature: 6	IR gun #: 1	HNO3 lot #:	Standard <input checked="" type="checkbox"/>	Field Turb.	

S₂

Sample Receipt Checklist

S2 Work Order# 2403160

Client: Bob Fushman Client Project ID: Leona F29-22,23 Tank Battery

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

-

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ATJLE
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AS
Custodian Printed Name

3/11/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS76@3'
2403160-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/24 09:43**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC0291	03/11/24	03/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/11/24 09:43**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0266	66.5 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0321	80.2 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/24 09:43**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHC0293	03/11/24	03/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/11/24 09:43**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	4.05	32.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS76@3'
2403160-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/24 09:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHC0323	03/12/24	03/14/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.00629	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.00577	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.00708	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	0.00521	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.00665	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	0.00782	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **03/11/24 09:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0147	44.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0183	54.8 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS77@6'
2403160-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/24 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC0291	03/11/24	03/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/11/24 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0267	66.7 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0383	95.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0344	86.0 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/24 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHC0293	03/11/24	03/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/11/24 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	4.54	36.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS77@6'
2403160-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0323	03/12/24	03/14/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/11/24 09:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0174	52.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0252	75.6 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS78@3'
2403160-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/24 09:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC0291	03/11/24	03/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/11/24 09:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0282	70.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0334	83.6 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/24 09:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHC0293	03/11/24	03/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/11/24 09:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	5.53	44.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS78@3'
2403160-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/24 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0323	03/12/24	03/14/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/11/24 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0171	51.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0245	73.5 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS79@6'
2403160-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/24 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHC0291	03/11/24	03/11/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/11/24 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0284	71.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0388	96.9 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0344	85.9 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/24 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHC0293	03/11/24	03/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/11/24 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	5.58	44.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS79@6'
2403160-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHC0323	03/12/24	03/14/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00678	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/11/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0167	50.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0223	66.9 %	40-150		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS80@3'
2403160-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0291	03/11/24	03/11/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/11/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0279	69.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0332	83.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0293	03/11/24	03/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/11/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	5.44	43.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS80@3'
2403160-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/24 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHC0323	03/12/24	03/14/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **03/11/24 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0168	50.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0215	64.4 %	40-150		"	"	"	"	

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Tasman Geosciences
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Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS81@6'
2403160-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/24 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHC0291	03/11/24	03/11/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/11/24 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0270	67.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0336	84.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/24 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHC0293	03/11/24	03/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/11/24 10:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.65	61.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

SS81@6'
2403160-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/24 10:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHC0323	03/12/24	03/14/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/11/24 10:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0178	53.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0257	77.2 %	40-150		"	"	"	"	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0291 - EPA 5030 Soil MS

Blank (BHC0291-BLK1)

Prepared: 03/11/24 Analyzed: 03/12/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0251		"	0.0400		62.8	50-150			
<i>Surrogate: Toluene-d8</i>	0.0386		"	0.0400		96.4	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0358		"	0.0400		89.4	50-150			

LCS (BHC0291-BS1)

Prepared: 03/11/24 Analyzed: 03/12/24

Benzene	0.0875	0.0020	mg/kg	0.100		87.5	70-130			
Toluene	0.0902	0.0050	"	0.100		90.2	70-130			
Ethylbenzene	0.0952	0.0050	"	0.100		95.2	70-130			
m,p-Xylene	0.197	0.010	"	0.200		98.4	70-130			
o-Xylene	0.0958	0.0050	"	0.100		95.8	70-130			
1,2,4-Trimethylbenzene	0.0808	0.0050	"	0.100		80.8	70-130			
1,3,5-Trimethylbenzene	0.0842	0.0050	"	0.100		84.2	70-130			
Naphthalene	0.0707	0.0038	"	0.100		70.7	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0264		"	0.0400		66.1	50-150			
<i>Surrogate: Toluene-d8</i>	0.0373		"	0.0400		93.2	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0354		"	0.0400		88.4	50-150			

Matrix Spike (BHC0291-MS1)

Source: 2403158-01

Prepared: 03/11/24 Analyzed: 03/12/24

Benzene	0.0755	0.0020	mg/kg	0.100	ND	75.5	70-130			
Toluene	0.0755	0.0050	"	0.100	ND	75.5	70-130			
Ethylbenzene	0.0747	0.0050	"	0.100	ND	74.7	70-130			
m,p-Xylene	0.153	0.010	"	0.200	ND	76.3	70-130			
o-Xylene	0.0765	0.0050	"	0.100	ND	76.5	70-130			
1,2,4-Trimethylbenzene	0.0577	0.0050	"	0.100	ND	57.7	70-130			QM-07
1,3,5-Trimethylbenzene	0.0611	0.0050	"	0.100	ND	61.1	70-130			QM-07
Naphthalene	0.0314	0.0038	"	0.100	ND	31.4	70-130			QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0260		"	0.0400		65.0	50-150			
<i>Surrogate: Toluene-d8</i>	0.0382		"	0.0400		95.6	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0358		"	0.0400		89.6	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0291 - EPA 5030 Soil MS

Matrix Spike Dup (BHC0291-MSD1)	Source: 2403158-01			Prepared: 03/11/24 Analyzed: 03/12/24						
Benzene	0.0782	0.0020	mg/kg	0.100	ND	78.2	70-130	3.47	30	
Toluene	0.0766	0.0050	"	0.100	ND	76.6	70-130	1.54	30	
Ethylbenzene	0.0727	0.0050	"	0.100	ND	72.7	70-130	2.69	30	
m,p-Xylene	0.148	0.010	"	0.200	ND	74.0	70-130	3.15	30	
o-Xylene	0.0748	0.0050	"	0.100	ND	74.8	70-130	2.30	30	
1,2,4-Trimethylbenzene	0.0532	0.0050	"	0.100	ND	53.2	70-130	8.06	30	QM-07
1,3,5-Trimethylbenzene	0.0554	0.0050	"	0.100	ND	55.4	70-130	9.78	30	QM-07
Naphthalene	0.0280	0.0038	"	0.100	ND	28.0	70-130	11.2	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0268		"	0.0400		66.9	50-150			
Surrogate: Toluene-d8	0.0382		"	0.0400		95.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0342		"	0.0400		85.6	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHC0293 - EPA 3550A

Blank (BHC0293-BLK1)

Prepared: 03/11/24 Analyzed: 03/12/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	9.06		"	12.5		72.4	30-150				

LCS (BHC0293-BS1)

Prepared: 03/11/24 Analyzed: 03/12/24

C10-C28 (DRO)	567	50	mg/kg	500		113	70-130				
Surrogate: <i>o</i> -Terphenyl	15.4		"	12.5		123	30-150				

Matrix Spike (BHC0293-MS1)

Source: 2403158-01

Prepared: 03/11/24 Analyzed: 03/12/24

C10-C28 (DRO)	567	50	mg/kg	500	35.2	106	70-130				
Surrogate: <i>o</i> -Terphenyl	8.56		"	12.5		68.4	30-150				

Matrix Spike Dup (BHC0293-MSD1)

Source: 2403158-01

Prepared: 03/11/24 Analyzed: 03/12/24

C10-C28 (DRO)	513	50	mg/kg	500	35.2	95.5	70-130	9.99	20		
Surrogate: <i>o</i> -Terphenyl	8.04		"	12.5		64.4	30-150				

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0323 - EPA 5030 Soil MS

Blank (BHC0323-BLK1)

Prepared: 03/12/24 Analyzed: 03/13/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0277		"	0.0333		83.0	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0332		"	0.0333		99.5	40-150			

LCS (BHC0323-BS1)

Prepared: 03/12/24 Analyzed: 03/13/24

Acenaphthene	0.0334	0.00500	mg/kg	0.0333	100	31-137
Anthracene	0.0323	0.00500	"	0.0333	96.8	30-120
Benzo (a) anthracene	0.0337	0.00500	"	0.0333	101	30-120
Benzo (a) pyrene	0.0287	0.00500	"	0.0333	86.2	30-120
Benzo (b) fluoranthene	0.0350	0.00500	"	0.0333	105	30-120
Benzo (k) fluoranthene	0.0355	0.00500	"	0.0333	107	30-120
Chrysene	0.0340	0.00500	"	0.0333	102	30-120
Dibenz (a,h) anthracene	0.0170	0.00500	"	0.0333	51.1	30-120
Fluoranthene	0.0342	0.00500	"	0.0333	103	30-120
Fluorene	0.0312	0.00500	"	0.0333	93.6	30-120
Indeno (1,2,3-cd) pyrene	0.0218	0.00500	"	0.0333	65.3	30-120
Pyrene	0.0360	0.00500	"	0.0333	108	35-142
1-Methylnaphthalene	0.0289	0.00500	"	0.0333	86.6	35-142
2-Methylnaphthalene	0.0354	0.00500	"	0.0333	106	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0278		"	0.0333	83.5	40-150
<i>Surrogate: Fluoranthene-d10</i>	0.0340		"	0.0333	102	40-150

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
03/18/24 10:13

PAH by EPA Method 8270D SIM - Quality Control

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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHC0323 - EPA 5030 Soil MS

Matrix Spike (BHC0323-MS1)	Source: 2403128-01			Prepared: 03/12/24 Analyzed: 03/13/24						
Acenaphthene	0.0165	0.00500	mg/kg	0.0333	ND	49.5	31-137			
Anthracene	0.0214	0.00500	"	0.0333	ND	64.1	30-120			
Benzo (a) anthracene	0.0172	0.00500	"	0.0333	ND	51.5	30-120			
Benzo (a) pyrene	0.0147	0.00500	"	0.0333	ND	44.0	30-120			
Benzo (b) fluoranthene	0.0136	0.00500	"	0.0333	ND	40.9	30-120			
Benzo (k) fluoranthene	0.0137	0.00500	"	0.0333	ND	41.1	30-120			
Chrysene	0.0158	0.00500	"	0.0333	ND	47.5	30-120			
Dibenz (a,h) anthracene	0.0140	0.00500	"	0.0333	ND	42.0	30-120			
Fluoranthene	0.0150	0.00500	"	0.0333	ND	45.0	30-120			
Fluorene	0.0152	0.00500	"	0.0333	ND	45.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0144	0.00500	"	0.0333	ND	43.1	30-120			
Pyrene	0.0174	0.00500	"	0.0333	ND	52.3	35-142			
1-Methylnaphthalene	0.0274	0.00500	"	0.0333	ND	82.3	15-130			
2-Methylnaphthalene	0.0167	0.00500	"	0.0333	ND	50.1	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0139</i>		<i>"</i>	<i>0.0333</i>		<i>41.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0138</i>		<i>"</i>	<i>0.0333</i>		<i>41.3</i>	<i>40-150</i>			

Matrix Spike Dup (BHC0323-MSD1)	Source: 2403128-01			Prepared: 03/12/24 Analyzed: 03/13/24						
Acenaphthene	0.0163	0.00500	mg/kg	0.0333	ND	48.9	31-137	1.19	30	
Anthracene	0.0157	0.00500	"	0.0333	ND	47.0	30-120	30.8	30	QR-02
Benzo (a) anthracene	0.0178	0.00500	"	0.0333	ND	53.4	30-120	3.53	30	
Benzo (a) pyrene	0.0152	0.00500	"	0.0333	ND	45.6	30-120	3.57	30	
Benzo (b) fluoranthene	0.0163	0.00500	"	0.0333	ND	48.8	30-120	17.7	30	
Benzo (k) fluoranthene	0.0158	0.00500	"	0.0333	ND	47.4	30-120	14.2	30	
Chrysene	0.0163	0.00500	"	0.0333	ND	48.9	30-120	3.01	30	
Dibenz (a,h) anthracene	0.0136	0.00500	"	0.0333	ND	40.9	30-120	2.62	30	
Fluoranthene	0.0172	0.00500	"	0.0333	ND	51.6	30-120	13.6	30	
Fluorene	0.0172	0.00500	"	0.0333	ND	51.5	30-120	12.0	30	
Indeno (1,2,3-cd) pyrene	0.0137	0.00500	"	0.0333	ND	41.1	30-120	4.77	30	
Pyrene	0.0178	0.00500	"	0.0333	ND	53.3	35-142	1.82	30	
1-Methylnaphthalene	0.0150	0.00500	"	0.0333	ND	45.0	15-130	58.6	50	QR-02
2-Methylnaphthalene	0.0179	0.00500	"	0.0333	ND	53.6	15-130	6.83	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0135</i>		<i>"</i>	<i>0.0333</i>		<i>40.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0179</i>		<i>"</i>	<i>0.0333</i>		<i>53.7</i>	<i>40-150</i>			

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Project Number: [none]
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Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference