Cottonwood CONSULTING

# SVE Monitoring

| Location | Date | SVE Point(s) | Exhaust OVM (ppm) | Vacuum Pressure upstream of drum (H2O") | Vacuum Pressure downstream of drum (H2O") | Run Time (Hours) | System Operational at Arrival? | Drum H2O (inches bTOD) | Drum Drained? | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | 4-6-23 | 1 | 5.1 | -44 | -36 | — | Y | 30.5 | N | Drum Frozen |
| Florance | | 2 | 104.1 | Broken | — | — | Y | 30.5 | Y | Drum leaking From Drain Valve |
| Sandoval | | 1 | 10.5 | Broken | Broken | 168.2 | N | 14.3 | Y | system restarted after Draining drum |
| Jaquez | | 3 | 142.1 | -30 | — | 334.3 | Y | 28.75 | Y | |
| AL Ellott | | 5 | 110.5 | -8 | -12 | 1347.5 | Y | 30.5 | Y | |
| GC4 H180 | | All | — | — | — | 4005.7 | Y | — | — | 2.6 psi 160° (1)0.5 (2)0.5 (3)0.5 (4)0.5 |
| Heaton | | Unit | 122.7 | -56 | — | — | Y | 31.25 | Y | |
| Mudge B 12R | | 1 | 204.7 | -44 | -30 | — | Y | 29.25 | Y | |
| Mudge A 002 | | 2 | 96.5 | -52 | — | — | Y | 30.5 | Y | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Notes:**
SVE - Soil Vapor Extraction
OVM - Organic Vapor Monitoring
ppm- parts per million
H2O"- inches water
cfm- cubic feet per minute
bTOD- below top of drum

Cottonwood CONSULTING



# SVE Monitoring

| Location | Date | SVE Point(s) | Exhaust OVM (ppm) | Vacuum Pressure upstream of drum (H2O") | Vacuum Pressure downstream of drum (H2O") | Exhaust Rate (cfm) *if known* | System Operational at Arrival? | Drum H2O (inches bTOD) | Drum Drained? | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic ALS 9A | 2-7-23 | 1 | 5.4 | -38 | -47 | — | Y | 26.5 | Y | |
| Florence | | 2 | 2.5 ~~Broke~~ JL | Broken | — | — | N | 27 | N | Restarted System, System running when left Drum Frozen |
| Sandoval | | 1 | 0.4 JL | — | — | — | N | 14.25 | Y | Attempted to restart Won't restart |
| Jaquez | | 3 | 1.0 | — | — | | N | 28 | N | Attempted to restart Won't restart, Drum Frozen |
| Al Elliot | | 5 | 2.4 | — | — | — | N | 27.5 | Y | Attempted to restart Will not restart |
| GGU H80 | | All | — | — | — | — | Y | — | — | 2.6 PSI 150°F 2618.0 hrs 1) 0.5 2) 0.5 3) 0.5 4) 0.25 |
| Heaton | | Unk | 106.7 | -56 | — | — | Y | 29.5 | Y | |
| Mudge B12R | 2-9-23 | 1 | 0.2 | — | — | — | N | 32.0 | N | Attempted to restart System won't Start, Drum Frozen |
| Mudge A2 | 2-9-23 | 2 | 2.1 | -54 | — | — | Y | 30.5 | N | Drum Frozen |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Notes:**
SVE - Soil Vapor Extraction
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ppm- parts per million
H2O"- inches water
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bTOD- below top of drum

Cottonwood CONSULTING

# SVE Monitoring

| Location | Date | SVE Point(s) | Exhaust OVM (ppm) | Vacuum Pressure upstream of drum (H2O") | Vacuum Pressure downstream of drum (H2O") | Exhaust Rate (cfm) *if known* | System Operational at Arrival? | Drum H2O (inches bTOD) | Drum Drained? | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic ALS 9A | 1-10-23 | 1 | 11.1 | -46 | -37 | — | Y | 26.5 | Y | |
| Florence GCU 16 | 1 | 2 | 23.1 | Broken | — | — | N | 31.4 | N | Drum Frozen |
| Sandoval | 1 | 1 | 62.2 | -8 | Broken | — | N | 14 | Y | Tank 80-90% Full |
| Jacquez | 1 | 3 | 7.4 | 0.0 | Broken | — | N | 9 | Y | Attempted to restart unit will not turn on |
| AI Elliot | 1 | 5 | 165.0 | -10 | -10 | — | Y | 27.5 | Y | 638.8 hours run time |
| GCU 180 | 1 | All | — | — | — | — | Y | — | — | 2.5 PSI 154°F 1947.1 hrs 1)0.0 2)0.0 3)1.0 4)0.0 |
| Heaton | 1 | Unit | 106.6 | -66 | Broken | — | Y | 26.5 | Y | |
| Mudge B12R | 1/11/23 | 1 | — | — | — | — | N | 32 | N | drum frozen - unable to drain. SVE not operational. |
| Mudge A2 | 1/12/23 | 2 | 0.8 | -54 | — | — | Y | 31 | N | water in drum below drain port. |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Notes:**
SVE - Soil Vapor Extraction
OVM - Organic Vapor Monitoring
ppm- parts per million
H2O"- inches water
cfm- cubic feet per minute
bTOD- below top of drum

Cottonwood CONSULTING

# SVE Monitoring

| Location | Date | SVE Point(s) | Exhaust OVM (ppm) | Vacuum Pressure upstream of drum (H2O") | Vacuum Pressure downstream of drum (H2O") | Run Time (Hours) | System Operational at Arrival? | Drum H2O (inches bTOD) | Drum Drained? | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | 6/6/23 | 1 | 5.5 | -44 | 0 | — | Y | Dry | N | |
| Florence | | 2 | 99.6 | Broken | — | — | Y | 29" | Y | Drum leaking from drain valve |
| Sandoval | | 1 | 7.3 | Broken | Broken | 3144.4 | Y | Below Port | N | 3144.4 hrs |
| Juaquez | | 3 | 123.2 | -24 | — | 1606.7 | Y | 30" | Y | 1606.7 hrs |
| AL Elliott | | 5 | 96.8 | -8 | -11 | 2683.0 | Y | Below Port | N | 2683.0 hrs |
| GCU H180 | | All | — | — | — | 5326.6 | Y | — | - | 110° 2.4 PSI 1)0.75 2)0.5 5326.6 hrs 3)0.5 4)0.5 PSI |
| Heaton | | Unk | 110.5 | -54 | — | — | N | Dry | N | Vacuum Pressure guage removed (downstream) |
| Mudge B12R | | 1 | 101.1 | -44 | -29 | — | Y | Dry | N | |
| Mudge A002 | ↓ | 2 | 171.6 | -50 | — | — | Y | Below Port | N | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Notes:**
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ppm- parts per million
H2O"- inches water
cfm- cubic feet per minute
bTOD- below top of drum

Cottonwood CONSULTING

# SVE Monitoring

| Location | Date | SVE Point(s) | Exhaust OVM (ppm) | Vacuum Pressure upstream of drum (H2O") | Vacuum Pressure downstream of drum (H2O") | Exhaust Rate (cfm) *if known* | System Operational at Arrival? | Drum H2O (inches bTOD) | Drum Drained? | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | 3/9/23 | 1 | 5.9 | -36 | -46 | - | Y | 31.25 | Y | |
| Florance | | 2 | 131.3 | broken | none | - | Y | 24.5 | Y | drum valve leaking |
| Sandoval | | 1 | 13.3 | Broken | Broken | - | Y | 31.0 | Y | run time 1041.4 hrs<br>Grabbed gas sample @ 1045 |
| Jacquez | | 3 | - | - | - | - | N | - | N | System not operational |
| Al Elliot | | 5 | 132.0 | -8 | -10 | - | Y | 30.25 | Y | run time 971.7 hours |
| GCU #80 | ↓ | All | - | - | - | - | Y | - | | 2.5 psi 150°F 3334.0 hours<br>1) 0.2 2) 0.2 3) 1.25 4) 0.1 |
| Heaton | 3/10/23 | unk | 113.8 | -42 | - | - | Y | 28.5 | Y | |
| Mudge B12R | | 1 | - | - | - | - | - | - | - | unable to access site |
| Mudge A2 | ↓ | 2 | 109.1 | -52 | - | - | Y | 31.5 | N | water in drum below valve |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Notes:**
SVE - Soil Vapor Extraction
OVM - Organic Vapor Monitoring
ppm- parts per million
H2O"- inches water
cfm- cubic feet per minute
bTOD- below top of drum

Cottonwood CONSULTING



# SVE Monitoring

| Location | Date | SVE Point(s) | Exhaust OVM (ppm) | Vacuum Pressure upstream of drum (H2O") | Vacuum Pressure downstream of drum (H2O") | Run Time (Hours) | System Operational at Arrival? | Drum H2O (inches bTOD) | Drum Drained? | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | 5/3/23 | 1 | 38.4 | -35 | -45 | - | Y | 32 | N | water below port |
| Florance | | 2 | 101.9 | Broken | - | - | N | 33 | N | water below port Restarted system. Drain valve still leaking |
| Sandoval | | 1 | 9.6 | Broken | Broken | 23290 | Y | 26.5 | Y | 2329.0 hrs |
| Jaquez | | 3 | - | - | - | - | N | 29 | Y | System won't start. |
| AL Elliott | | 5 | 106.2 | -8 | -11 | 1951.3 | Y | 32 | Y | 1951.3 hrs |
| GCU H180 | | All | - | - | - | 4510.2 | Y | - | - | 2.5psi 165° Temp 1)0.5 2)0.5 3)1.0 4)0.5 4510.2 hrs psi |
| Heaton | | UNK | 104.3 | -53 | - | - | Y | Dry | N | |
| Mudge B12R | | 1 | 122.3 | -44 | -29 | - | Y | 31.5 | Y | |
| Mudge A002 | | 2 | 69.3 | -59 | - | - | N | 31 | N | water below port. restarted system |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Notes:**
SVE - Soil Vapor Extraction
OVM - Organic Vapor Monitoring
ppm- parts per million
H2O"- inches water
cfm- cubic feet per minute
bTOD- below top of drum

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

June 30, 2023

Kyle Siesser

Cottonwood Consulting LLC
PO BOX 1653
Durango, CO 81302
TEL: (970) 764-7356
FAX:

RE: Mudge B 012R OrderNo.: 2306D59

Dear Kyle Siesser:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/27/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

**Analytical Report**
Lab Order **2306D59**
Date Reported: **6/30/2023**

**CLIENT:** Cottonwood Consulting LLC
**Client Sample ID:** SVE
**Project:** Mudge B 012R
**Collection Date:** 6/21/2023 11:40:00 AM
**Lab ID:** 2306D59-001 **Matrix:** AIR
**Received Date:** 6/27/2023 8:40:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **JJP** |
| Gasoline Range Organics (GRO) | 240 | 10 | | µg/L | 2 | 6/27/2023 12:44:25 PM |
| Surr: BFB | 589 | 15-412 | S | %Rec | 2 | 6/27/2023 12:44:25 PM |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **JJP** |
| Methyl tert-butyl ether (MTBE) | ND | 0.50 | | µg/L | 2 | 6/27/2023 12:44:25 PM |
| Benzene | ND | 0.20 | | µg/L | 2 | 6/27/2023 12:44:25 PM |
| Toluene | ND | 0.20 | | µg/L | 2 | 6/27/2023 12:44:25 PM |
| Ethylbenzene | 0.71 | 0.20 | | µg/L | 2 | 6/27/2023 12:44:25 PM |
| Xylenes, Total | 4.1 | 0.40 | | µg/L | 2 | 6/27/2023 12:44:25 PM |
| Surr: 4-Bromofluorobenzene | 103 | 70-130 | | %Rec | 2 | 6/27/2023 12:44:25 PM |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| D | Sample Diluted Due to Matrix |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. |
| B | Analyte detected in the associated Method Blank |
| E | Above Quantitation Range/Estimated Value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2306D59**

***30-Jun-23***

**Client:** Cottonwood Consulting LLC

**Project:** Mudge B 012R

| Sample ID: **2306d59-001adup** | SampType: **DUP** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **SVE** | Batch ID: **GA97746** | RunNo: **97746** |
| Prep Date: | Analysis Date: **6/27/2023** | SeqNo: **3554692** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 240 | 10 | | | | | | 0.0337 | 20 | |
| Surr: BFB | 23000 | | 4000 | | 587 | 15 | 412 | 0 | 0 | S |

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| D | Sample Diluted Due to Matrix |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. |
| B | Analyte detected in the associated Method Blank |
| E | Above Quantitation Range/Estimated Value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2306D59**

***30-Jun-23***

**Client:** Cottonwood Consulting LLC

**Project:** Mudge B 012R

| Sample ID: **2306d59-001adup** | SampType: **DUP** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **SVE** | Batch ID: **R97746** | RunNo: **97746** |
| Prep Date: | Analysis Date: **6/27/2023** | SeqNo: **3554694** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | ND | 0.50 | | | | | | 0 | 20 | |
| Benzene | ND | 0.20 | | | | | | 0 | 20 | |
| Toluene | ND | 0.20 | | | | | | 0 | 20 | |
| Ethylbenzene | 0.71 | 0.20 | | | | | | 0.393 | 20 | |
| Xylenes, Total | 4.1 | 0.40 | | | | | | 1.05 | 20 | |
| Surr: 4-Bromofluorobenzene | 4.1 | | 4.000 | | 102 | 70 | 130 | 0 | 0 | |

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| D | Sample Diluted Due to Matrix |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. |
| B | Analyte detected in the associated Method Blank |
| E | Above Quantitation Range/Estimated Value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: Cottonwood Consulting LLC | Work Order Number: 2306D59 | RcptNo: 1

Received By: **Joseph Alderette** 6/27/2023 8:40:00 AM

Completed By: **Desiree Dominguez** 6/27/2023 10:23:10 AM

Reviewed By: 6-27-23

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. How was the sample delivered? | FedEx | | |

## Log In

| | | | |
|---|---|---|---|
| 3. Was an attempt made to cool the samples? | Yes ☐ | No ☐ | NA ☑ |
| 4. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☐ | No ☐ | NA ☑ |
| 5. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 6. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 7. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 8. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 9. Received at least 1 vial with headspace <1/4" for AQ VOA? | Yes ☐ | No ☐ | NA ☑ |
| 10. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | |
| 12. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | |
| 13. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 14. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | |

# of preserved bottles checked for pH: (<2 or >12 unless noted)

Adjusted?

Checked by: 6/27/23

## Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | NA | Good | Yes | NA | | |

# Chain-of-Custody Record

Client: Cottonwood Consulting LLC

Mailing Address: PO Box 1653
Durango, CO 81302

Phone #: 970-764-7356

email or Fax#: ksiesser@cottonwoodconsulting.com

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
■ Standard ☐ Rush

Project Name: Mudge B #012R

Project #:

Project Manager: Kyle Siesser

Sampler: Joseph LaFortune

On Ice: ☐ Yes ☑ No

# of Coolers: 1

Cooler Temp(including CF): N/A


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107


| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. 2306D59 |
|---|---|---|---|---|---|---|
| 6/21/23 | ~~1445~~ 1440 JL | AIR | SVE | tedlar bag - 1 | NA | -001 |

Analysis Request

| BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, $NO_3$, $NO_2$, $PO_4$, $SO_4$ | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) | TPH (8015) |
|---|---|---|---|---|---|---|---|---|---|---|
| ■ | | | | | | | | | | ■ |

| Date | Time | Relinquished by: | Received by: | Via: | Date | Time |
|---|---|---|---|---|---|---|
| 6/26/23 | 0900 | Joseph LaFortune | | Fedex | 6-27-23 | 8:40 |
| | | | | | | |

Remarks:
please cc emillar@cottonwoodconsulting.com
jlafortune@cottonwoodconsulting.com

Custody Seal Present and intact 6-27-23

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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

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

CONDITIONS

Action 247790

## CONDITIONS

| | |
|---|---|
| Operator:<br>SIMCOE LLC<br>1199 Main Ave., Suite 101<br>Durango, CO 81301 | OGRID:<br>329736 |
| | Action Number:<br>247790 |
| | Action Type:<br>[UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| michael.buchanan | None | 10/2/2023 |