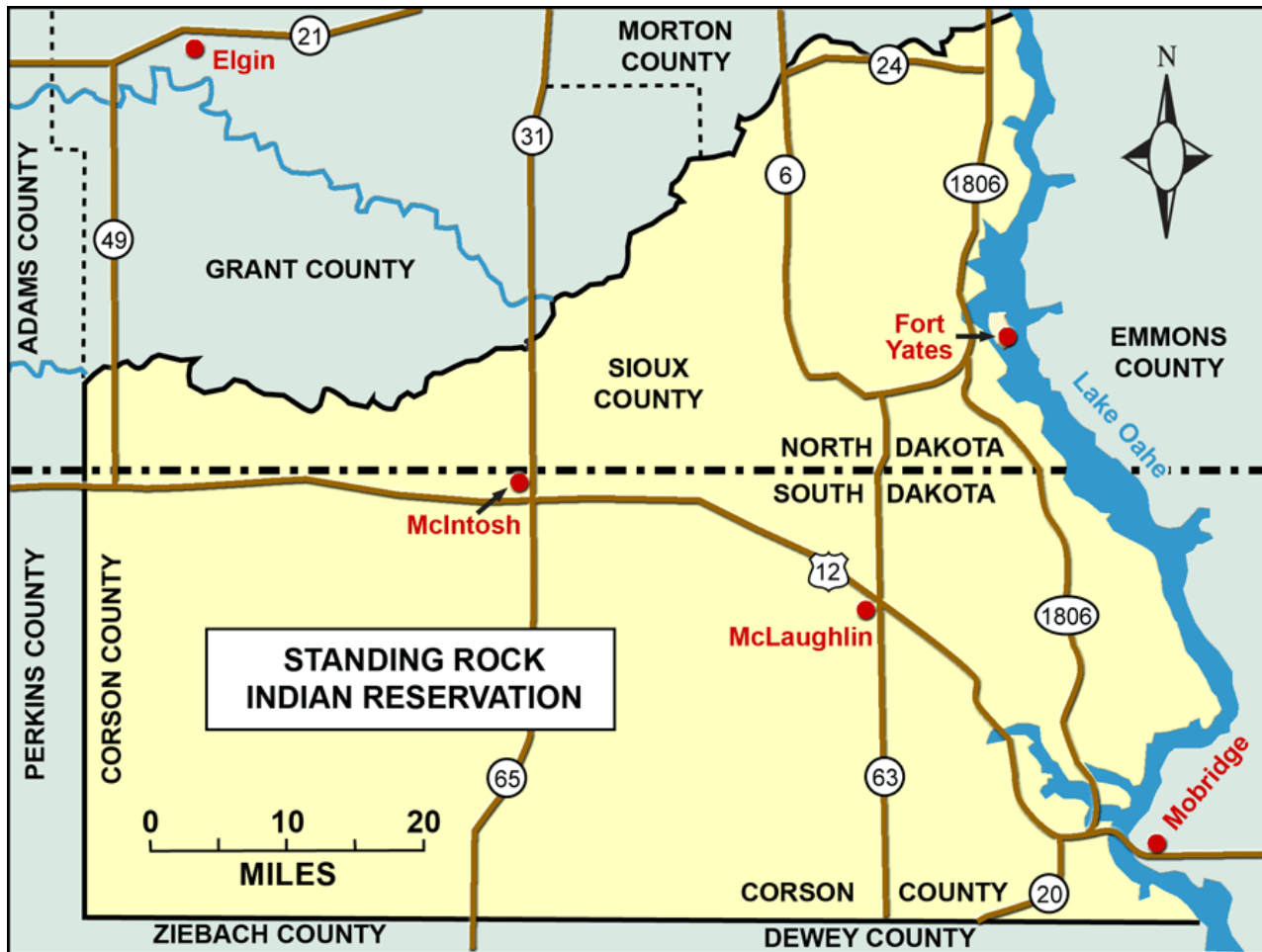




PROTECTING STANDING ROCK
BEYOND THE LAND AND WATER



STANDING ROCK SIOUX TRIBE BOUNDARIES
 8 DISTRICTS
 3 ND DISTRICTS -FORT YATES, CANNONBALL & PORCUPINE
 5 SD DISTRICTS -BEAR SOLDIER, RUNNING ANTELOPE, ROCK CREEK, WAKPALA & KENEL

- DER/EPA
- 6 Depts
 - AQ Program
 - Brownfields
 - Solid Waste
 - Pesticides
 - Enforcement
 - GAP
- Service Area
 - 2.3 Million Acres
 - 1.4 Million Acres (tribally owned)

HARRIET BLACKHOOP-CRUZ

AQ COORDINATOR

STANDING ROCK SIOUX TRIBE DER/EPA



- I am an enrolled member of the Standing Rock Sioux Tribe and reside in the district of Porcupine ND. I graduated from Sitting Bull College in 2012 with my BS in Environmental Science. Upon graduation I was employed with SBC where I was the TREND Coordinator for 8 years. In 2019 I decided to advance my career and took the position of AQ/UST Coordinator with the SRST. In my spare time, I like to spend time with family doing various activities. I also enjoy getting involved with my community and church. If you know me, you would know I am always on the go...

CROSSWALKS/EPA REQUIREMENTS

- CONTAIN ELEMENTS/COMPONENTS
- DESIGN OF A PROGRAM
- GUIDELINES

EPA REGION 8 QA DOCUMENT REVIEW CROSSWALK

QAPP/FSP/SAP for: <i>(check appropriate box)</i>	Entity (<i>grantee, contract, EPA AO, EPA Program, Other</i>)	Regulatory Authority	X_ 2 CFR 1500 for																			
<input type="checkbox"/> GRANTEE	Standing Rock Sioux Tribe (Clean Air Act 103 TX-96815001-0)	and/or	<input type="checkbox"/> 48 CFR 46 for Contracts																			
<input type="checkbox"/> CONTRACTOR			<input type="checkbox"/> Interagency Agreement																			
<input type="checkbox"/> EPA			<input type="checkbox"/> EPA/Court Order																			
<input type="checkbox"/> Other			<input type="checkbox"/> EPA Program Funding																			
Document Title <i>[Note: Title will be repeated in Header]</i>	Radon Testing Program	Funding Mechanism	<input type="checkbox"/> EPA Program Regulation																			
QAPP/FSP/SAP Preparer	Harriet Blackhoop, Environmental Specialist		<input type="checkbox"/> EPA CIO 2105																			
Period of Performance <i>(of QAPP/FSP/SAP)</i>	FY19-FY20	Date Submitted for Review	September 18, 2019																			
EPA Project Officer	Monia BenKhaled	PO Phone #	303-312-6209																			
EPA Project Manager	Kyle Olson	PM Phone #	303-312-6002																			
QA Program Reviewer or Approving Official	Alison Ruhs	Date of Review	9-30-19																			
Documents Submitted for QAPP Review (QA Reviewer must complete):		Notes for Document Submittals:																				
1. QA Document(s) submitted for review:		1. A QAPP written by a Grantee, EPA, or Federal Partner <u>must include</u> for review: Work Plan(WP) / Statement of Work (SOW) / Program Plan (PP) / Research Proposal (RP) and funding mechanism																				
<table border="1"> <thead> <tr> <th>QA Document</th> <th>Document Date</th> <th>Document Stand-alone</th> <th>Document with QAPP</th> </tr> </thead> <tbody> <tr> <td>QAPP</td> <td>9-18-19</td> <td>Yes</td> <td></td> </tr> <tr> <td>FSP</td> <td>n/a</td> <td>Yes / No</td> <td>Yes / No</td> </tr> <tr> <td>SAP</td> <td>n/a</td> <td>Yes / No</td> <td>Yes / No</td> </tr> <tr> <td>SOP(s)</td> <td></td> <td></td> <td>Yes / No</td> </tr> </tbody> </table>	QA Document	Document Date	Document Stand-alone	Document with QAPP	QAPP	9-18-19	Yes		FSP	n/a	Yes / No	Yes / No	SAP	n/a	Yes / No	Yes / No	SOP(s)			Yes / No	2. A QAPP written by Contractor <u>must include</u> for review: a) Copy of Task Order Work Assignment/SOW b) Reference to a hard or electronic copy of the contractor's approved QMP c) Copy of Contract SOW if no QMP has been approved d) Copy of EPA/Court Order, if applicable e) The QA Review must determine (with the EPA CO or PO) if a QARF was completed for the environmental data activity described in the QAPP.	
QA Document	Document Date	Document Stand-alone	Document with QAPP																			
QAPP	9-18-19	Yes																				
FSP	n/a	Yes / No	Yes / No																			
SAP	n/a	Yes / No	Yes / No																			
SOP(s)			Yes / No																			
2. WP/SOW/TO/PP/RP Date _____ WP/SOW/TO/PP Performance Period _____		3. a. Field Sampling Plan (FSP) and/or Sampling & Analyses Plan (SAP) must include the Project QAPP <u>or must</u> be a stand-alone QA document that <u>contain all QAPP required elements</u> (Project Management, Data Generation/Acquisition, Assessment and Oversight, and Data Validation and Usability).																				
3. QA document consistent with the: WP/SOW/PP for grants? <u>Yes / No</u> SOW/TO for contracts? <u>Yes / No</u>		c. SOPs must be submitted with a QA document that <u>contains all QAPP required elements</u> .																				
4. QARF signed by R8 QAM <u>Yes / No / NA</u> Funding Mechanism <u>IA / contract / grant / NA</u> Amount _____																						
Summary of Comments (<i>highlight significant concerns/issues</i>):																						
1. Over all the QAPP was complete and thorough. However, Elements B6-B9, and C1 appeared to be accidentally omitted. These sections need to be added. This omission, as well as minor comments, are listed below in "BLUE" throughout the crosswalk. Please address these comments before receiving approval.																						
2. Standing Rock Sioux Tribe (Clean Air Act 103 TX-96815001-0) must address those identified in the Comment section(s) that includes a "Response (date)."																						

WHAT IS RADON? WHY A HEALTH HAZARD

- Radon is a colorless, odorless radioactive gas and is produced by decaying uranium.
- It is produced in most soils.
- Radon becomes a hazard when it enters in a home and becomes trapped.
- Inhalation or ingestion of the gas have become known to cause cancer.

WRITING A QAPP

- PARTNERS-WEBSITES
- ITEP (INSTITUTE OF ENVIRONMENTAL PROFESSIONALS)
-course certifications
- EPA
- STANDING ROCK HOUSING AUTHORITY (MOU)
- SITTING BULL COLLEGE (IRB REVIEW)

Standing Rock Sioux Tribe
Quality Assurance Project Plan
Radon Testing Program

QUALITY ASSURANCE PROJECT PLAN FOR
Radon (Rn) MEASUREMENT PROGRAM
USING ELECTRET IONIZATION CHAMBERS

By
Standing Rock Sioux Tribe
DER/EPA


Revision

04/01/2019

QAPP
PREVIEW

A decorative graphic on the left side of the image, consisting of a network of light blue lines and small circles, resembling a circuit board or a data network, set against a dark blue background.

EPA APPROVAL
-SUBMITTED
THROUGH MAX.GOV
APPROVED 10/2019



RADON PROGRAM STARTS
-RECRUITING PARTICIPANTS/DEC 2019
-DISTRICT MEETINGS/8 DISTRICTS
-SCHOOLS/PROFESSIONAL
DEVELOPMENT DAYS

TESTING STARTS JANUARY 2020
-50 TESTS IN 8 DISTRICTS

COMPLETED TESTING
-MARCH 2020
-END OF WINTER IN ND



Ion Chamber FIELD DEPLOYMENT AND RETRIEVAL and LOG (04172019) Place EICs at least 3 ft (1 m) from floor, in general breathing zone, where it will not be touched, gotten wet, stayed in direct sunlight Plan to start and stop the measurement in 4 days, plus or minus a few hours. (ex: start Monday at noon, and stop the next Monday after 9 am or before 3 pm. START the measurement after you are in the measurement location by: 1. unscrewing the plunger top, 2. place EIC on shelf or table, 3. take photo and complete STOP the measurement by 1. Screw the plunger closed again, 2. Carefully package and transport for analysis, and 3. log the date and time and any notes in your log <i>The first row below is an example; write over or leave as an example.</i> If the building occupants agree to this, it can be useful to have a picture of the EIC in its measurement location (ex: email the image to yourself with the building name)									
Electret serial number	Start Date/Time in format: mm/dd/yy 00:00 with time in 24 h time	Start Date/Time in format: mm/dd/yy 00:00 with time in 24 h time	city	state	zip code	floor (bsmnt, half bsmnt, 1st, or 2nd)	room identification (ex: bedroom1, living room)	height off floor (feet)	Deployer name
XXX001 (this 1st row is an example)	3/18/2019 9:00	3/27/2019 13:00		AZ			living room	3	your name
SHI693	1/7/2020 9:00	1/14/2020 9:00	Fort Yates	ND	58538	1st	Bedroom	4	Harriet Blackhoop-Cruz
SHJ385	1/7/2020 9:00	1/14/2020 9:00	Fort Yates	ND	58538	1ST	Bedroom	4	Harriet Blackhoop-Cruz
SHI527	1/7/2020 11:00	1/14/2020 13:30	Fort Yates	ND	58538	1st	Bedroom	4	Harriet Blackhoop-Cruz
SHJ567	1/7/2020 11:00	1/14/2020 13:30	Fort Yates	ND	58538	1st	Bedroom	4	Harriet Blackhoop-Cruz
SHJ301	1/7/2020 14:00	1/14/2020 14:30	Fort Yates	ND	58538	1st	bedroom	3	Harriet Blackhoop-Cruz
SHJ363	1/7/2020 14:00	1/14/2020 14:30	Fort Yates	ND	58538	1ST	Bedroom	3	Harriet Blackhoop-Cruz
SHH345	1/7/2020 15:00	1/14/2020 15:30	Fort Yates	ND	58538	1st	Bedroom	4	Harriet Blackhoop-Cruz
SHH652	1/7/2020 15:00	1/14/2020 15:30	Fort Yates	ND	58538	1st	Bedroom	4	Harriet Blackhoop-Cruz
SKF889	1/15/2020 17:00	1/22/2020 17:00	Selfridge	ND	58568	1st	Bedroom	3	Harriet Blackhoop-Cruz
SKF839	1/15/2020 17:00	1/22/2020 17:00	Selfridge	ND	58568	1st	Bedroom	3	Harriet Blackhoop-Cruz
SKF822	1/15/2020 18:00	1/22/2020 18:00	Porcupine	ND	58568	1st	Bedroom	3	Harriet Blackhoop-Cruz
SKF867	1/15/2020 18:00	1/22/2020 18:00	Porcupine	ND		1st	Bedroom	3	Harriet Blackhoop-Cruz
SKF835	1/15/2020 18:30	1/22/2020 18:30	Porcupine	ND		base ment	Basement	3	Harriet Blackhoop-Cruz
SKF830	1/15/2020 18:30	1/22/2020 18:30	Porcupine	ND		1st	Bedroom	3	Harriet Blackhoop-Cruz
SKF968	1/15/2020 20:30	1/22/2020 20:30	Porcupine	ND		1st	Bedroom	3	Harriet Blackhoop-Cruz
SKF898	1/15/2020 20:30	1/22/2020 20:30	Porcupine	ND		base ment	Basement	3	Harriet Blackhoop-Cruz

RESULTS FOR RADON TESTS



Only Enter Info Into the Yellow Fields

Electret serial number	These blue fields are automatically filled by your entries in the Deployment Log	These blue fields are automatically filled by your entries in the Deployment Log	US/SI Units	US		EIC	EIC	Elevation		γ	Radon in Air
			Total Days	Initial	Final			Feet	CF		
			Exposure	Voltage	Voltage	CF	Config	Feet	CF	μR/h	pCi/L
0001 (this 1st row is an exam	2019-03-18 09:00	2019-03-27 13:00	9.17	810	680	2.0380	SST	2500	1.00	7.4	6.3
SHI693	2020-01-07 09:00	2020-01-14 09:00	7.00	445	382	1.8846	SST	2500	1.00	7.4	4.1
SHJ385	2020-01-07 09:00	2020-01-14 09:00	7.00	457	396	1.8927	SST	2500	1.00	7.4	3.9
SHI527	2020-01-07 11:00	2020-01-14 13:30	7.10	437	423	1.8948	SST	2500	1.00	7.4	0.4
SHJ567	2020-01-07 11:00	2020-01-14 13:30	7.10	479	462	1.9183	SST	2500	1.00	7.4	0.6
SHJ363	2020-01-07 14:00	2020-01-14 14:30	7.02	484	455	1.9177	SST	2500	1.00	7.4	1.5
SHH301	2020-01-07 14:00	2020-01-14 14:30	7.02	371	342	1.8460	SST	2500	1.00	7.4	1.6
SHH345	2020-01-07 15:00	2020-01-14 15:30	7.02	379	356	1.8539	SST	2500	1.00	7.4	1.1
SHH652	2020-01-07 15:00	2020-01-14 15:30	7.02	399	372	1.8663	SST	2500	1.00	7.4	1.4
SKF889	2020-01-15 17:00	2020-01-22 17:00	7.00	681	622	2.0031	SST	2500	1.00	7.4	3.5
SKF839	2020-01-15 17:00	2020-01-22 17:00	7.00	667	600	1.9958	SST	2500	1.00	7.4	4.1
SKF822	2020-01-15 18:00	2020-01-22 18:00	7.00	694	635	2.0082	SST	2500	1.00	7.4	3.5
SKF867	2020-01-15 18:00	2020-01-22 18:00	7.00	687	631	2.0061	SST	2500	1.00	7.4	3.3
SKF835	2020-01-15 18:30	2020-01-22 18:30	7.00	642	551	1.9801	SST	2500	1.00	7.4	5.9
SKF830	2020-01-15 18:30	2020-01-22 18:30	7.00	696	620	2.0057	SST	2500	1.00	7.4	4.7
SKF968	2020-01-15 20:30	2020-01-22 20:30	7.00	710	636	2.0116	SST	2500	1.00	7.4	4.6
SKF898	2020-01-15 20:30	2020-01-22 20:30	7.00	694	626	2.0065	SST	2500	1.00	7.4	4.2

Voltages

Initial Voltage/ Final Voltage = Radon in the Air

RADON TESTS COMPLETED

- Data was entered in high or low readings
- Participants were notified by mail
- Long-Term Testing



<https://tse3.mm.bing.net/th?id=OIP.8JjJNzdB5Or06y8HWbyacQHaf9&pid=Api&P=0&w=217&h=175>

The background is a gradient of blue, darker at the bottom. In the corners, there are decorative white lines resembling a circuit board or a network diagram, with small circles at the end of the lines.

RADON TESTS CONTINUE IN WINTER 2020

LONG-TERM TESTS FOR HIGH READINGS WILL CONTINUE FOR 90 DAY PERIOD

SECURED FUNDING FOR REMEDIATION OF HOMES

END OF RADON PROJECT-ON TO THE NEXT MYSTERY

THANK YOU WOPILA TANKA

ITEP

FOR ALL THE SUPPORT FOR HELPING ME TO MAKE THE RADON PROGRAM A SUCCESS, ESPECIALLY TO MELINDA-RONCA BATTISTE. SHE HELPED ME KEEP IT TOGETHER...

EPA

THANK YOU ALLISON RUHS FOR ALL THE ASSISTANCE ON THIS JOURNEY.

STANDING ROCK

FOR ALL THE PATIENCE AND TIME IN GETTING THIS PROJECT GOING.

QUESTIONS OR COMMENTS