

New Mexico Environment Department

Surface Water Quality Bureau

(SWQB)

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| **SWQB Technical System Audit (TSA)** |

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| --- | --- | --- |
| **Title of Project:** | **Location:** | **TSA Notification Date**: |
|  |  |  |
| **QAO:** Miguel Montoya | **Project Manager:** | **Immediate Supervisor:** |
|  |  |  |
| **Schedule Field Observation Date:** | **Actual Field Observation Date:** | **Personnel Observed:** |
|  |  |  |
| **Schedule Interview Date:** | **Actual Interview Date:** | **Personnel Interviewed:** |
|  |  |  |
| **TSA Checklist Completion**: | **Assessment Report Completion Date**: | **Assessment Report Sent Date:** |

Compliance will be determined by evaluating adherence to the criteria detailed in the approved project planning documents against the discovery of information acquired through the TSA of an environmental program. The compliant column of the TSA Checklist will be marked with yes, no, or deficient. If “yes” is marked, then no deficiency or findings were observed and will be documented as such in this TSA. If “no” is marked, then a finding was observed and will be documented as such in this TSA. If “deficient” is noted, then a deficiency was observed in the quality assurance protocol detailed in planning document(s) and will be documented as such in this TSA. . If “NA” is noted, then the criteria is not applicable to current TSA. See SOP 16.1 *Technical System Audit* for definitions of deficiencies and findings.

## Assessment Report

Narrative Text regarding the conclusion of the TSA.

## Corrective Action

Any corrective action discovered through the TSA

QA Officer Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Assessment for Determining Compliance to Project Planning Documents

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| **Technical System Audit Checklist** |

### Documentation of Planning Documents

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| Project Staff evaluated for this portion of the TSA include: | | |
| Criteria for determining compliance have been collated from submitted Project Planning documents (i.e., SWQB QMP, QAPP, FSP and SOPs) and are below: | **Notes** | **Compliant (yes, no, or deficient** |
| Project Managerprovided project planning document to QAO within 5 business days. |  |  |
| * Signed acknowledgment statement for SWQB QMP |  |  |
| * Signed acknowledgment statement for SWQB QAPP |  |  |
| * Signed acknowledgment statement for SOP 16.1 TSA for the SWQB |  |  |
| * Project-specific QAPP |  |  |
| * Field Sampling Plan (FSP) |  |  |
| * SOPs utilized for Project (related to temperature) |  |  |
| * Signed acknowledgment statement for all applicable SWQB SOPs |  |  |
| Were all applicable SOPs utilized for project |  |  |

### Sample Process Design Implemented as Stated in Project Planning Documents

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| --- | --- | --- |
| Criteria for determining compliance to the sample process design have been collated from the submitted Project Planning documents (i.e., QMP, QAPP, SOPs and FSP) and are below: | Notes | **Compliant (yes, no, or deficient** |
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### Sample Method Implemented as Stated in Project Planning Documents

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| Criteria for determining compliance for sample method implementation have been taken from... The criteria are listed below: | **Notes:** | **Compliant (yes, no, or deficient** |
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### Sample Handling and Custody Implemented as Stated in Planning Documents

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| Criteria for determining compliance for Sample Handling and Custody have been selected from the …. | **Notes** | **Compliant (yes, no, or deficient** |
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### Analytical Methods Implemented as Stated in Planning Documents

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| Criteria for determining compliance for Analytical Methods have been selected from… | **Notes** | **Compliant (yes, no, or deficient** |
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### Quality Control Implemented as Stated in Planning Documents

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| Criteria for determining compliance for Quality Control have been selected from… | **Notes** | **Compliant (yes, no, or deficient** |
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### Instrument/Equipment Testing, Inspection, and Maintenance Implemented as Stated in Project Planning Documents

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| --- | --- | --- |
| Criteria for determining compliance for instrument and equipment testing, inspection, and maintenance have been selected from…. | Notes | **Compliant (yes, no, or deficient** |
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### Instrument/Equipment Calibration and Frequency Implemented as Stated in Project Planning Document

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| Criteria for determining compliance for instrument and equipment calibration and frequency were selected from… and have been listed below: | Notes | **Compliant (yes, no, or deficient** |
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### Inspection/Acceptance of Supplies and Consumables Implemented as Stated in Planning Documents

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| Criteria for determining compliance for Inspection/Acceptance of Supplies and Consumables were selected…and have been listed below: | **Notes** | **Compliant (yes, no, or deficient** |
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### Non-direct Measurements Implemented as stated in Project Planning Document

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| Criteria for determining compliance to Project Planning documents for the use of non-direct measurements are detailed in the... | Notes | **Compliant (yes, no, or deficient** |
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### Data Management Implemented as Stated in Project Planning Documents

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| Criteria for determining compliance for data management were taken from... The Criteria are listed below: | Notes | **Compliant (yes, no, or deficient** |
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### Assessment and Oversight Implemented as Stated in Planning Documents

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| Criteria for determining compliance for Assessment and Oversight were selected from… and have been listed below: | **Notes** | **Compliant (yes, no, or deficient** |
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### Data Review, Verification and Validation Implemented as Stated in Planning Documents

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| Criteria for determining compliance for Data Review, Verification and Validation criteria were taken…The Criteria are listed below: | **Notes** | **Compliant (yes, no, or deficient** |
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## Observations of Field Activities

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| Field Observations | **Notes** |
| Identification of Project Staff Present During Field Activities: |  |
| Observations of Field Activities by QAO: |  |
| All files for TSA are located at: |  |

### Sample Process Design implemented as stated in project planning documents

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| --- | --- |
| Sample Process Design requirements: | **Notes**  **(This information is used to determine compliance to planning documents)** |
| * Compliant with water quality monitoring locations requirements detailed…. |  |

### Sample Method Criteria detailed in Planning Documents.

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| --- | --- |
| Sampling Method requirements: | **Notes**  **(This information is used to determine compliance to planning documents)** |
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## Interview with Project Manager, (name of Project Manager and date of interview)

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| **Interview questions for Project Manager (Questions were composed from requirements of submitted quality assurance planning documents)** | **Notes: This information is used to determine compliance to planning documents.** |
| * Did your Manager provide you with the resources needed to fulfill project goals as stated in approved….? |  |
| * Were you aware of QAQC requirements before initiating the project? |  |
| * Where are the goals and project objectives listed/stated for (project that the TSA is being conducted on)? |  |
| * Is the distribution list current and accurate in the most up to date project planning documents? |  |
| * Were applicable planning documents distributed to your (e.g., monitoring team) project staff? |  |
| * Did staff participating in project have an opportunity to review and sign all applicable planning documents (e.g., QMP, QAPP, FSP, SOPs)? |  |
| * How is staff training documented for the project? |  |
| * Other questions that need to be addressed during interview, see SOP 16.1 |  |
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| Do you have any comments or recommendation, e.g., to SOPs? |  |

## TSA Station Assessment Report

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| Map # | Station Name | Station ID | Assessment Unit | | Thermograph | Serial # of temperature logger | Serial # recorded on temperature "Accuracy check" file | Temperature accuracy verification - Hobo file | Deviation from 2021-2022 Jemez FSP | Observation of Field Activities by QAO | Temp logger Identified by FSP | **Lost Temperature data loggers for 2021** |
| 1 | American Creek above Rito de las Palomas - 31Americ000.1 | 31Americ000.1 | American Creek (Rio de las Palomas to headwaters) | | 1 | 10685693 | X | X | Station changed to 31Americ006.4 | x | x |  |
| 4 | CLEAR CREEK AT NM 126 - 31ClearC002.3 | 31ClearC002.3 | Clear Creek (Rio de las Vacas to San Gregorio Lake) | | 1 | 10685703 | X | X |  | x | x |  |
| 6 | East Fork Jemez above confluence with San Antonio Creek - 31EFkJem000.1 | 31EFkJem000.1 | East Fork Jemez (San Antonio Creek to VCNP bnd) | | 1 | 10685990 | X | X |  | x | x | X |
| 10 | Jemez R at Village of San Ysidro - 31JemezR034.2 | 31JemezR034.2 | Jemez River (Zia Pueblo bnd to Jemez Pueblo bnd) | | 1 | 10686003 | X | X |  | x | x |  |
| 12 | Jemez R. blw Jemez Spr. WWTP - 31JemezR057.4 | 31JemezR057.4 | Jemez River (Rio Guadalupe to Soda Dam nr Jemez Springs) | | 1 | 10685714 | X | X |  | x | x | X |
| 14 | Jemez River above Soda Dam - 31JemezR064.9 | 31JemezR064.9 | Jemez River (Soda Dam nr Jemez Springs to East Fork) | | 1 | 10686008 | X | X |  | x | x |  |
| 16 | JEMEZ RIVER NEAR CANON, BELOW MUNICIPAL SCHOOL - 31JemezR046.6 | 31JemezR046.6 | Jemez River (Jemez Pueblo bnd to Rio Guadalupe) | | 1 | 10498707 | X | X |  | x | x |  |
| 20 | Redondo Creek Above Sulphur Creek - 31Redond000.1 | 31Redond000.1 | Redondo Creek (Sulphur Creek to headwaters) | | 1 | 10685993 | X | X |  |  | x |  |
| 22 | Rio Cebolla above the Rio de las Vacas - 31RCebol000.1 | 31RCebol000.1 | Rio Cebolla (Rio de las Vacas to Fenton Lake) | | 1 | 10686005 | X | X | Station changed to Rio Cebolla above the Rio de las Vacas - 31RCebol007.0 |  | x |  |
| 25 | Rio Cebolla at Lake Fork Canyon- 31RCebol007.0 | 31RCebol007.0 | Rio Cebolla (Rio de las Vacas to Fenton Lake) | | 1 | 10686002 | X | X |  |  | x |  |
| 26 | Rio de Las Vacas above the Rio Cebolla - 31RVacas000.1 | 31RVacas000.1 | Rio de las Vacas (Rio Cebolla to Clear Creek) | | 1 | 10685709 | X | X | FSP did not have a temperature logger identified |  |  |  |
| 29 | Rio Guadalupe at Deer Creek Landing - 31RGuada010.0 | 31RGuada010.0 | Rio Guadalupe (Jemez River to confl with Rio Cebolla) | | 1 | 10686013 | X | X |  |  | x | X |
| 31 | Rito de los Indios above San Antonio Creek - 31RIndio000.2 | 31RIndio000.2 | Rito de los Indios (San Antonio Creek to headwaters) | | 1 | 20569923 | X | X |  | x | x |  |
| 32 | Rito Penas Negras at NM Hwy 126 - 31RPNegr000.1 | 31RPNegr000.1 | Rito Penas Negras (Rio de las Vacas to headwaters) | | 1 | 10685994 | X | X |  | x | x |  |
| 35 | San Antonio Creek abv VCNP boundary - 31SanAnt017.7 | 31SanAnt017.7 | San Antonio Creek (VCNP bnd to headwaters) | | 1 | 10685715 | X | X |  | x | x |  |
| 39 | Sulphur Creek above San Antonio Creek - 31Sulphu000.1 | 31Sulphu000.1 | Sulphur Creek (San Antonio Creek to Redondo Creek) | | 1 | 10685995 | X | X |  |  | x |  |
| Total Number of Sampling Events | | | | 16 | |  |  |  |  |  |  |  |
| Deployment location included in table (above) were copied from Table 7 of the approved 2021-2022 Jemez Watershed FSP | | | | | |  |  |  |  |  |  |  |
| **Total deployments for 2021 in the Jemez River Watershed: 16** | | | | | | **Total Loggers Lost for 2021: 3** |  |  |  |  |  |  |

## Map Monitroing stations

Map

Description automatically generated