



U.S. Department of Energy

Hanford Field Office
P.O. Box 550
Richland, Washington 99352

December 13, 2024

24-PFD-0056

Ms. Cascade Galasso, Project Manager
Superfund and Emergency Management Division
Site Cleanup Section 4
U.S. Environmental Protection Agency
825 Jadwin Avenue, Suite 210
Richland, Washington 99352

Dear Ms. Galasso:

TRANSMITTAL OF AIR MONITORING PLAN FOR THE REDUCTION-OXIDATION
REMOVAL ACTION WORK PLAN, DOE/RL-2018-46, REVISION 3

This letter transmits the Air Monitoring Plan (AMP) for Reduction-Oxidation, DOE/RL-2018-46, Revision 3, for your information. This AMP incorporated new ventilation system information after installation and changes for evaluation of the flow rate for the exhaust stack. The Review Comment Record is also included. If you have any questions, please contact me, at (509) 376-7756.

Sincerely,

Kelly A. Ebert Digitally signed by Kelly
A. Ebert
Date: 2024.12.13
10:08:36 -08'00'

Kelly A. Ebert, Director
Project and Facilities Division

PFD:MBG

Attachments

cc: See page 2

Ms. Cascade Galasso
24-PFD-0056

-2-

December 13, 2024

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Attachment 1
24-PFD-0056

Air Monitoring Plan for REDOX
Removal Action Work Plan
DOE/RL-2018-46 Revision 3

(24 pages including cover sheet)

Air Monitoring Plan for REDOX Removal Action Work Plan

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management



P.O. Box 550
Richland, Washington 99352

Air Monitoring Plan for REDOX Removal Action Work Plan

C. M. Ocampo
Central Plateau Cleanup Company LLC (CPCCo)

Date Published
August 2024

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

 U.S. DEPARTMENT OF
ENERGY | Richland Operations
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APPROVED
By Sarah Harrison at 11:59 am, Aug 14, 2024

Release Approval

Date

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Signature Page

Title: *Air Monitoring Plan for REDOX Removal Action Work Plan*

Kelly A. Ebert

Digitally signed by Kelly A. Ebert

Date: 2024.09.09 12:32:13

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Kelly A. Ebert
U.S. Department of Energy
Richland Operations Office

Signature

Date

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Terms

AMP	air monitoring plan
AOP	Air Operating Permit
APQ	annual possession quantity
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>
CFM	cubic feet per minute
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
HEPA	high-efficiency particulate air (filter)
HSTF	Hexone Storage and Treatment Facility
MEI	maximally exposed individual
NFM	near-facility monitoring
NTCRA	non-time-critical removal action
REDOX	Reduction-Oxidation
S&M	surveillance and maintenance
TEDE	total effective dose equivalent

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1 Introduction

This air monitoring plan (AMP) supports DOE/RL-2017-06, *Removal Action Work Plan for the Reduction-Oxidation Complex*, for a non-time-critical removal action (NTCRA) for the Reduction-Oxidation (REDOX) Complex. The REDOX Complex structures addressed in this NTCRA are the 202S Building (including the Canyon, Silo, and Annex); the 293S Nitric Acid and Iodine Recovery Building (293S Building); as well as waste management from closure of the *Resource Conservation and Recovery Act of 1976*-permitted 276S Hexone Storage and Treatment Facility (276S HSTF). The structures addressed by this NTCRA are chemically and/or radiologically contaminated. Revision 2 of this AMP incorporated changes resulting from upgrades to the 291S Ventilation System. Revision 3 of this AMP incorporated changes for evaluation of the flow rate for the exhaust stack.

The selected NTCRA scope for the REDOX Complex structures includes the following activities:

- Continued surveillance and maintenance (S&M) of the REDOX Complex
- Hazard abatement of the 202S Canyon Galleries
- Demolition preparation of the 202S Silo Service Area, 202S Annex, and abovegrade areas of the 202S Canyon (Canyon Deck and Pipe, Operating, and Crane Cab Galleries)
- Demolition of the 293S Building, the 276S HSTF, and the 202S Annex
- Grouting of belowgrade areas of the 293S Building
- Disposal of wastes generated during removal activities
- Cleanup of miscellaneous debris
- Equipment decontamination
- Stabilization of the affected structures and immediately adjacent areas

Although the 291S Ventilation System is not part of the NTCRA scope, an upgrade to the system is being installed to support this removal action (details are in Chapter 5). Included in this NTCRA are characterization activities of remaining hazardous substances to facilitate demolition and waste disposal, as well as to document post-removal conditions for future remedial action.

Historically, the 202S Building was licensed under the Hanford Site Air Operating Permit (AOP), Permit Number 00-05-006 as Emission Unit 332 within the radiological air emissions license number FF-01 (WDOH, 2017, *Radioactive Air Emissions For The Department of Energy Richland Office Hanford Site License*) for radiological air emissions associated with S&M activities. The original implementation of the NTCRA required that the 202S Building be transitioned from the AOP into the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) as part of DOE/RL-2017-06. This transition from the AOP to CERCLA is documented in 19-ESQ-0086, “Transition of the Reduction-Oxidation Facility (REDOX) and Stack P-291S001-001 to Regulation Under the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA).”

This AMP updates the abatement and monitoring methods required to meet the substantive requirements of the WAC 246-247, “Radiation Protection—Air Emissions,” regulation for radioactive emissions; the WAC 173-400, “General Regulations for Air Pollution Sources,” regulation for criteria emissions; and the WAC 173-460, “Controls for New Sources of Toxic Air Pollutants,” regulation for toxic emissions.

Collectively, these regulations allow for CERCLA authority of the 202S Building through development of work documents that provide compliance with the substantive provisions of the regulations during the NTCRA. All substantive portions of each of these regulations will be identified in the following chapters, which also provide for the abatement and monitoring methods associated with the demolition of the 202S Annex, 293S Building, and 276S HSTF that are included in the NTCRA.

2 Radiological Air Emissions

WAC 173-480, “Ambient Air Quality Standards and Emission Limits for Radionuclides,” sets state standards that are as stringent (or more so) as the federal standards under the *Clean Air Act Amendments of 1990* and subsequent amendments and under the federal implementing regulation, 40 CFR 61, “National Emissions Standards for Hazardous Air Pollutants,” Subpart H, “National Emission Standards for Emissions of Radionuclides Other than Radon from Department of Energy Facilities.”

U.S. Environmental Protection Agency (EPA) approves full delegation of the 40 CFR 61 authority to the Washington State Department of Health (WDOH), which includes all substantive emissions monitoring, abatement, and reporting aspects of the federal regulation. The state standards protect the public by conservatively establishing exposure standards applicable to a maximally exposed individual (MEI), be that individual real or hypothetical. Therefore, the standards address any member of the public, at the point of maximum annual air concentration in an unrestricted area where any member of the public may be. All combined radionuclide airborne emissions from the U.S. Department of Energy (DOE) Hanford Site “facility” are not to exceed amounts that would cause an exposure to any member of the public of greater than 10 mrem/yr effective dose equivalent, per the WAC 173-480-040, “Ambient Standard,” requirement. Adopting the specific substantive standards of WAC 173-480 and 40 CFR 61, Subpart H, WAC 246-247 requires verification of compliance with the 10 mrem/yr standard and is applicable or relevant and appropriate to this NTCRA.

WAC 246-247-075, “Monitoring, Testing, and Quality Assurance,” addresses sources emitting fugitive or diffuse radioactive airborne emissions by requiring monitoring of such sources. Such monitoring requires physical measurement of the effluent or ambient air, and quality assurance of environmental measures to assure precision, accuracy, and completeness. The substantive provisions of WAC 246-247 that require monitoring of radioactive airborne emissions are applicable or relevant and appropriate to this NTCRA.

The above state-implementing regulations further address control of radioactive airborne emissions where economically and technologically feasible (WAC 246-247-040 [3] and [4], “General Standards,” and associated definitions). To meet the substantive aspect of these requirements, best or reasonably achieved control technology will be applied by ensuring that demonstrated emission control technologies (those successfully operated in similar applications) will be used when economically and technologically feasible (i.e., based on cost/benefit). If it is determined that there are substantive aspects of the requirement for control of radioactive airborne emissions, then controls will be administered as appropriate.

3 Criteria/Toxic Air Emissions

Requirements are established under WAC 173-400 and WAC 173-460 for the regulation of emissions of criteria/toxic air pollutants, or “nonradioactive” air pollutants. The primary nonradioactive emissions resulting from demolition of ancillary facilities during this NTCRA will be fugitive particulate matter. In accordance with WAC 173-400-040, “General Standards for Maximum Emissions,” reasonable precautions must be taken to prevent the release of air contaminants associated with fugitive emissions resulting from excavation, materials handling, or other operations, and to prevent fugitive dust from becoming airborne from fugitive sources of emissions. The use of treatment technologies that would result in emissions of toxic air pollutants that would be subject to the substantive applicable requirements of WAC 173-460 are not anticipated to be a part of this NTCRA. Treatment of some waste encountered during this NTCRA may be required to meet Environmental Restoration Disposal Facility waste acceptance criteria (ERDF-00011, *Environmental Restoration Disposal Facility Waste Acceptance Criteria*). In most cases, the type of treatment anticipated would consist of solidification/stabilization techniques such as macroencapsulation or grouting, which is analyzed in the Environmental Restoration Disposal Facility waste acceptance criteria, and WAC 173-460-150, “Table of ASIL, SQER and De Minimis Emission Values,” requirements would not be considered an applicable or relevant and appropriate requirement as all criteria and toxic emissions will be below de minimis. This, in turn, fulfills the applicable requirement of WAC 173-460-070, “Ambient Impact Requirement,” and thus, WAC 173-460-060, “Control Technology Requirements.” If additional treatment is deemed necessary that would result in the emission of regulated air pollutants, the substantive requirements of WAC 173-400-113(2), “New Sources in Attainment or Unclassifiable Areas—Review for Compliance with Regulations,” and WAC 173-460-060 would be evaluated to determine applicability.

Emissions to the air will be minimized during implementation of this NTCRA through use of standard industry practices such as the application of water sprays, fixatives, and wind-speed dependent work restrictions if work is performed in an area to be potentially impacted by the outside environment. These techniques are typically considered to be reasonable precautions to control fugitive emissions as required by regulatory standards.

4 Radiological Airborne Source Information

There is a potential for particulate radionuclide airborne emissions to result from the NTCRA activities. An estimate of potential airborne emissions from the NTCRA work was conducted using the WAC 246-247-030(21)(a), “Definitions, Abbreviations, and Acronyms,” annual possession quantity (APQ) method.¹ The release fraction for gases (1.0) and liquids or particulate solids (10^{-3})² was applied, as appropriate, to the APQ for the 202S Building, 276S HSTF, 293S Building, and 202S Annex. The unabated total effective dose equivalent (TEDE) to the MEI³ was then calculated using

¹ The APQ method looks at a given isotopic source term, multiplied by the associated release fraction provided in WAC 246-247-030(21)(a), in order to determine a dose to a hypothetical MEI.

² When calculating potential-to-emit, a WAC 246-247-030(21)(a) release fraction is assigned to some or all the source term based on the physical state of the media. In most cases, a 10^{-3} release fraction is assigned to the source term, assuming it to be liquids or particulate solids. For the 276S HSTF, a gaseous release fraction of 1.0 is assigned to the hydrogen-3 and carbon-14 source term.

³ The WAC 246-247-030(15) definition for MEI is: “any member of the public (real or hypothetical) who abides or resides in an unrestricted area, and may receive the highest TEDE from the emission unit(s) under consideration, taking into account all exposure pathways affected by the radioactive air emissions.” For the purposes of radiological source term, the MEI is at the Hanford Site boundary line. This excludes the land transferred to the Tri-Cities Washington Economic Development Council.

the CAP88-PC⁴ software (version 4.0) and documented in the calculation ECF-HANFORD-17-0128, *Radiological and Toxic Air Emissions for the REDOX Complex*, Rev. 2. The location of the offsite MEI is 30,401 m (99,741 ft) east-southeast of the 200 West Area. The representative radionuclides used for the calculation were plutonium-239 for alpha and strontium-90 for beta/gamma with both radionuclides contributing greater than 10% of the TEDE to the MEI for both point source and diffuse and fugitive emissions. These isotopes were chosen to conservatively estimate the TEDE based upon their presence in the source material and their potential dose consequence compared to the rest of radioisotopes in the source material. It is conservatively assumed all the APQ for the areas within the scope of the removal action would be released within 1 year.

The unabated TEDE to the MEIs for the point source (202S Building) and diffuse and fugitive source (demolition of the 276S HSTF, 293S Building, and 202S Annex) are provided in Table 1. For the exhaust stack flow rate, multiple flow rates (20,000 cubic feet per minute [CFM]; 30,000 CFM; 40,000 CFM; 50,000 CFM; and 60,000 CFM) were evaluated to determine which operating condition would yield the largest TEDE. It was determined that 20,000 CFM yielded the largest TEDE. Project activities will adjust the exhaust flow rate based on best operating practices. For the 202S Building, the potential-to-emit is less than 0.1 mrem/yr TEDE to the offsite MEI; annual periodic confirmatory measurements are required as discussed in Chapter 6. For the demolition portion of this NTCRA, the exposure risk will be minimized by applying soil fixative, water misting, and other fugitive dust controls previously discussed in Chapter 3.

Table 1. Total Effective Dose Equivalent to the Maximally Exposed Individual

Emission Type	Unabated TEDE (mrem/yr) ^b	
	Offsite MEI	Onsite MEI
Point source – 291S001 Stack – 20,000 CFM ^a	9.58E-02	2.15E-01
Point source – 291S001 Stack – 30,000 CFM	9.48E-02	2.13E-01
Point source – 291S001 Stack – 40,000 CFM	9.38E-02	2.10E-01
Point source – 291S001 Stack – 50,000 CFM	9.28E-02	2.08E-01
Point source – 291S001 Stack – 60,000 CFM	9.19E-02	2.05E-01
Diffuse and fugitive – Demolition of 276S HSTF, 293S Building, and 202S Annex	6.15E-03	1.95E-02
Totals	1.02E-01	2.35E-01

a. The largest TEDE was used from the exhaust stack flow range (20,000 CFM to 60,000 CFM) evaluated.

b. TEDE to the onsite MEI is provided in accordance with the agreement reached between the U.S. Department of Energy, Richland Operations Office, the U.S. Environmental Protection Agency, and the Washington State Department of Health (AIR 00-1012, “New Maximally Exposed Individual Definition”).

Source: Table 10 in ECF-HANFORD-17-0128, *Radiological and Toxic Air Emissions for the REDOX Complex*.

CFM = cubic feet per minute

MEI = maximally exposed individual

HSTF = Hexone Storage and Treatment Facility

TEDE = total effective dose equivalent

⁴ A regulatory compliance tool under 40 CFR 61, “National Emission Standards for Hazardous Air Pollutants,” the Clean Air Act Assessment Package-1988 (CAP88) model is a set of computer programs, databases, and associated utility programs for estimating dose and risk from radionuclide emissions to the air. CAP88-PC version 4.0 allows modeling on a personal computer and is a recent version of the code.

5 Emission Controls

As a significant activity regarding potential for airborne radionuclide emissions, this NTCRA will be subject to the substantive provisions of the WAC 246-247-040 best available radionuclide control technology standard. The 40 CFR 61.93, “Emission Monitoring and Test Procedures” requirements, adopted through WAC 246-247-035(1)(a)(i), “National Standards Adopted by Reference for Sources of Radionuclide Emissions,” are also a substantive requirement within this work scope. This chapter delineates the proposed alternative to the qualification of effluent and sample flows in order to prove sampling defensibility by instituting the 40 CFR 61.93(d) requirements.

The activities performed in the 202S Building as part of the NTCRA include hazard abatement of the 202S Canyon Galleries, equipment decontamination, demolition preparation of the 202S Silo Service Area, 202S Annex, and abovegrade areas of the 202S Canyon in addition to ongoing S&M surveillances. The 291S Ventilation System has been upgraded and the aging sand filter system has been isolated. A new high-efficiency particulate air (HEPA) filtration system (Figure 1) has been installed. The Wind Tunnel connection to the sand filter has been blocked with an isolation weldment and grout. Contaminated air from the 202S Building is being diverted through a new abovegrade metal duct to the new HEPA filtration system and then discharged through the 291S001 Stack. The original exhaust fans (291S-EF-1 and 291S-EF-2) located adjacent to the 291S Exhaust Building will be deactivated and decommissioned. The sand filter has been isolated and will be dispositioned along with the REDOX Canyon in the 200-CR-1 Operable Unit.

The Wind Tunnel is an original, reinforced concrete, belowgrade structure that runs the length of the 202S Building. The Wind Tunnel routes contaminated air to the new air duct, located just upstream of the sand filter. From this tie-in location, the air is routed through a riser connected to an abovegrade metal duct and feeds into the new HEPA filtration system. The new filtration system consists of three skid-mounted exhausters, each of which is made up of a set of prefilters, two sets of HEPA filters, a 93-kW (125-hp) fan, and control instruments (the unabated point source TEDE to the offsite MEI does not take credit for any abatement by the filters). Each HEPA filter is rated for 0.94 m³/sec (2,000 ft³/min) yielding a maximum airflow of 18.8 m³/sec (40,000 ft³/min) per exhauster filter housing. Two fans are in operation at a time, with the third fan on standby (for maintenance, filter change out, etc.). Each exhaust fan is equipped with a variable frequency drive to enable fan speed adjustment. The stack sampling system has been upgraded to allow for compliant sampling under the increased stack flow rate (previously capable up to only 17.7 m³/sec [37,500 ft³/min]).

Per CP-ENG-0141, *291S Stack Sampling for New Exhauster System*, a near isokinetic sampling state will be maintained at stack flow rates ranging from 20,000 CFM to 60,000 CFM. Implementation of a testing period has ensured system integrity by observing certain variables, such as vibration, component health checks, differential pressures, and fan bearing temperatures, all while operational. Per CP-ENG-0305, *Completed Integrated Acceptance Testing (Phase 1 and Phase 2) for the REDOX Exhausters*, system testing included multiple fan scenarios, such as using one or two fans at a time. As a part of the testing period, a vent and balance team was onsite to gather system effluent readings. Readings were taken at test ports located downstream of the fans at a location compliant with 40 CFR 60, “Standards of Performance for New Stationary Sources,” Test Method 1.

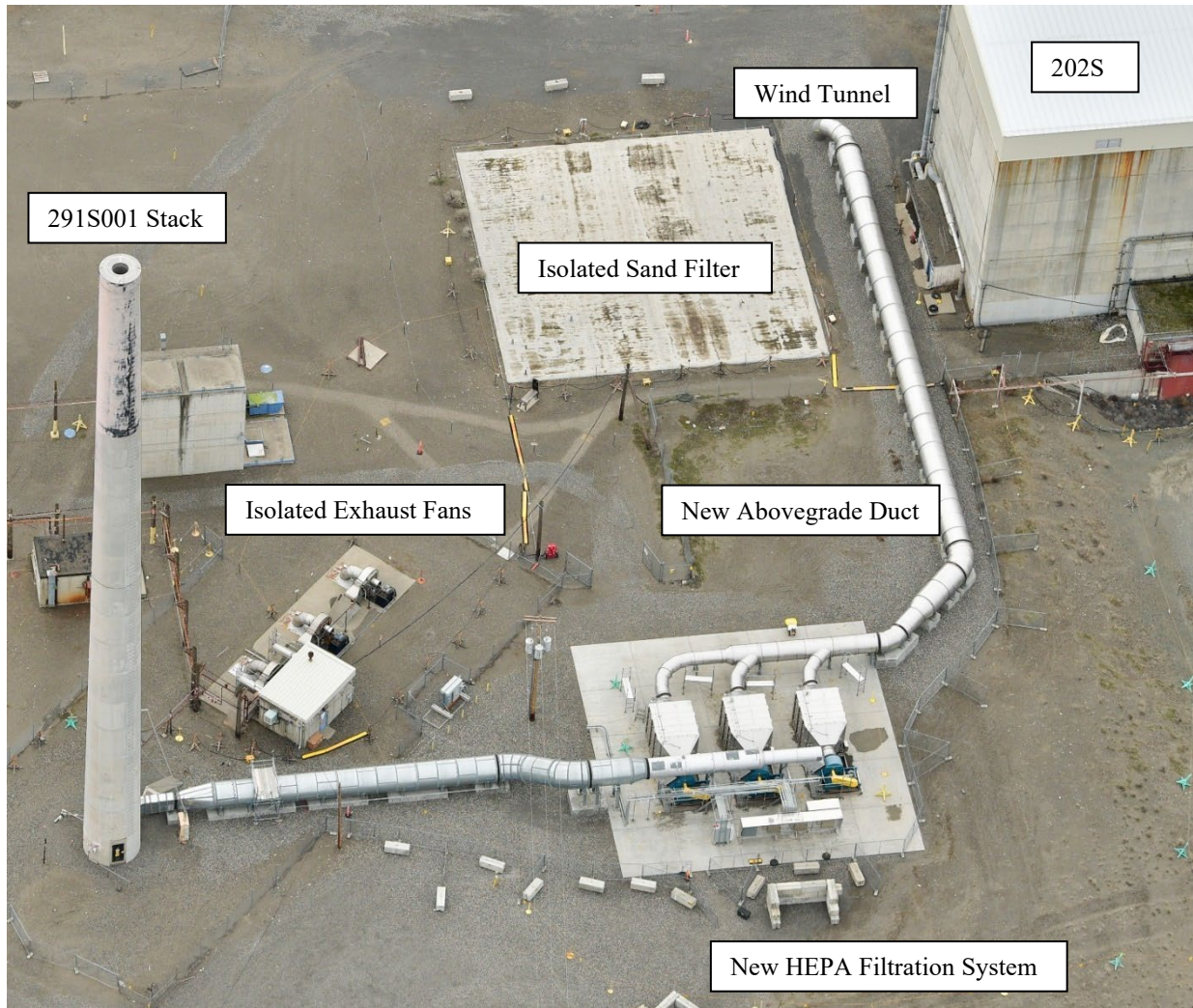


Figure 1. 291S Ventilation System Schematic with New HEPA Filtration System and Abovegrade Ducting

All HEPA filters will be procured with a removal efficiency of at least 99.97%. Aerosol leak testing of the HEPA filter media will indicate a removal efficiency meeting the 99.95% standard for HEPA filtered applications. The following measures were selected to provide added worker protection controls:

- Planning for the special handling of stabilized items while minimizing risk of damage during handling.
- Vacuum cleaners and/or portable exhausters used for demolition activities equipped with HEPA-type filters to provide point source or downdraft contamination control.
- The increase of the stack effluent and sample flows with the new HEPA filtration system will provide better control contamination and radon buildup, thus controlling dose to the worker.

For the 293S Building, 202S Annex, and 276S HSTF demolition, it has been demonstrated through Hanford Site experience and ongoing operations that the listed available methods, systems, and techniques for the control of radionuclide particulate emissions in the bulleted list below represent the most effective control technology from among all known feasible alternatives and the required level of best available radionuclide control technology for the subject NTCRA. Recent and successful application of these controls at Hanford Site cleanup projects include the BC Cribs Characterization,

100 Area and 300 Area soil cleanup, and the Transuranic Waste Retrieval Project, each demonstrating excellent radionuclide controls with no measurable impact to any member of the public, be they real or hypothetical MEIs.

Based on analysis of the potential emissions and evaluation of available control technologies, the following active controls of diffuse and fugitive emissions have been selected for use when practicable during this removal action. The radiological control and environmental organizations are responsible for selecting and ensuring that appropriate controls are implemented to maintain both worker exposure and environmental releases as low as reasonably achievable. These include, but are not limited to, the following:

- Items inside of the ventilated space may be internally and externally stabilized and handled to minimize any potential release prior to being removed from ventilated space or securing ventilation.
- Water in mists or fine sprays will be applied as practicable for suppression of fugitive emissions and dust during mechanical excavation, backfilling, and demolition activities.
- Radiological surveys (e.g., swipes/smears) will be taken from demolition equipment, leaving any areas where there is the potential for removable contamination above 2,000 dpm/100 cm² alpha or 100,000 dpm/100 cm² beta/gamma following any demolition action.
- Operational limits for removable or transferable radioactive contamination levels will be established in work packages and associated radiation work procedures. Fixatives or other physical controls will be employed if removable or transferable contamination levels above 100,000 dpm/100 cm² beta/gamma or exceeding 2,000 dpm/100 cm² alpha are measured or expected.
- Fixatives will be applied to contaminated soil and/or debris and equipment per manufacturer instructions as needed to minimize airborne contamination during the NTCRA activities for fugitive emissions and dust. Fixative application techniques may include spraying, brushing, pouring, or another method, as necessary. Due to their high tack and soil binding nature, fixatives provide greater suppression of the soil matrix and reduce the amount of particle movement when exposed to wind forces. Fixatives, water, covers, containment tents, windscreens, or other controls during cessation of work activities will be applied to the extent practicable based on the work environment (i.e., weather conditions and predicted wind speeds above 32 km/hr [20 mi/hr]).
- Fixatives or cover material (e.g., soil, gravel, and plastic) will be applied to disturbed contaminated soils and debris associated with the REDOX Complex demolition activities at any time that field activities will be idle for more than 24 hours.
- If the overnight sustained wind speed is predicted to be greater than 32 km/hr (20 mi/hr) based on the Hanford Meteorological Station forecast for the 200 West Area, fixative or cover material will be applied to contaminated soil or demolition debris, as practicable. If a fixative has already been applied and the contaminated items will remain undisturbed, further use of fixatives will be evaluated individually. The fixatives or other controls will not be applied when the contaminated soil surface is frozen or it is raining, snowing, or other freezing precipitation is falling at the end of work operations.
- Measures such as decontamination solutions, expandable foam, or encasement in grout, fixatives, or glovebags will also be used in a graded approach to help minimize the spread of contamination.
- During open-air demolition, stabilized items identified as requiring special handling will be managed in a manner to minimize disturbance of the contamination. Stabilization methods will be implemented

prior to demolition to address void space issues and eliminate the need for excessive crushing, size reduction, or other actions that could lead to potential airborne releases.

- Field activities will be temporarily ceased, and the area will be placed in a safe configuration if contamination control measures are found not expected to be adequate based on site conditions (e.g., excessive wind). Additionally, fixatives will be applied to demolition sites and debris piles, as needed, to help control dust and radiological or nonradiological contaminants.
- Waste containers will remain closed, except during packaging and waste inspection activities.
- Any vacuum cleaners and portable exhausters used for demolition activities will be equipped with appropriately tested HEPA filters. Filters will be aerosol tested annually. Units will undergo additional aerosol testing in the event that the units are thought to have been compromised (e.g., dropped or roughly handled).
- Portable exhausters or wet methods will be utilized to control emissions from stripping operations, which tend to generate respirable particulate matter (e.g., grinding, cutting, or welding) whenever it is reasonably possible to do so.

If unanticipated new sources of airborne pollutants are encountered, the potential for emissions will be reviewed and appropriate controls implemented, as required.

Best available radionuclide control technology and as low as reasonably achievable control technology controls will be applied based on the potential-to-emit using a graded approach.

6 Monitoring

There are two components associated with airborne emissions monitoring at the REDOX Complex as part of the NTCRA: point source monitoring (e.g., stacks, HEPA-filtered vacuums, portable HEPA-filtered exhausters) and diffuse and fugitive monitoring (e.g., temporary ambient air monitors used by the radiological control program, radiological surveys), coupled with monitoring effectiveness validation using the near-facility monitoring (NFM) (air monitoring stations N441, N442, N956, and N963).

The calculated unabated annual dose combined for all in-scope related point source (2.15 E-01 mrem/yr) and diffuse and fugitive source (1.95 E-02 mrem/yr) activities during the NTCRA is 2.35 E-01 mrem/yr TEDE to the offsite MEI (Table 1). As the point source annual dose (0.215 mrem/yr) to the onsite MEI (Table 1) is greater than 0.1 mrem/yr, this activity is subject to emissions monitoring of the point sources in accordance with the substantive requirements of WAC 246-247-075(2). Fugitive and diffuse emissions monitoring with applicable quality assurance will be provided, reflecting the substantive requirements of WAC 246-247-075(8).

The activities performed in the 202S Building as part of the NTCRA include hazard abatement of the 202S Canyon Galleries, equipment decontamination, demolition preparation of the 202S Silo Service Area, 202S Annex, and abovegrade areas of the 202S Canyon in addition to ongoing S&M surveillances. These activities are performed within the 202S Building, and any resultant emissions are controlled and monitored as point source(s). The existing sampling system with alternative methods, identified in Table 2, will be used to measure emissions during these activities. Concurrence of the alternative methods will be requested from the EPA.

The REDOX monitoring system is required to meet the newer standard (ANSI/HPS N13.1-1999, *Sampling and Monitoring Releases of Airborne Radioactive Substances from the Stacks and Ducts of Nuclear Facilities*), instead of the current requirements derived from ANSI/HPS N13.1-1969, *Guide to*

Sampling Airborne Radioactive Materials in Nuclear Facilities. According to Table 2 of ANSI/HPS N13.1-1999, the REDOX Stack is classified as a potential impact category 2 point source, requiring continuous sampling with retrospective offline analysis. The current monitoring system configuration provides an alternative to some of the ANSI/HPS N13.1-1999 methods to allow the use of the modified physical configuration of the system until such time as the abatement system is further upgraded or the 202S Building demolition is completed. Concurrence of the alternative methods will be obtained from the EPA in consultation with the Washington State Department of Health prior to implementation.

Table 2 details the ANSI/HPS N13.1-1999 standard requirements as applied to the REDOX Stack sample collection system and any alternatives.

Table 2. Comparison of ANSI/HPS Requirements to REDOX Stack Sampling System

ANSI/HPS N13.1-1999 Standard Requirement	REDOX Stack Sample Collection System
Sample collection site validation (Table 4)	The sample collection location meets the 40 CFR 60, Appendix A-1, Method 1 (Method 1) location of eight duct diameters from the stack inlet and two duct diameters from the stack exhaust. No ports exist at this location to verify cyclonic flow, velocity coefficient of variation, and tracer gas concentration profiles. This location cannot be verified as meeting the ANSI/HPS N13.1-1999 standard. This sample location will be maintained to ANSI N13.1-1969 standards with an upgrade to the ANSI/HPS N13.1-1999 alternative standards, where possible.
Sample flow rate	The sample collection system has an adjustable flow control device to ensure near-isokinetic sampling. The use of the ANSI N13.1-1969 isokinetic flow recommendations will ultimately constitute as an alternative. Review of historical data provides solid baseline for historical sampling results and continuation of all applicable NESHAP requirements will ensure continued representative sample results. Testing will help in determining what the sample effluent flows need to be in order to maintain near-isokinetic flow at the system effluent flow rate using multiple fan scenarios. In one scenario, the facility may only use one fan during or as a part of maintenance activities. In another scenario, two of the three fans may be run at once. Once the flow rates are determined, calculations will document the results of the actual isokinetic flow rates in order to qualify the actual sample flow rates and ensure defensible sampling.
Effluent flow rate	The system effluent flow rate will be based on results from the vent and balance performed during the testing period. Periodic effluent flow rate measurements are conducted as the flow rate varies by less than 20% from each of the scenarios listed above during the year at an alternative location to that prescribed by Method 1.
Shrouded nozzle probe	The probe is a rake with multiple nozzles and has not been aerosol tested. An annual review of sample results, in order to ensure results remain low, will be done in place of this requirement.
Sample collection media	The sample collection media meets the ANSI/HPS N13.1-1999 standard.
Maintenance (Table 5) and Method 114 Table 2	The probe cannot be removed for inspection without affecting the structural integrity of the stack masonry shell. The probe has been cemented into place. All other applicable inspections can be performed.

Table 2. Comparison of ANSI/HPS Requirements to REDOX Stack Sampling System

ANSI/HPS N13.1-1999 Standard Requirement	REDOX Stack Sample Collection System
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References: 40 CFR 60, “Standards of Performance for New Stationary Sources.”

ANSI N13.1-1969, *Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities*.

ANSI/HPS N13.1-1999, *Sampling and Monitoring Releases of Airborne Radioactive Substances from the Stacks and Ducts of Nuclear Facilities*.

ANSI/HPS = American National Standards Institute/Health Physics Society

NESHAP = National Emission Standards for Hazardous Air Pollutants

REDOX = reduction-oxidation

The 291S Ventilation System provides ventilation and abatement for the 202S Building, 202S Annex, and 202S Silo and exhausts through the 291S001 Stack. The 291S001 Stack is considered a “major” point source of emissions meeting the substantive requirements of 40 CFR 61.93(b)(24). All radionuclides that could cause an effective dose equivalent greater than 1% of the standard or contribute greater than 10% of the potential effective dose equivalent are measured as required by 40 CFR 61.93(b)(4). This sampling system will be maintained operational in accordance with the substantive requirements of 40 CFR 61, Subpart H, as long as the stack operates. Results from the 291S-001 Stack sampling system are reported annually in the Radionuclide Air Emissions Report for the Hanford Site.

The following alternative monitoring protocols will be used due to the physical limitations of the existing design:

- Sampling system flow rates are not measured; instead, an alternative method of documenting actual flow results from the different operating scenarios will ensure that the sampling effluent flow is representative of the system effluent flow (near-isokinetic) per 40 CFR 61.93(b)(3). Upon designation of any flow values, the results will not vary by greater than 20% for each identified scenario.
- The sampling probe is located at the 50 ft level of the stack. This location meets the 40 CFR 60, Appendix A-1, “Test Methods 1 through 2f,” Method 1 requirement of eight duct diameters downstream of the last flow disturbance and two duct diameters upstream from any flow disturbance.
- The sample location predates the ANSI/HPS N13.1-1999 standard and was established in accordance with DOE protocols. Acceptance of the sample location based on the original design criteria is proposed.
- The sampling probe is a rake-style probe used at other Hanford Site facilities (e.g., T Plant, Waste Encapsulation Storage Facility, Waste Receiving and Processing Facility, Plutonium-Uranium Extraction Facility). A review of the REDOX sample results over the previous 10 years indicates consistent low-level emissions consistent with the S&M status of the facility and demonstrates the ability of the probe to collect a consistent sample over time.
- The annual 40 CFR 61, Appendix B, “Test Methods,” Method 114, Table 2 inspection of the probe is not possible for the reason listed in Table 2 of this AMP. An annual comparison to interior workplace air monitoring (adjusted for the HEPA filter removal efficiency) and biweekly NFM data will be qualitatively performed as an alternative to the annual inspection.

Where the 202S Building ventilation is not sufficient to provide for worker safety, various types of engineering controls and containments will be used for exhausting through portable HEPA-filtered exhausters, with portable HEPA-filtered vacuums used as needed. The portable exhausters are minor emission units that are easily set up for use and readily portable, being either hand-carried or wheel mounted.

HEPA-filtered vacuums intended for use will vary in size with both large and small, portable units of the type similar to those in use on the Hanford Site (e.g., portable temporary radioactive air emissions units). To verify low emissions periodically, a contamination survey of the outlet of the vacuum will be performed at the completion of use. Vacuuming using one of these devices has no specific contamination limit but will be controlled based on the specifics of the situation. If contamination levels over 2,000 dpm/100 cm² alpha or 100,000 dpm/100 cm² beta/gamma (i.e., high surface contamination area) are inadvertently exceeded, a separate evaluation regarding emissions measurement will be conducted.

The demolition activities of the NTCRA will generate diffuse and fugitive (nonpoint source) emissions from the demolition of the 293S Building, the 276S HSTF, and the 202S Annex; grouting of belowgrade areas of the 293S Building; disposal of wastes generated during removal activities; cleanup of miscellaneous debris; and stabilization of the area.

During the demolition activities at the REDOX Complex, worker protection (worksite) monitoring activities will be considered and may include the following:

- Real-time and periodic radiological monitoring using temporary ambient air monitors as prescribed by the Radiological Control organization and reviewed by the Environmental organization (primary method for evaluating compliance with the action levels and void limits)
- Radiological smear surveys (indicator – effluent air emission estimated rates are based on gross residual contamination levels)

These worksite monitoring activities verify the effectiveness of abatement and as low as reasonably achievable control methods during demolition activities. Worksite monitoring includes using temporary ambient air monitors (real-time continuous air monitors with alarms, personnel samplers, and ambient air samplers) and surveys. The worksite monitoring network will be established as directed by the Radiological Control organization, with review by the Environmental organization, and will be focused around and in the established radioactive control zones. This monitoring network provides the primary emissions data used to ensure the limits set in the Radiological Work Permit are not exceeded.

Using a graded approach, additional monitoring for diffuse and fugitive emissions may be conducted in place of using handheld instruments during excavation activities at radiologically contaminated waste sites. The additional monitoring may be a combination of radiological contamination surveys for removable alpha and beta-gamma activity and workplace air monitoring. Work progress contamination surveys may be performed adjacent to contamination area boundaries during active remediation to monitor for contamination spread, as needed. Periodic contamination surveys may be performed when needed on those portions of the heavy equipment (e.g., trackhoe buckets, demolition hammers, and pipe cutting shears) working within the posted contamination areas to ensure that removable contamination levels are below the limiting conditions of the applicable Radiological Work Permit. Lapel air samplers may be worn by personnel entering areas that are monitored for occupational exposure to airborne radioactivity when workplace air samplers are determined to be nonrepresentative of active work areas (i.e., not close enough to the workers or in the wrong position to be representative of the breathing zone air activity).

In addition to point-source and worksite monitoring, the 200 West Area Near Facility Ambient Air Program stations nearest the REDOX Complex provide validation of the effectiveness of the contamination control measures utilizing the near-field monitoring network. The four air monitoring stations (N441, N442, N956, and N963) do not provide real-time data, so their biweekly data will be used as indicators along with the worksite monitoring data for overall trending of the effectiveness of the contamination control measures. During periods of demolition and debris removal, no more than one of these four stations will be allowed to be inoperative for more than 24 hours. As part of the sitewide evaluation of NFM data, the sample management and analytical results tracking database compares NFM 6-month composite air sample results to 10% of the 40 CFR 61, Appendix E, “Compliance Procedures Methods for Determining Compliance With Subpart I,” Table 2 values. The NFM database identifies results that exceed these values. Results from the air monitoring stations identified in this document that are above these values will be reviewed, the adequacy of the controls evaluated as appropriate, and the DOE Richland Operations Office, EPA, and WDOH will be notified.

The well-established Hanford Site protocol for emission monitoring will be followed, including Hanford Site perimeter ambient air data collection, sampling frequencies, sample analysis, and data reporting (DOE/RL-91-50, *Hanford Site Environmental Monitoring Plan*). This method will address the substantive requirements of WAC 246-247-075. Perimeter monitoring is used to measure the diffuse and fugitive emissions from the Hanford Site. Demonstration of compliance with the 40 CFR 61.92, “Standard,” effective dose equivalent of 10 mrem/yr limit is provided by the Radioactive Air Emissions Report for the Hanford Site (e.g., DOE/RL-2022-07, *Radionuclide Air Emissions Report for the Hanford Site, Calendar Year 2021*).

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Appendix A-1, “Test Methods 1 through 2f.”
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61.93, “Emission Monitoring and Test Procedures.”
Appendix B, “Test Methods.”
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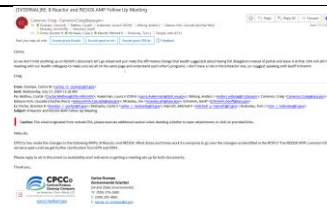
Attachment 2
24-PFD-0056

Comment Record
Air Monitoring Plan for REDOX
Removal Action Work Plan
DOE/RL-2018-46 Revision 3

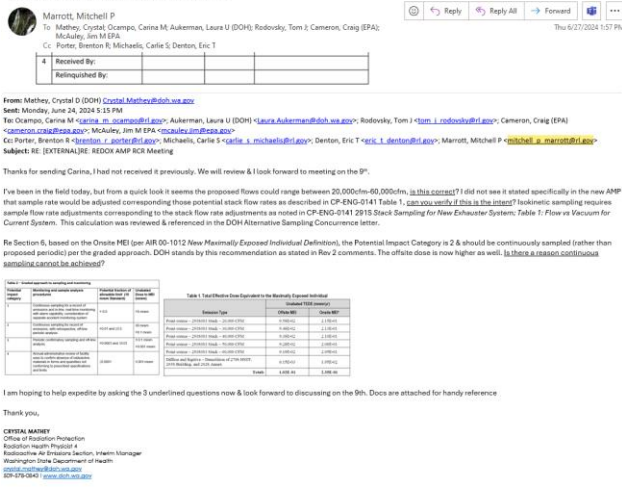
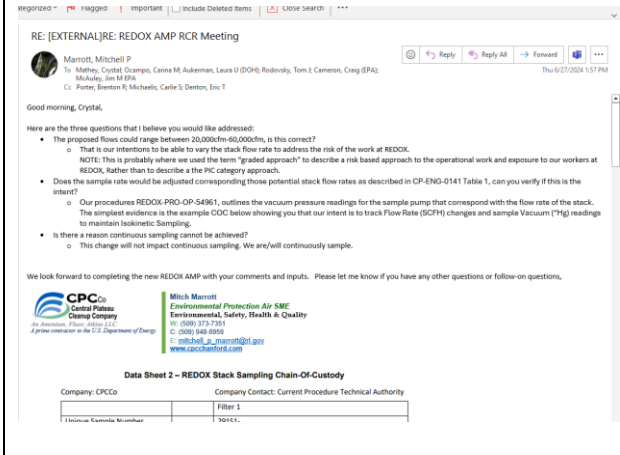
(3 pages including cover sheet)

Review Comment Record	U.S. Environmental Protection Agency	Date: 7/9/24
		Page 1 of 2
Document Title(s)/Number(s):		
Air Monitoring Plan for REDOX Removal Action Work Plan, DOE/RL-2018-46, Revision 3 Draft		

Document Manager	Telephone Number	Project Manager	Telephone Number	Facility Site ID	Cleanup Site ID
Craig Cameron	(509) 376-8665	Craig Cameron	(509) 376-8665	NA	NA

Item No.	Pg. # Sec. # Para./Sent.	Comment or Question	Modification Needed	Basis/Justification	DOE Response	EPA Response	Open/Close	Reviewer Initials
1.	Pg. 5, Section 5, second paragraph	Comment to remove "abandoned" on sand filter.	Remove "abandoned".	Clarification	Will modify to: The sand filter has been isolated and abandoned <u>will be disposed along with the REDOX canyon in place in the Operable Unit, 200-CR-1.</u>	Add a sentence on sand filter remedial action with REDOX Canyon	Close	CC
2.	Pg. 12, Section 6, First Paragraph	"Results from the air monitoring stations identified in this document that are above these values will be reviewed, the adequacy of the controls evaluated as appropriate, and the DOE Richland Operations Office and EPA will be notified." Should also list DOH.	Add DOH	Accuracy	Will modify to: "Results from the air monitoring stations identified in this document that are above these values will be reviewed, the adequacy of the controls evaluated as appropriate, and the DOE Richland Operations Office, <u>and EPA and DOH</u> will be notified."	Add DOH to last sentence. "DOE Richland Operations Office, EPA, and DOH will be notified"	Close	CG
3.	Pg. 2, Section 2, First Paragraph	WDOH has full delegation	Take out partial in sentence: "...U.S. Environmental Protection Agency (EPA) partial delegation of the 40 CFR 61 authority to the State of Washington includes all substantive emissions monitoring, abatement, and reporting aspects of the federal regulation."	Accuracy	Will modify to: ".....U.S. Environmental Protection Agency (EPA) <u>approves partial-full</u> delegation of the 40 CFR 61 authority to the <u>Washington State Department of Health (WDOH), which State of Washington</u> includes all substantive emissions monitoring, abatement, and reporting aspects of the federal regulation."	 Close per 7/17/24 EPA (CC) email	Close per 7/17/24 EPA (CC) email	JM

<h1>Review Comment Record</h1>	<h1>U.S. Environmental Protection Agency</h1>	Date: 7/9/24
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Item No.	Pg. # Sec. # Para./Sent.	Comment or Question	Modification Needed	Basis/Justification	DOE Response	EPA Response	Open/Close	Reviewer Initials																																																																																																																																																																																																												
4.	Section 6	<p>Email from DOH:</p> <p>RE: [EXTERNAL]RE: REDOX AMP RCR Meeting</p>  <p>From: Marrott, Mitchell P. [mailto:mitchell_p_marshall@epa.gov] To: Mathew, Crystal [mailto:Crystal.Mathew@epa.gov]; Ocampo, Carina M [mailto:Carina.M.Ocampo@epa.gov]; Aukerman, Laura U [mailto:Laura.Aukerman@epa.gov]; Rodovsky, Tom J [mailto:Tom.J.Rodovsky@epa.gov]; Cameron, Craig [mailto:Craig.Cameron@epa.gov]; McAuley, Jim M [mailto:Jim.McAuley@epa.gov]; Porter, Brenton R [mailto:Brenton.R.Porter@epa.gov]; Michaelis, Carlie S [mailto:Carlie.S.Michaelis@epa.gov]; Denton, Eric T [mailto:Eric.T.Denton@epa.gov]; Marrott, Mitchell P [mailto:mitchell_p_marshall@epa.gov] Subject: RE: [EXTERNAL]RE: REDOX AMP RCR Meeting</p> <p>Thanks for sending Carina, I had not received it previously. We will review & I look forward to meeting on the 9th.</p> <p>I've been in the field today, but from a quick look it seems the proposed flow could range between 20,000cfm-60,000cfm. In this comment I did not see it stated specifically in the new AMP that sample rate would be adjusted corresponding to those potential stack flow rates as described in CP-ENG-0141 Table 1. Is this the intent? Isokinetic sampling requires sample flow rate adjustments corresponding to the stack flow rate adjustments as noted in CP-ENG-0141 2015 Stack Sampling for New Exhauster System, Table 1: Flow vs Vacuum for Current System. This calculation was reviewed & referenced in the DOH Alternative Sampling Concurrence letter.</p> <p>Re Section 6, based on the Onsite MEX (per AIR 05-1012 New Maximally Exposed Individual Definition), the Potential Impact Category is 2 & should be continuously sampled (rather than proposed periodic) per the graded approach. DOH stands by this recommendation as stated in Rev 2 comments. The offsite dose is now higher as well. Is there a reason continuous sampling cannot be achieved?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Stack</th> <th>Flow Rate (cfm)</th> <th>Flow Rate (m³/min)</th> <th>Flow Rate (m³/hr)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>20,000</td> <td>14.16</td> <td>85.0</td> </tr> <tr> <td>2</td> <td>40,000</td> <td>28.32</td> <td>170.0</td> </tr> <tr> <td>3</td> <td>60,000</td> <td>42.48</td> <td>255.0</td> </tr> <tr> <td>4</td> <td>80,000</td> <td>56.64</td> <td>340.0</td> </tr> <tr> <td>5</td> <td>100,000</td> <td>70.80</td> <td>425.0</td> </tr> <tr> <td>6</td> <td>120,000</td> <td>84.96</td> <td>510.0</td> </tr> <tr> <td>7</td> <td>140,000</td> <td>99.12</td> <td>595.0</td> </tr> <tr> <td>8</td> <td>160,000</td> <td>113.28</td> <td>680.0</td> </tr> <tr> <td>9</td> <td>180,000</td> <td>127.44</td> <td>765.0</td> </tr> <tr> <td>10</td> <td>200,000</td> <td>141.60</td> <td>850.0</td> </tr> <tr> <td>11</td> <td>220,000</td> <td>155.76</td> <td>935.0</td> </tr> <tr> <td>12</td> <td>240,000</td> <td>169.92</td> <td>1020.0</td> </tr> <tr> <td>13</td> <td>260,000</td> <td>184.08</td> <td>1105.0</td> </tr> <tr> <td>14</td> <td>280,000</td> <td>198.24</td> <td>1190.0</td> </tr> <tr> <td>15</td> <td>300,000</td> <td>212.40</td> <td>1275.0</td> </tr> <tr> <td>16</td> <td>320,000</td> <td>226.56</td> <td>1360.0</td> </tr> <tr> <td>17</td> <td>340,000</td> <td>240.72</td> <td>1445.0</td> </tr> <tr> <td>18</td> <td>360,000</td> <td>254.88</td> <td>1530.0</td> </tr> <tr> <td>19</td> <td>380,000</td> <td>269.04</td> <td>1615.0</td> </tr> <tr> <td>20</td> <td>400,000</td> <td>283.20</td> <td>1700.0</td> </tr> <tr> <td>21</td> <td>420,000</td> <td>297.36</td> <td>1785.0</td> </tr> <tr> <td>22</td> <td>440,000</td> <td>311.52</td> <td>1870.0</td> </tr> <tr> <td>23</td> <td>460,000</td> <td>325.68</td> <td>1955.0</td> </tr> <tr> <td>24</td> <td>480,000</td> <td>339.84</td> <td>2040.0</td> </tr> <tr> <td>25</td> <td>500,000</td> <td>354.00</td> <td>2125.0</td> </tr> <tr> <td>26</td> <td>520,000</td> <td>368.16</td> <td>2210.0</td> </tr> <tr> <td>27</td> <td>540,000</td> <td>382.32</td> <td>2295.0</td> </tr> <tr> <td>28</td> <td>560,000</td> <td>396.48</td> <td>2380.0</td> </tr> <tr> <td>29</td> <td>580,000</td> <td>410.64</td> <td>2465.0</td> </tr> <tr> <td>30</td> <td>600,000</td> <td>424.80</td> <td>2550.0</td> </tr> <tr> <td>31</td> <td>620,000</td> <td>438.96</td> <td>2635.0</td> </tr> <tr> <td>32</td> <td>640,000</td> <td>453.12</td> <td>2720.0</td> </tr> <tr> <td>33</td> <td>660,000</td> <td>467.28</td> <td>2805.0</td> </tr> <tr> <td>34</td> <td>680,000</td> <td>481.44</td> <td>2890.0</td> </tr> <tr> <td>35</td> <td>700,000</td> <td>495.60</td> <td>2975.0</td> </tr> <tr> <td>36</td> <td>720,000</td> <td>509.76</td> <td>3060.0</td> </tr> <tr> <td>37</td> <td>740,000</td> <td>523.92</td> <td>3145.0</td> </tr> <tr> <td>38</td> <td>760,000</td> <td>538.08</td> <td>3230.0</td> </tr> <tr> <td>39</td> <td>780,000</td> <td>552.24</td> <td>3315.0</td> </tr> <tr> <td>40</td> <td>800,000</td> <td>566.40</td> <td>3400.0</td> </tr> <tr> <td>41</td> <td>820,000</td> <td>580.56</td> <td>3485.0</td> </tr> <tr> <td>42</td> <td>840,000</td> <td>594.72</td> <td>3570.0</td> </tr> <tr> <td>43</td> <td>860,000</td> <td>608.88</td> <td>3655.0</td> </tr> <tr> <td>44</td> <td>880,000</td> <td>623.04</td> <td>3740.0</td> </tr> <tr> <td>45</td> <td>900,000</td> <td>637.20</td> <td>3825.0</td> </tr> <tr> <td>46</td> <td>920,000</td> <td>651.36</td> <td>3910.0</td> </tr> <tr> <td>47</td> <td>940,000</td> <td>665.52</td> <td>3995.0</td> </tr> <tr> <td>48</td> <td>960,000</td> <td>679.68</td> <td>4080.0</td> </tr> <tr> <td>49</td> <td>980,000</td> <td>693.84</td> <td>4165.0</td> </tr> <tr> <td>50</td> <td>1,000,000</td> <td>708.00</td> <td>4250.0</td> </tr> </tbody> </table> <p>I am hoping to help expedite by asking the 3 underlined questions now & look forward to discussing on the 9th. Docs are attached for handy reference</p> <p>Thank you,</p> <p>MITCH MARROTT Office of Radiation Inspection Radiation Safety Division Washington State Department of Health mitchell_p_marshall@epa.gov 202-576-9043 www.epa.gov</p>	Stack	Flow Rate (cfm)	Flow Rate (m³/min)	Flow Rate (m³/hr)	1	20,000	14.16	85.0	2	40,000	28.32	170.0	3	60,000	42.48	255.0	4	80,000	56.64	340.0	5	100,000	70.80	425.0	6	120,000	84.96	510.0	7	140,000	99.12	595.0	8	160,000	113.28	680.0	9	180,000	127.44	765.0	10	200,000	141.60	850.0	11	220,000	155.76	935.0	12	240,000	169.92	1020.0	13	260,000	184.08	1105.0	14	280,000	198.24	1190.0	15	300,000	212.40	1275.0	16	320,000	226.56	1360.0	17	340,000	240.72	1445.0	18	360,000	254.88	1530.0	19	380,000	269.04	1615.0	20	400,000	283.20	1700.0	21	420,000	297.36	1785.0	22	440,000	311.52	1870.0	23	460,000	325.68	1955.0	24	480,000	339.84	2040.0	25	500,000	354.00	2125.0	26	520,000	368.16	2210.0	27	540,000	382.32	2295.0	28	560,000	396.48	2380.0	29	580,000	410.64	2465.0	30	600,000	424.80	2550.0	31	620,000	438.96	2635.0	32	640,000	453.12	2720.0	33	660,000	467.28	2805.0	34	680,000	481.44	2890.0	35	700,000	495.60	2975.0	36	720,000	509.76	3060.0	37	740,000	523.92	3145.0	38	760,000	538.08	3230.0	39	780,000	552.24	3315.0	40	800,000	566.40	3400.0	41	820,000	580.56	3485.0	42	840,000	594.72	3570.0	43	860,000	608.88	3655.0	44	880,000	623.04	3740.0	45	900,000	637.20	3825.0	46	920,000	651.36	3910.0	47	940,000	665.52	3995.0	48	960,000	679.68	4080.0	49	980,000	693.84	4165.0	50	1,000,000	708.00	4250.0		Clarification	<p>No change to document. Email on clarification sent from Mitch Marrott to DOH:</p>  <p>RE: [EXTERNAL]RE: REDOX AMP RCR Meeting</p> <p>Good morning, Crystal,</p> <p>Here are the three questions that I believe you would like addressed:</p> <ul style="list-style-type: none"> The proposed flows could range between 20,000cfm-60,000cfm, is this correct? <ul style="list-style-type: none"> That is not intended to be able to vary the stack flow rate to address the risk of the work at REDOX. NOTE: This is probably where we used the term "graded approach" to describe a risk based approach to the operational work and exposure to our workers at REDOX, rather than to describe a the PC category approach. Does the sample rate would be adjusted corresponding those potential stack flow rates as described in CP-ENG-0141 Table 1, can you verify if this is the intent? <ul style="list-style-type: none"> Our procedures REDOX-PRO-QP-54961, outlines the vacuum pressure readings for the sample pump that correspond with the flow rate of the stack, to maintain isokinetic sampling. The simplest evidence is the example OOC below showing you that our intent is to track Flow Rate (SCFH) changes and sample Vacuum (TSG) readings to maintain isokinetic sampling. Is there a reason continuous sampling cannot be achieved? <ul style="list-style-type: none"> This change will not impact continuous sampling. We are/will continuously sample. <p>We look forward to completing the new REDOX AMP with your comments and inputs. Please let me know if you have any other questions or follow-up questions.</p> <p>CPCCo Central Plateau Chem Company An American Fluoropolymer LLC A Fluoropolymer in the U.S. Department of Energy</p> <p>Mitch Marrott Environmental Protection Air SMC Environmental, Safety, Health & Quality (509) 373-7391 (509) 388-8999 mitchell_p_marshall@epa.gov www.epa.gov</p> <p>Data Sheet 2 - REDOX Stack Sampling Chain-Of-Custody</p> <p>Company: CPCCo Company Contact: Current Procedure Technical Authority</p> <p>Fiber 1: _____ Fiber 2: _____</p>		Close	CM
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