

ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670

(303) 412-1200

Boulder, CO 80308-0670

www.rockyflatssc.org

Jefferson County ~ Boulder County ~ City and County of Broomfield ~ City of Arvada ~ City of Boulder
City of Golden ~ City of Northglenn ~ City of Thornton ~ City of Westminster ~ Town of Superior
League of Women Voters ~ Rocky Flats Cold War Museum ~ Rocky Flats Homesteaders
Kim Griffiths

Board of Directors Meeting – Agenda

Monday, February 3, 2020, 8:30 – 11:15 AM

**Rocky Mountain Metropolitan Airport, Terminal Building, Mount Evans Room
11755 Airport Way, Broomfield, Colorado**

- 8:30 AM Convene/Introductions/Agenda Review
- 8:35 AM Chairman’s Review of January 13th Executive Committee meeting
- 8:40 AM Public Comment: Comments are limited to the Consent Agenda and non-agenda items
- 8:50 AM Business Items (briefing memo attached)
1. Elect Stewardship Council Officers for 2020
Action Item: Elect Officers
 2. Adopt 2020 Meeting Schedule and Notice Provisions Resolution
Action item: Adopt Resolution
 3. Consent Agenda: Approve meeting minutes and checks
 4. Executive Director’s Report
- 9:00 AM Host DOE Quarterly Meeting (briefing memo attached)
- o DOE will brief on site activities for the third quarter of 2019 (July – September).
 - o Activities include surface water monitoring, groundwater monitoring, ecological monitoring, and site operations (inspections, maintenance, etc.).

Public Comment on DOE's Quarterly Report: Comments must focus on DOE's Quarterly Report.

- 10:00 AM DOE Briefing on the Cleanup Levels and Protectiveness of the Remedy (briefing memo attached)
- DOE will discuss the basis for the cleanup standards, the decision to delist the lands that now comprise the Refuge and transportation corridor from CERCLA, risk, and related issues.
 - This conversation is foundational to CDPHE's April 2020 briefing on soil sampling by the Jefferson Parkway highway authority.

Public Comment on DOE's Presentation: Comments must focus on DOE's Presentation.

- 11:00 AM Board Roundtable – Big Picture/Additional Questions/Issue Identification
Adjourn

Upcoming Meetings: All dates are proposed and will be set at this meeting

April 6
June 8
September 14
October 26

Business Items

- Cover memo
- 2020 meeting dates resolution and notice provisions
- November 18, 2019, draft board meeting minutes
- List of Stewardship Council checks

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MEMORANDUM

TO: Board of Directors
FROM: David Abelson
SUBJECT: Business Items
DATE: January 15, 2020

As provided in the agenda, there are a number of actions the Board must take.

1. Elect Stewardship Council officers for 2020
2. Adopt 2020 Meeting Schedule and Notice Provisions Resolution
3. Consent Agenda – Approve minutes and checks

The first two items are discussed below.

Election of officers

In accordance with the Stewardship Council bylaws, “the Chair, Vice Chair, and Secretary/Treasurer shall be elected annually by the Board of Directors.” The terms commence at this meeting, and there are no limitations as to the number of terms one can serve. The following people have expressed interest in serving:

Joyce Downing (Northglenn) – Chair
Jan Kulmann (Thornton) – Vice Chair
Jeannette Hillery (League of Women Voters) – Secretary/Treasurer

If you are interested in serving, please let me know. Additional names can be added for consideration at the meeting.

ACTION ITEM: Elect the officers for 2020

Resolution Re: 2020 Meeting Schedule and Notice Provisions

Each year, the Board adopts a resolution establishing the meeting dates for the year. The proposed meeting calendar tracks the schedule the Board has followed for a number of years, with the exception of June, which is one week later than usual.

February 3 (first Monday of the month)

April 6 (first Monday of the month)

June 8 (second Monday of the month)
September 14 (second Monday of the month)
October 26 (fourth Monday of the month)

The attached notice provisions track the Stewardship Council's bylaws.

ACTION ITEM: Adopt the meeting schedule and notice resolution

**RESOLUTION
OF THE
BOARD OF DIRECTORS
OF
ROCKY FLATS STEWARDSHIP COUNCIL**

regarding

2020 MEETING SCHEDULE AND NOTICE PROVISIONS

WHEREAS, pursuant to an Intergovernmental Agreement dated as of February 13, 2006, and as amended thereafter, (the “IGA”), the Rocky Flats Stewardship Council (“Stewardship Council”) was established; and

WHEREAS, the Stewardship Council was created to allow local governments to work together on the continuing local oversight of the activities occurring on the Rocky Flats site to ensure that government and community interests are met with regards to long term stewardship of residual contamination and refuge management; and

WHEREAS, the Board of Directors of the Stewardship Council has a duty to perform certain obligations in order to assure the efficient operation of the Stewardship Council; and

WHEREAS, on March 6, 2006, the Board of Directors of the Stewardship Council adopted Bylaws regarding the operations of the Stewardship Council, governing, *inter alia*, meeting and notice requirements; and

WHEREAS, § 24-6-402, C.R.S., of the Colorado Sunshine Law, specifies the duty of the Board of Directors at its first regular meeting of the calendar year to designate a public posting place within the boundaries of the Stewardship Council for notices of meetings, in addition to any other means of notice; and

WHEREAS, pursuant to its Bylaws and Colorado laws, the Stewardship Council desires to establish its regular meeting schedule and location, and to designate its public posting place(s) for 2020.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE ROCKY FLATS STEWARDSHIP COUNCIL THAT:

1. Meeting Schedule/Location. The Board of Directors determines to hold regular meetings the **first Monday of February and April, the second Monday of June and September, and the fourth Monday of October at 8:30 AM** at the Rocky Mountain Metropolitan Airport Terminal Building, 11755 Airport Way, Broomfield, Colorado; and to hold special meetings as may be necessary, in accordance with the Bylaws of the Stewardship Council.

2. Regular Meeting Notice. The Board of Directors determines to annually post its regular meeting schedule at the Clerk and Recorder’s office of the following counties: Jefferson, Boulder, Broomfield, Adams and Weld; and at the City or Town Clerk’s Office of the following cities and/or towns: Arvada, Boulder, Broomfield, Westminster, Golden, Superior, Thornton, and Northglenn, for posting in a public place. In addition, the Board shall post its regular meeting schedule on the website established for the Stewardship Council. These notices shall remain posted throughout the year. At least seven (7) days advance notice of the regular meeting time, place and date shall be provided to the directors and

alternate directors, and to those members of the public who so request. The general nature of the business proposed to be transacted or the purpose of any meeting of the Board of Directors shall be specified in the notices of such meeting where possible.

3. Special Meeting Notice. In the event of a special meeting, a notice of such special meeting shall be posted at least seventy-two (72) hours in advance at the clerks' offices of the counties, cities and towns indicated above, for posting in a public place. At least seventy-two (72) hours advance notice of the special meeting time, place and date shall be provided to the directors and alternate directors, and to those members of the public who so request. The general nature of the business proposed to be transacted at or the purpose of any meeting of the Board of Directors shall be specified in the notices of such meeting where possible. The Board of Directors' ability to act on matters brought before it at a special meeting is restricted to those items specified in the notice.

4. Emergency Meeting Notice. Should the Board of Directors determine an emergency special meeting is necessary, a notice of such emergency meeting shall be posted at least twenty-four (24) hours in advance at the clerks' offices of the counties, cities and towns indicated above in accordance with the Colorado Open Meetings Act. The general nature of the business proposed to be transacted at, or the purpose of, any meeting of the Board of Directors shall be specified in the notices of such meeting where possible. The Board of Directors' ability to act on matters brought before it at a special meeting is restricted to those items specified in the notice.

5. Additional Notification. The Stewardship Council shall maintain a list of persons who, within the previous two years, have requested notification of all meetings, or of meetings with discussions of certain specified policies, and shall provide reasonable advance notification of such meetings to the individuals.

APPROVED AND ADOPTED THIS 3RD DAY OF FEBRUARY, 2020.

(SEAL)

ROCKY FLATS STEWARDSHIP COUNCIL

By: _____
Chair

ATTEST:

By: _____

ROCKY FLATS STEWARDSHIP COUNCIL
Monday, November 18, 8:30 – 11:00 AM
Rocky Mountain Metropolitan Airport, Terminal Building, Mount Evans Room
11755 Airport Way, Broomfield, Colorado

Board members in attendance: Sandra McDonald (Alternate, Arvada), Lisa Morzel (Director, City of Boulder), Mike Shelton (Director, Broomfield), Kim Groom (Alternate, Broomfield), David Allen (Alternate, Broomfield), Jim Dale (Director, Golden), Libby Szabo (Director, Jefferson County), Pat O’Connell (Alternate, Jefferson County), Joyce Downing (Director, Northglenn), Shelley Stanley (Alternate, Northglenn), Ken Lish (Alternate, Superior), Jan Kulmann (Director, Thornton), James Boswell (Alternate, Thornton), Kathryn Skulley (Director, Westminster), Jeannette Hillery (Director, League of Women Voters), Linda Porter (Alternate, League of Women Voters), Roman Kohler (Rocky Flats Homesteaders), Arthur Widdowfield (Director, Rocky Flats Cold War Museum), Ken Frieberg (Alternate, Rocky Flats Cold War Museum), Kim Griffiths.

Stewardship Council staff members and consultants in attendance: David Abelson (Executive Director), Melissa Weakley (Technical Program Manager), Cameron Richards (Seter & Vander Wall, P.C), Erin Rogers (consultant).

Attendees: Andy Keim (DOE-LM), Bob Darr (Navarro), Jeremy Wehner (Navarro), Linda Kaiser (Navarro), Nicole Lachance (Navarro), Jody Nelson (Navarro), Ryan Wisniewski (Navarro), John Boylan (Navarro), George Squibb (Navarro), Jennifer Opila (CDPHE), Lindsay Masters (CDPHE), Rob Beierle (CDPHE), Lindsey Archibald (CDPHE), Laura Dixon (CDPHE), Jeremy Rodriguez (Rep. Perlmutter), Ryan Hanson (Sen. Gardner), Bill Ray (Jefferson Parkway Public Highway Authority), Trea Nance (Woman Creek Reservoir Authority), Linda Hladik, David Wood, Bonnie Graham Reed, John Reed, Laura Hubbard (Broomfield), Lynn Segal, Carl Spreng, Elle Cushman, Erik Sween, Mark Hammer, Nancy Ford (Arvada City Council).

Convene/Agenda Review

Joyce Downing convened the meeting at 8:35 a.m. The first order of business was introductions of Board members and the audience. Joyce noted that the Executive Committee met prior to this meeting and had reviewed and approved the agenda for this meeting.

Public Comment

Lynn Segal suggested that the Stewardship Council have a discussion with Dr. Michael Ketterer about the significance of the large plutonium particle found by the Jefferson Parkway Authority.

Consent Agenda

The Board moved on to the consent agenda, which included approval of the minutes from the September meeting and the checks written since that meeting. Jim Dale moved to approve the September Board minutes and the checks. The motion was seconded by Lisa Morzel. The motion to accept the minutes and checks passed 13-0.

Executive Director’s Report

David Abelson began by congratulating Jan Kulmann on her election as Mayor of Thornton. He also noted that Mark McGoff (who was not present) from Arvada was term limited, so would not be returning to his position on the Stewardship Council. David said Mark had been great to work with, and

that he was a quiet but very engaged member who worked very closely with his staff and City Council. Also leaving his position was Mike Shelton of Broomfield. Mike spent eight years on the Stewardship Council, and David said his active engagement was very appreciated. Finally, Lisa Morzel of Boulder would not be returning for another term. She started with the predecessor organization to the Stewardship Council. David said that throughout her 20 years of engagement, she always looked for common ground, was a pleasure to work with and would be missed. Lisa thanked the group and expressed her belief that the Stewardship Council was not a place for politics. She said working with the scientific staff from the agencies had also been great, as was working with David.

David next provided an update on the status of questions and concerns about the original landfill that the Stewardship Council had forwarded to DOE in February 2019. He explained that the process had been pre-vetted with DOE, with the assurance that if followed the Stewardship Council would not run afoul of the Federal Advisory Committee Act (FACA). It was to both DOE and the Stewardship Council that DOE have the latitude to answer the questions posed by making sure that, upon forwarding the questions and concerns of the Stewardship Council members, the Stewardship Council itself would not be offering an advisory opinion. David explained that in April DOE received a directive from DOE's Office of General Counsel directing DOE to not respond. Joyce and David were notified of that decision in October. David said they were told that this response had been sitting in a DOE email box that apparently did not get checked. He said the effect of this decision was to place the Stewardship Council members at a disadvantage. This new determination by General Counsel puts the Stewardship Council members at a disadvantage. Unlike any other party that might offer its questions, concerns, or even recommendations to LM via the Stewardship Council, the Stewardship Council members are now prohibited from forwarding the collective view of the membership to DOE via the Stewardship Council. Stated another way, community advocacy groups are allowed to partner, to develop questions and recommendations, and to request that the Stewardship Council forward that opinion to DOE, but the Stewardship Council members are not afforded the same opportunity. Libby Szabo asked if the Chair could be the only signer when concerns were forwarded. She said the important thing was to get answers, and it did not matter who signed the letter. Mike Shelton said he would appreciate a written report on this issue from David to get it on the record. He also suggested that perhaps the governor could forward the questions to DOE. Ken Lish asked David to also outline potential workarounds in his report. He suggested an option in which all members would sign the letter, but the name of the Stewardship Council would be removed. Jim Dale asked if copies of the letter were sent to Representatives Perlmutter and Neguse. David said he believed it was, along with the Governor. Kathryn Skulley asked if members should push back via congressional representatives. David said he would keep the Stewardship Council updated on this issue.

Host DOE Quarterly Meeting

DOE briefed on site activities for the second quarter of 2019 (April-June). Activities included surface water monitoring, groundwater monitoring, ecological monitoring, and site operations (inspections, maintenance, etc.).

Surface Water Monitoring – George Squibb

George began with a quick review of the monitoring requirements and map of locations and monitoring sites, also what constituents they monitor.

At the Original Landfill (OLF), routine surface water sampling in Woman Creek downstream of the OLF (GS59) showed mean concentrations for all analytes below applicable RFLMA water-quality standards.

At the Present Landfill (PLF) sampling showed concentrations for all analytes below applicable RFLMA water-quality standards.

The 12-month rolling average plutonium concentrations at location SW027 was reportable through April 2019. This average was calculated from a single sample collected in 2018 with 0.16 picocurie per liter (pCi/L) Pu (the standard is 0.15 pCi/L). For more information about this, see RFLMA Contact Record 2019-01. There was no flow in 2019 until May 28. The composite sample started on May 28 is still in progress. Averages for May and June cannot be calculated until analytical results are available. Concentrations at the downstream Woman Creek Point of Compliance (WOMPOC) were not reportable.

No other Point of Evaluation (POE) or Point of Compliance (POC) analyte concentrations were reportable during the second quarter of 2019.

Lynn Segal asked for clarification about George's comment about needing to wait for enough flow to compare results. George explained that the analytical measurement was based on the volume of water available, and that the sampler was automated. He said that analysis required 4 liters in order to be completed. However, the result of 0.16 pCi/L is elevated and is essentially at the site-specific standard of 0.15 pCi/L. They also have not been seeing increased levels at the Point of Compliance downstream. He added that this was why these use a layered monitoring system. David Abelson added that the Rocky Flats water standard for plutonium (0.15 pCi/L) is one hundred times more protective (i.e., lower) than the applicable federal standard. David Wood asked why having very little flow off the 903 Pad was a good thing. George said it shows them that the revegetation was working, and less erosion was occurring.

Groundwater Monitoring – John Boylan

John first reviewed the RFLMA monitoring network, which includes:

- 10 Resource Conservation and Recovery Act (RCRA) wells (sampled quarterly to evaluate potential impacts from OLF and PLF)
- 9 Area of Concern (AOC) wells and one Surface Water Support location (sampled semiannually). These are located in drainages downstream of contaminant plumes and are evaluated for plumes discharging to surface water
- 27 Sentinel wells (sampled semiannually). These are downgradient of treatment systems, edges of plumes, and in drainages, and are used to look for plumes migrating to surface water and treatment system problems
- 42 evaluation wells (sampled biennially). These are located within plumes, near source areas, and interior of Central Operable Unit (COU) and are used to evaluate whether monitoring of an area or plume can cease
- 9 treatment system locations (seven are sampled semiannually, and two are quarterly)

During the quarter, all locations were sampled except Evaluation wells and the results were generally consistent with previous data. Data will be evaluated as part of the 2019 annual report. AOC well 10304 remains reportable for trichloroethene (TCE). This well monitors for impacts to surface water quality in Woman Creek. Woman Creek location SW10200 was concurrently sampled per Consultation Posting 010819 (see also Contact Record 2015-10). The result from 10304 was 3.5 micrograms per liter ($\mu\text{g/L}$) TCE (RFLMA standard: 2.5 $\mu\text{g/L}$). Comparatively, the result from SW10200 showed no TCE.

John noted that recent 4th quarter results in 10304 showed TCE below the standard.

Most scheduled locations were successfully sampled. Two wells were dry (Sentinel wells 90299 and 95299), which happens at these locations frequently. All treatment system locations were successfully sampled and results were consistent with previous sampling events.

The Mound/East Trenches system met all treatment targets. The Solar Ponds system met treatment targets for nitrate and reduced uranium concentrations from 80 µg/L to 35 µg/L (approximately 56% removed). A new uranium treatment system component is being developed to address this issue. Routine maintenance was also performed on these treatment systems.

David Allen referred to the consultation posting for TCE, and asked why this was not created as a Contact Record instead. Linda Kaiser (Navarro) said this was because it was tied back to the Contact Record 2015-10 addendum, which was available on the website. Jim Dale asked if the source site was remediated during closure. John said it was. Ken Lish referred to slide 17 and asked John to explain more about the modeling that showed that these results were expected. He asked whether the model showed that an exceedance would last so long. John said he did not know about that specifically, but that the information about the model was available online. Additional information could be found in the Groundwater IM/IRA (2004 or 2005), the Fate and Transport Study (2002), and a Water Balance study. Ken asked if they were sure that the elevated levels were attributable to the wet conditions. John said they have not seen these effects elsewhere, and that they will continue to watch. Kim Groom asked whether groundwater at Rocky Flats moved approximately a half inch per year. John said it depended on various factors. He explained that of the 12-13 inches of precipitation per year, about 90% of that was lost to evapotranspiration. Kim asked where the closest offsite groundwater well was located, and whether there was a need to monitor it. John explained that the impacted groundwater was very shallow above claystone bedrock. The plumes discharge to surface water before leaving the COU. Sandra asked how many times surface water at location SW10200 had been sampled since 2015. John said about 5-7 times, and all results were non-detect. David Allen said that shallow groundwater wells around the area were about 200-300 feet deep, and asked what depth they were onsite. John said that the deepest at Rocky Flats were 60-65 feet, and most were less deep. Mike Shelton asked if they needed large quantities of groundwater to sample. John said generally they did not large quantities. Lynn Segal asked what the implications to human health were from the TCE spike. George said that if you were drinking water from the site, you should have different water source. He added that TCE was not showing in surface water samples.

Site Operations – Jeremy Wehner

Quarterly sign inspections are part of RFLMA physical control requirements. Signs were inspected on May 15, 2019, and all were in good condition and legible.

Jeremy also reported on three monthly inspections at the OLF (April 15, May 17, and June 19). Minor erosion was found along central berm 5 channel as well as five small holes above berm 4. There were no weather-related inspections during the quarter. Settlement monuments were surveyed on June 10. Vertical settling was within design limits. A geotechnical slope stability evaluation was completed in September, including design of the slope stabilization project. A Request for Proposal was issued in May 2019.

The East Subsurface Drain continues to function as designed. At this location, the Seep 10 siphon operated during second quarter, with approximately 745,600 gallons diverted. This water would historically saturate and potentially destabilize the slump area as it flowed to the East Perimeter Channel. A temporary groundwater intercept system also operated during the second quarter. Since season startup on May 17, approximately 50,000 gallons were diverted by the end of June.

At the PLF, the quarterly inspection was on May 24 and there were no weather-related inspections. The landfill is in good condition. Routine maintenance was performed at the PLF Treatment System outlet.

At the North Walnut Creek Slump, there was continued data collection from piezometers where possible. Slump monitoring points were surveyed on April 15, May 6, and June 10. Maximum movement since baseline (September 5, 2017) was approximately two feet vertically. The scarp crack remained largely closed due to elk traffic in the area but was open 1/4 to 1/2 inch in places. Small cracking developed in the Interceptor Trench System Sump access road.

No site road maintenance was conducted during the second quarter but was being planned for summer (July).

Shelley Stanley asked if the groundwater interceptor at the OLF was actively pumping and whether it was working year-round. Jeremy said it was generally operating May through October. Shelley asked if the number of gallons pumped had gone down. Jeremy said it did not operate recently because of the stabilization project, but the rate was about the same. Mike Shelton asked if they would be replacing piezometers. Jeremy said they were no longer needed, and they were reducing the frequency of reading the remaining ones for the same reason. Lynn Segal asked what the piezometers were used for. Jeremy said they were used to determine whether groundwater was a determining factor in slope stability. She asked why they did not take them all out. Jeremy said they were not causing harm, so there was no reason to spend the money to remove them.

Site Ecology – Jody Nelson

Jody reported that ecology activities during the second quarter included:

- Weed mapping
- Commercial herbicide applications (treated approximately 251 acres) in the COU
- Spot herbicide control of small weed infestations in the COU
- Wetland water level monitoring and weed surveys
- Nest box surveys
- Prairie dog survey: None in COU
- Installation of tree cages around woody plants
- Continued installation of wildlife-friendly fence crossings

Kim Griffiths asked about the size of the elk herd onsite. Jody said there were at least 250. Lisa Morzel asked if they were actively tracking the herd. Jody said they were not, but that USFWS was looking at doing a collaring study.

CDPHE Update on State's Response to Plutonium Hot-Spot Along Indiana Street

Jennifer Opila, Division Director, Hazardous Material and Waste Management Division, was on hand to provide a brief update followed by Q&A. She had previously sent an email update, which was distributed to members of the Stewardship Council. She reviewed highlights from that email (see page 61 of Board meeting packet).

Jennifer said that CDPHE would be taking several steps to look at potential effects of contamination on both a Parkway construction worker and the outside area. They will be producing a map of the sample locations and results, which will be posted on their website. Additionally, they will be using the RESRAD model to look at what level of contamination could be left in place based on a particular dose. This tool is specifically designed to help determine the allowable residual radioactivity in site cleanup and has successfully been used in the past to evaluate potential doses from windblown plutonium in the area of Rocky Flats. CDPHE is also working with CSU to review some of the data and the sampling and analysis plan. Finally, CDPHE will be preparing a review of scientific literature addressing the potential effects of a specific particle of radioactive contamination as opposed to a homogenous type of distribution. CDPHE is expecting to have this work completed by April 2020. After completing these steps, CDPHE will determine if there are any additional measures that should be taken to protect public health during the construction of the Jefferson Parkway.

Pat O'Connell asked what would be shown on the map. Jennifer said it would be all the sampling data for the Rocky Mountain Greenway and the Jefferson Parkway. This would be at least 300 samples. Mike Shelton asked if they would also be looking at the dose for residents. Jennifer said that the construction worker scenario involves the highest exposure, but they would also be looking at offsite exposure. Mike asked how they chose RESRAD. Jennifer said it was used at Rocky Flats in order to make land release decisions. Mike referred to the statement that RESRAD had been 'successfully used' to make decisions. He said that rare cancers had been found in surrounding areas and asked how this could be called successful. Jennifer responded that RESRAD was the standard practice. David Abelson added that using RESRAD would also allow good comparison to past scenarios. Lindsey Masters (CDPHE) addressed the concern about rare cancers by noting that a review of the State Cancer Registry (which tracks every case of cancer in Colorado) showed no increased level of rare cancers around Rocky Flats. In fact, they were at or below the average incidence. Mike asked if this included Boulder. Libby Szabo asked if the registry included how long people have lived in Colorado. Lindsey said she would look into those questions. Libby asked if any similar sampling was done while Candelas was being built. Jennifer said she did not believe so. Kim Groom asked if they were increasing the sampling density due to finding of the hot particle. Jennifer noted the Parkway Authority did conduct step-out sampling, as well as more than 200 other samples, and nothing close to that level was found. She also reiterated that the State does not have regulatory authority for this project. Kim asked if the State would do additional sampling or wait for modeling results. She said they were waiting. Jennifer was also asked whether CSU was being asked to weigh in on sampling recommendations. She said their scope had not yet determined. David Abelson pointed out that the area in question was only a 300-foot right-of-way, so people should keep in mind how small it was. Shelley Stanley asked how the group would be notified about results. Jennifer said they would be sharing the information with David to distribute, as well as sending to a short list of interested stakeholders. Ken Lish noted that the link for RESRAD in the packet was not functional. Jennifer said she would resend.

Public Comment

Bonnie Graham Reed asked if the Colorado standard was 0.9 pCi/g. Jennifer said this was only a trigger point for evaluating construction techniques, not a standard. Bonnie said that 0.065 pCi/g was background level and that cancer was so much more rare before 1945 and the nuclear age. She said plutonium was developed to kill and is very dangerous. Regarding the construction worker scenario, she said she understood that precautions would be taken during construction but was concerned about winds later blowing contamination into neighborhoods. She said they needed to look beyond the construction worker. Lynn Segal said plutonium could not be treated like other materials. She said she did not understand why people were being allowed on the Refuge before this analysis was done. Jennifer said that these same analyses were done prior to the Refuge opening. Lynn asked why these studies were being done now. Jennifer said they were looking at new data specifically for the Jefferson Parkway project. David Abelson explained a bit about the historical context of past sampling efforts and noted that there was a wealth of information available online. Nancy Ford stated that the government should do a meta-analysis of this data for the community in layperson language. Jennifer said she was looking at improvements to the Rocky Flats part of the CDPHE website.

2020 Work Plan

The Board reviewed the draft 2020 Work Plan at the September meeting, and no changes were offered at the meeting. David pointed out one small change to what they reviewed last month. On page 2, 2020 Activities, item #2, a second sentence was added. David asked if there were any questions. Ken Lish suggested adding an item related to tracking CDPHE steps related to soil sampling. To do this, David will modify #3 by adding "...and others, including CDPHE's analysis". Mike Shelton said he also would like to get expert information from Dr. Ketterer. Other members said it would make more sense to hear from CSU. David Abelson said these items would be covered by the work plan, but it would be good practice not to mention specific individuals.

Jeannette Hillery moved to approve the 2020 Work Plan. The motion was seconded by Lisa Morzel. The motion passed 13-0.

2020 Budget

The Board reviewed the draft budget at the September meeting. No changes were offered. Ken Lish asked what ECA was and why their conferences were included in the budget. David said ECA was the Energy Communities Alliance, comprised of local government groups that surround DOE facilities. He explained that the Stewardship Council gets reimbursed more for travel expenses than the annual dues cost them as an affiliate member.

Cameron Richards, the Stewardship Council's legal counsel, explained the budget review process. Prior to finalizing the budget, the Stewardship Council must hold a budget hearing and allow time for public comment. Following the public hearing, the Stewardship Council must approve the budget resolution, and approval must occur before the end of each year. Joyce Downing officially opened the hearing for the 2020 budget. She asked for public comment. There being no public comment, the budget hearing was then closed.

Lisa Morzel made a motion to accept the 2020 budget. The motion was seconded by Jan Kulmann. The motion to approve the 2020 budget, appropriate the funds, and adopt the budget resolution was approved 13-0

New Member Selection

Two organizations applied for membership to the Rocky Flats Stewardship Council. These were both existing members; The League of Women Voters and the Rocky Flats Homesteaders. The vote was to approve up to two organizations for Board membership.

Mike Shelton asked what were outreach efforts were made to solicit applications. David Abelson said a variety of methods were used, including advertisements, email distribution list (approximately 130 names), website, and sharing by local governments and others. Murph Widdowfield said prior to his application, he saw it in the newspaper.

Jim Dale made a motion to accept the League of Women Voters and the Rocky Flats Homesteaders to continue as members of the Stewardship Council. The motion was seconded by Kathryn Skulley. The motion was approved 13-0

Board Roundtable

There were two updates from Stewardship Council members. Mike Shelton said Broomfield has been talking about reimbursing the Jefferson County Parkway Authority for their sampling. Jim Dale noted that former Stewardship Council member Laura Weinberg was elected Mayor of Golden.

Big Picture/Additional Questions/Issue Identification

February 3, 2020

Potential Business Items

- Elect 2020 Officers
- Adopt resolution re: 2020 meeting dates

Potential Briefing Items

- DOE quarterly update
- Understanding Risk - Introduction

April 6, 2020

Potential Business Items

- TBD

Potential Briefing Items

- Understanding Risk - Continued

June 8, 2020

Potential Business Items

- TBD

Potential Briefing Items

- TBD

Issues to watch:

- Soil sampling results, dam breach, uranium exceedances in surface water, trichloroethylene (TCE) exceedances in groundwater

The meeting was adjourned at 11:07 a.m.

Respectfully submitted by Erin Rogers.

Rocky Flats Stewardship Council
Check Detail 2020
 October 7, 2019 through January 17, 2020

Type	Num	Date	Name	Account	Paid Amount	Original Amount
Check		10/28/2019		CASH-Wells Fargo-Operating		-3.50
				Admin Services-Misc Services	-3.50	3.50
TOTAL					-3.50	3.50
Check		11/29/2019		CASH-Wells Fargo-Operating		-3.50
				Admin Services-Misc Services	-3.50	3.50
TOTAL					-3.50	3.50
Bill Pmt -Check	2010	11/13/2019	Seter & Vander Wall, P.C.	CASH-Wells Fargo-Operating		-2,507.54
Bill	79134	09/30/2019		Attorney Fees	-2,251.39	2,251.39
Bill	79400	10/31/2019		Attorney Fees	-256.15	256.15
TOTAL					-2,507.54	2,507.54
Bill Pmt -Check	2011	11/13/2019	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-484.50
Bill	19-74	10/31/2019		Accounting Fees	-484.50	484.50
TOTAL					-484.50	484.50
Bill Pmt -Check	2012	11/13/2019	Erin Rogers	CASH-Wells Fargo-Operating		-550.00
Bill	10/9/19 Invoice	09/30/2019		Personnel - Contract	-550.00	550.00
TOTAL					-550.00	550.00
Bill Pmt -Check	2013	11/13/2019	Crescent Strategies, LLC	CASH-Wells Fargo-Operating		-8,389.89
Bill	10/31/19 Billing	10/31/2019		Personnel - Contract	-7,750.00	7,750.00
				TRAVEL-Local	-19.72	19.72
				Postage	-15.99	15.99
				Telecommunications	-92.58	92.58
				Meeting Expense	-200.00	200.00
				TRAVEL-Out of State	-311.60	311.60
TOTAL					-8,389.89	8,389.89
Check	2014	11/13/2019	Century Link	CASH-Wells Fargo-Operating		-25.98
				Telecommunications	-25.98	25.98
TOTAL					-25.98	25.98
Check	2015	12/08/2019	Century Link	CASH-Wells Fargo-Operating		-26.35
				Telecommunications	-26.35	26.35
TOTAL					-26.35	26.35
Bill Pmt -Check	2016	12/08/2019	Blue Sky Bistro	CASH-Wells Fargo-Operating		-206.25
Bill	3780	11/30/2019		Misc Expense-Local Government	-206.25	206.25
TOTAL					-206.25	206.25
Bill Pmt -Check	2017	12/08/2019	Crescent Strategies, LLC	CASH-Wells Fargo-Operating		-8,703.79
Bill	11/30/19 Billing	11/30/2019		Personnel - Contract	-7,750.00	7,750.00
				TRAVEL-Local	-98.02	98.02
				Postage	-15.99	15.99
				Telecommunications	-92.58	92.58
				TRAVEL-Out of State	-747.20	747.20
TOTAL					-8,703.79	8,703.79
Bill Pmt -Check	2018	12/08/2019	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-142.50
Bill	19-79	11/30/2019		Accounting Fees	-142.50	142.50
TOTAL					-142.50	142.50
Bill Pmt -Check	2019	12/08/2019	Seter & Vander Wall, P.C.	CASH-Wells Fargo-Operating		-980.09
Bill	79454	11/30/2019		Attorney Fees	-980.09	980.09
TOTAL					-980.09	980.09

Rocky Flats Stewardship Council
Check Detail 2020
 October 7, 2019 through January 17, 2020

Type	Num	Date	Name	Account	Paid Amount	Original Amount
Check	2020	01/04/2020	Century Link	CASH-Wells Fargo-Operating		-25.71
				Telecommunications	-25.71	25.71
TOTAL					-25.71	25.71
Bill Pmt -Check	2021	01/04/2020	Crescent Strategies, LLC	CASH-Wells Fargo-Operating		-8,251.88
Bill	12/31/19 Billing	12/31/2019		Personnel - Contract	-7,750.00	7,750.00
				TRAVEL-Local	-26.10	26.10
				Postage	-371.99	371.99
				Telecommunications	-103.79	103.79
TOTAL					-8,251.88	8,251.88
Bill Pmt -Check	2022	01/04/2020	Erin Rogers	CASH-Wells Fargo-Operating		-700.00
Bill	12/21/19 Invoice	12/21/2019		Personnel - Contract	-550.00	550.00
				Website	-150.00	150.00
TOTAL					-700.00	700.00
Bill Pmt -Check	2023	01/04/2020	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-266.00
Bill	19-82	12/31/2019		Accounting Fees	-266.00	266.00
TOTAL					-266.00	266.00

DOE Quarterly Report

- Cover memo
- Selection of quarterly report

DOE Cleanup Briefing

- Cover memo
- May 2015 board briefing memo

ROCKY FLATS STEWARDSHIP COUNCIL

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Jefferson County ~ Boulder County ~ City and County of Broomfield ~ City of Arvada ~ City of Boulder
City of Golden ~ City of Northglenn ~ City of Thornton ~ City of Westminster ~ Town of Superior
League of Women Voters ~ Rocky Flats Cold War Museum ~ Rocky Flats Homesteaders
Kim Griffiths

MEMORANDUM

TO: Stewardship Council Board of Directors
FROM: Melissa Weakley
SUBJECT: DOE's Quarterly Report (3rd Quarter 2019) Briefing
DATE: January 15, 2020

DOE will present an overview its Quarterly Report of Site Surveillance and Maintenance Activities for the Third Quarter of 2019, which can be accessed here:

https://www.lm.doe.gov/Rocky_Flats/3Q19_RFS.pdf. This report includes information on the remedy-related surveillance, monitoring, and maintenance activities conducted at Rocky Flats during the third quarter (July 1 to September 30) of calendar year 2019.

Quarterly Report highlights are included below.

- **Present Landfill (PLF):** The PLF quarterly inspection was conducted on August 14, 2019. A weather-related inspection (in response to heavy rainfall) was performed on July 3, 2019. No issues were observed during either inspection.
- **Original Landfill (OLF):** The OLF monthly inspections were conducted on July 18, August 20, and September 17, 2019. A weather-related inspection was conducted on July 3, 2019. Mobilization for the OLF Stabilization Project began in August 2019.
 - During the weather-related inspection, evidence of erosion was noted, which included excess sediment buildup along the east supporting hillside's erosion control wattles and within the lower East Perimeter Channel. The sediment buildup was documented and removed using hand tools (see attached figure).
 - During the August inspection, a 14-foot-long tension crack (depth unknown) near the regraded 2017 slump area, as well as two 0.5-inch-diameter holes (1 to 2 inches deep) near Berm 4, were documented and filled in (see attached figure).
 - During the September inspection, the holes did not reappear; however, the previous month's tension crack and at least five other cracks nearby were visible. Crack lengths varied from 6 to 14 feet with depths from 6 to 13 inches. The cracks were documented and addressed during the OLF Stabilization Project.
 - The Seep 10 siphon was operational during the third quarter of 2019.
 - The temporary groundwater intercept system was operated from May 17 through September 25. The system was shut down in late September to allow for OLF construction.
- **Additional Weather-Related Inspections:** Weather-related inspections were performed on July 2, 2019, in the Central Operable Unit (COU), including former building areas 371/374, 771, 881, and

991, along with the Ash Pits and East Trenches. No new slumps or significant changes were noted at the former building areas, and conditions at the Ash Pits and East Trenches were unchanged.

- **Groundwater Treatment Systems (East Trenches Plume Treatment System, Mound Site Plume Collection System, Solar Ponds Plume Treatment System, and Present Landfill Treatment System):** Routine maintenance of all four systems was performed. No issues were noted.
- **Groundwater Monitoring:** Ten RFLMA monitoring locations were sampled during the third quarter (see attached figure). Results were generally consistent with previous data and will be evaluated as part of the annual report for 2019.
- **Surface Water Monitoring:** During the third quarter, 12 flow-paced, composite surface water samples, 5 surface water grab samples, and 12 treatment system grab samples were collected and analyzed (see attached figure).
 - **Plutonium:** Point of Evaluation (POE) monitoring location SW027, at the end of the South Interceptor Ditch at the inlet to Pond C-2, was reportable for plutonium during the second quarter of 2019. The 12-month rolling averages for plutonium (0.159 pCi/L) exceeded the RFLMA standard (0.15 pCi/L), resulting in a reportable condition at SW027 from June 2018 through April 2019. Due to low flow, however, the 12-month rolling average values include results from only a single composite sample collected on May 3–4, 2018. Analytical results are pending for May through September 2019 as the required volume for analysis is still being collected. Therefore, averages for those months cannot be calculated at this time.
 - All other analyte concentrations at RFLMA POE locations GS10, SW027, and SW093 remained below reportable condition levels throughout the third quarter of 2019.
 - All analyte concentrations at RFLMA Point of Compliance (POC) locations WALPOC and WOMPOC remained below reportable condition levels throughout the third quarter of 2019.

Attached are a few selections from the quarterly report: Table of Contents, List of Figures, and Appendices; a map of the Original Landfill; and a map showing surface water and groundwater monitoring locations. After the figures is a table containing the analytical results for water samples collected in the third quarter of 2019.

Attachments

Third Quarter 2019 Report Cover Page, Table of Contents, and Abbreviations

Original Landfill Figure

Rocky Flats Site Water Monitoring Location Figure

Analytical Results for Water Sampling

**Rocky Flats Site, Colorado,
Quarterly Report of
Site Surveillance and
Maintenance Activities
Third Quarter
Calendar Year 2019**

January 2020



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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Appendix A	Landfill Inspection Forms and Survey Data, Third Quarter 2019
Appendix B	Analytical Results for Water Samples, Third Quarter 2019

Abbreviations

Am	americium
AMP	Adaptive Management Plan
AOC	Area of Concern
BMP	best management practice
CAD/ROD	Corrective Action Decision/Record of Decision
COU	Central Operable Unit
CY	calendar year
DOE	U.S. Department of Energy
EPC	East Perimeter Channel
ESSD	East Subsurface Drain
ETPTS	East Trenches Plume Treatment System
ft ³	cubic feet
IC	institutional control
ITS	Interceptor Trench System
ITSS	Interceptor Trench System sump
LM	Office of Legacy Management
µg/L	micrograms per liter
mg/L	milligrams per liter
MSPCS	Mound Site Plume Collection System
MSPTS	Mound Site Plume Treatment System
N	nitrogen
NTP	Notice to Proceed
NWCS	North Walnut Creek Slump
OLF	Original Landfill
pCi/L	picocuries per liter
PLF	Present Landfill
PLFTS	Present Landfill Treatment System
PMJM	Preble's meadow jumping mouse
POC	Point of Compliance
POE	Point of Evaluation
Pu	plutonium
RCRA	Resource Conservation and Recovery Act
RFLMA	<i>Rocky Flats Legacy Management Agreement</i>
RFSOG	<i>Rocky Flats Site, Colorado, Site Operations Guide</i>
SPPTS	Solar Ponds Plume Treatment System
USFWS	U.S. Fish and Wildlife Service

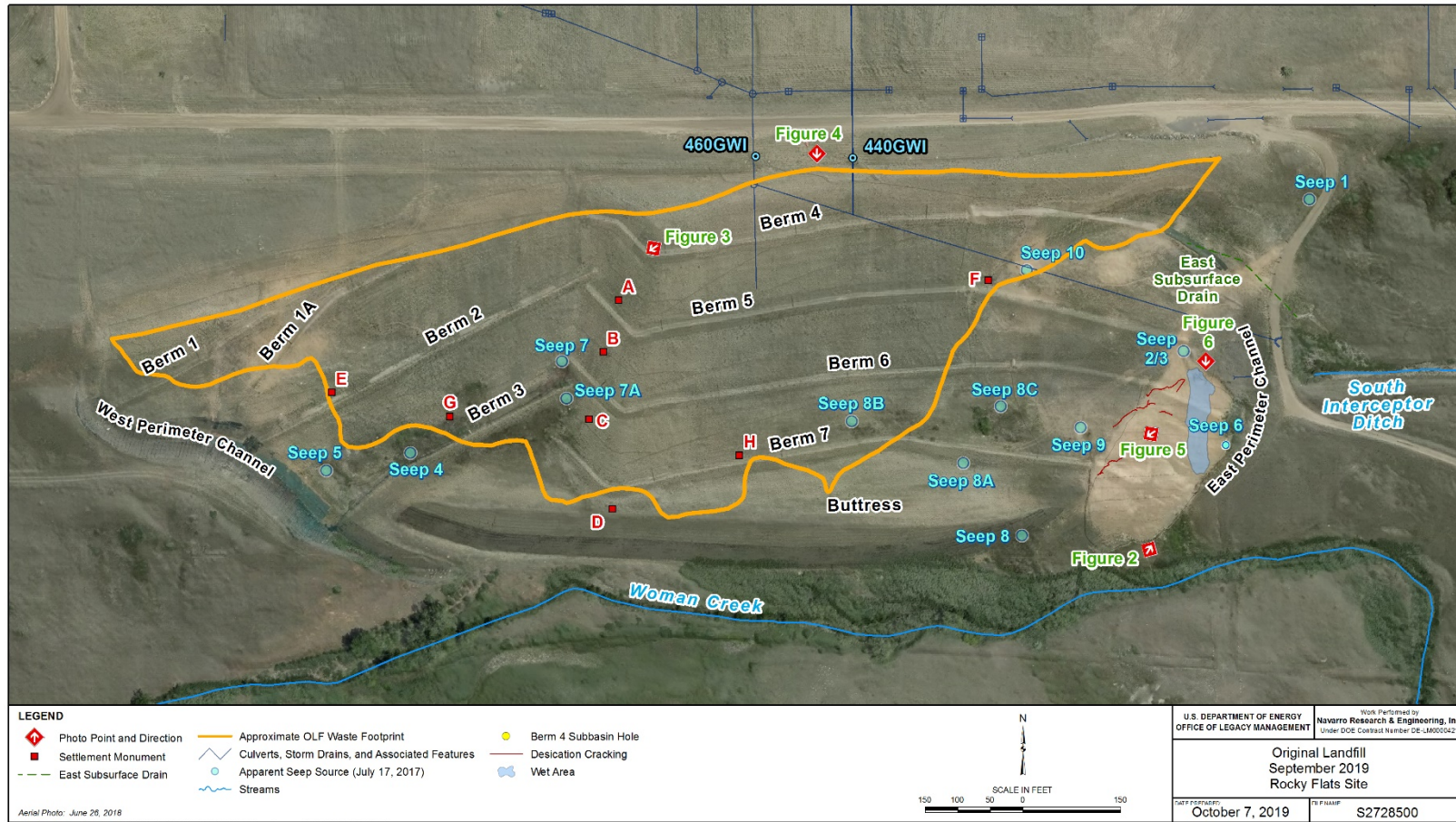


Figure 1. OLF Key Features and Locations, and Direction of Report Figure Photographs, Rocky Flats Site, Colorado

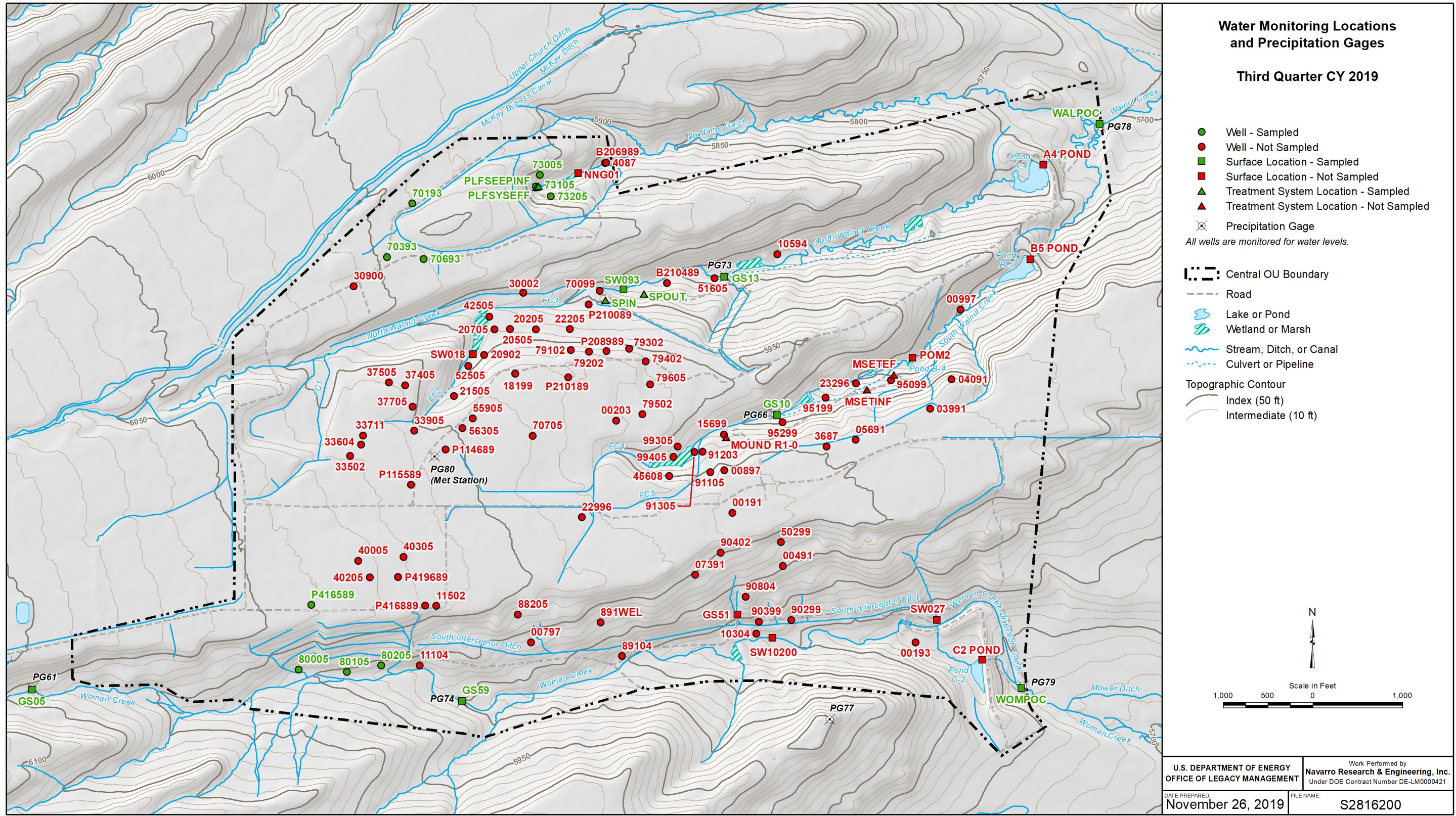


Figure 1. Rocky Flats Site Water Monitoring Locations and Precipitation Gauges

Appendix B

Analytical Results for Water Samples—Third Quarter CY 2019

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
70193	WL	7/15/2019	RFS01-10.1907018-001	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7440-38-2	Arsenic	Y	0.33	ug/L	U	F	0.33		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7440-41-7	Beryllium	Y	0.08	ug/L	U	F	0.08		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7440-42-8	Boron	Y	18	ug/L	J B	F	4.4		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	75-25-2	Bromoform	N	0.46	ug/L	U N	F	0.46		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7440-47-3	Chromium	Y	0.5	ug/L	U	F	0.5		FJQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7440-50-8	Copper	Y	0.56	ug/L	U	F	0.56		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7439-92-1	Lead	Y	0.18	ug/L	U	F	0.18		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7439-97-6	Mercury	Y	0.027	ug/L	U	F	0.027		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	91-20-3	Naphthalene	N	0.22	ug/L	U	F	0.22		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7440-02-0	Nickel	Y	0.3	ug/L	U	F	0.3		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7782-49-2	Selenium	Y	3.8	ug/L	U	F	0.37		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7440-22-4	Silver	Y	0.033	ug/L	U	F	0.033		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7440-61-1	Uranium	Y	0.06	ug/L	J	F	0.05		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1		FQ	G	STD
70193	WL	7/15/2019	RFS01-10.1907018-001	7440-66-6	Zinc	Y	3.3	ug/L	J B	F	2		FJQU	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	D	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	D	0.21		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	D	0.27		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	75-35-4	1,1-Dichloroethene	N	1.2	ug/L	U	F	0.23		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	75-35-4	1,1-Dichloroethene	N	1.1	ug/L	U	D	0.23		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	D	0.21		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	D	0.15		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	D	0.13		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	D	0.18		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	D	0.13		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	D	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7440-38-2	Arsenic	Y	0.33	ug/L	U	F	0.33		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7440-38-2	Arsenic	Y	0.33	ug/L	U	D	0.33		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	71-43-2	Benzene	N	0.16	ug/L	U	D	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7440-41-7	Beryllium	Y	0.088	ug/L	J	F	0.08		FQ	G	STD

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
70393	WL	7/15/2019	RFS01-10.1907018-015	7440-41-7	Beryllium	Y	0.08	ug/L	U	D	0.08		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7440-42-8	Boron	Y	9.9	ug/L	J B	F	4.4		FQU	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7440-42-8	Boron	Y	7.3	ug/L	J B	D	4.4		FQU	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	75-25-2	Bromoform	N	0.46	ug/L	U N	F	0.46		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	75-25-2	Bromoform	N	0.46	ug/L	U N	D	0.46		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7440-43-9	Cadmium	Y	0.27	ug/L	U	D	0.27		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	D	0.19		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	108-90-7	Chlorobenzene	N	0.17	ug/L	U	D	0.17		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	67-66-3	Chloroform	N	0.16	ug/L	U	D	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	74-87-3	Chloromethane	N	0.3	ug/L	U	D	0.3		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7440-47-3	Chromium	Y	0.5	ug/L	U	F	0.5		FJQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7440-47-3	Chromium	Y	0.5	ug/L	U	D	0.5		FJQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	D	0.15		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7440-50-8	Copper	Y	0.56	ug/L	U	F	0.56		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7440-50-8	Copper	Y	0.56	ug/L	U	D	0.56		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	100-41-4	Ethylbenzene	N	0.16	ug/L	U	D	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	D	0.36		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7439-92-1	Lead	Y	0.18	ug/L	U	F	0.18		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7439-92-1	Lead	Y	0.18	ug/L	U	D	0.18		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7439-97-6	Mercury	Y	0.027	ug/L	U	F	0.027		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7439-97-6	Mercury	Y	0.027	ug/L	U	D	0.027		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	75-09-2	Methylene chloride	N	0.94	ug/L	U	D	0.94		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	91-20-3	Naphthalene	N	0.22	ug/L	U	F	0.22		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	91-20-3	Naphthalene	N	0.22	ug/L	U	D	0.22		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7440-02-0	Nickel	Y	1.6	ug/L	J	F	0.3		FJQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7440-02-0	Nickel	Y	1.2	ug/L	J	F	0.3		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7440-02-0	Nickel	Y	1.2	ug/L	J	D	0.3		FJQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7782-49-2	Selenium	Y	1	ug/L	J	F	0.37		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7782-49-2	Selenium	Y	1.1	ug/L	J	D	0.37		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7440-22-4	Silver	Y	0.033	ug/L	U	F	0.033		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7440-22-4	Silver	Y	0.033	ug/L	U	D	0.033		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	100-42-5	Styrene	N	0.36	ug/L	U	D	0.36		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	127-18-4	Tetrachloroethene	N	0.95	ug/L	J	F	0.2		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	127-18-4	Tetrachloroethene	N	0.97	ug/L	J	D	0.2		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	108-88-3	Toluene	N	0.17	ug/L	U	D	0.17		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	1330-20-7	Total Xylenes	N	0.19	ug/L	U	D	0.19		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	D	0.15		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	79-01-6	Trichloroethene	N	5	ug/L	F	F	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	79-01-6	Trichloroethene	N	4.9	ug/L	D	D	0.16		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7440-61-1	Uranium	Y	0.091	ug/L	J	F	0.05		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7440-61-1	Uranium	Y	0.05	ug/L	U	D	0.05		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	75-01-4	Vinyl chloride	N	0.1	ug/L	U	D	0.1		FQ	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7440-66-6	Zinc	Y	21	ug/L	B	F	2		R	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-002	7440-66-6	Zinc	Y	3	ug/L	J B	F	2		FQU	G	STD
70393	WL	7/15/2019	RFS01-10.1907018-015	7440-66-6	Zinc	Y	2.6	ug/L	J B	D	2		FQU	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13		F	G	STD

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
70693	WL	7/15/2019	RFS01-10.1907018-003	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7440-38-2	Arsenic	Y	0.33	ug/L	U	F	0.33		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7440-41-7	Beryllium	Y	0.08	ug/L	U	F	0.08		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7440-42-8	Boron	Y	.31	ug/L	B	F	4.4		FU	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	75-25-2	Bromoform	N	0.46	ug/L	U N	F	0.46		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7440-47-3	Chromium	Y	0.5	ug/L	U	F	0.5		FJ	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7440-50-8	Copper	Y	0.56	ug/L	U	F	0.56		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7439-92-1	Lead	Y	0.18	ug/L	U	F	0.18		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7439-97-6	Mercury	Y	0.027	ug/L	U	F	0.027		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	91-20-3	Naphthalene	N	0.22	ug/L	U	F	0.22		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7440-02-0	Nickel	Y	0.62	ug/L	J	F	0.3		FJ	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7782-49-2	Selenium	Y	1	ug/L	J	F	0.37		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7440-22-4	Silver	Y	0.033	ug/L	U	F	0.033		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	79-01-6	Trichloroethene	N	0.81	ug/L	J	F	0.16		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7440-61-1	Uranium	Y	0.05	ug/L	U	F	0.05		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1		F	G	STD
70693	WL	7/15/2019	RFS01-10.1907018-003	7440-86-6	Zinc	Y	3.6	ug/L	J B	F	2		FU	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7440-38-2	Arsenic	Y	0.33	ug/L	U	F	0.33		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7440-41-7	Beryllium	Y	0.08	ug/L	U	F	0.08		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7440-42-8	Boron	Y	40	ug/L	B	F	4.4		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	75-25-2	Bromoform	N	0.46	ug/L	U N	F	0.46		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7440-47-3	Chromium	Y	0.5	ug/L	U	F	0.5		FJQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7440-50-8	Copper	Y	0.56	ug/L	U	F	0.56		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7439-92-1	Lead	Y	0.18	ug/L	U	F	0.18		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7439-97-6	Mercury	Y	0.027	ug/L	U	F	0.027		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	91-20-3	Naphthalene	N	0.22	ug/L	U	F	0.22		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7440-02-0	Nickel	Y	0.93	ug/L	J	F	0.3		FJQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7782-49-2	Selenium	Y	4.8	ug/L	U	F	0.37		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7440-22-4	Silver	Y	0.033	ug/L	U	F	0.033		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19		FQ	G	STD

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
73005	WL	7/15/2019	RFS01-10.1907018-004	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7440-61-1	Uranium	Y	37	ug/L	U	F	0.05		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1		FQ	G	STD
73005	WL	7/15/2019	RFS01-10.1907018-004	7440-66-6	Zinc	Y	5.7	ug/L	J B	F	2		FQJ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7440-38-2	Arsenic	Y	0.33	ug/L	U	F	0.33		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7440-41-7	Beryllium	Y	0.08	ug/L	U	F	0.08		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7440-42-8	Boron	Y	110	ug/L	B	F	4.4		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	75-25-2	Bromoform	N	0.46	ug/L	U N	F	0.46		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7440-47-3	Chromium	Y	0.5	ug/L	U	F	0.5		FJQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7440-50-8	Copper	Y	0.56	ug/L	U	F	0.56		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7439-92-1	Lead	Y	0.18	ug/L	U	F	0.18		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7439-97-6	Mercury	Y	0.027	ug/L	U	F	0.027		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	91-20-3	Naphthalene	N	0.22	ug/L	U	F	0.22		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7440-02-0	Nickel	Y	3.9	ug/L	U	F	0.3		FJQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7782-49-2	Selenium	Y	0.37	ug/L	U	F	0.37		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7440-22-4	Silver	Y	0.033	ug/L	U	F	0.033		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7440-61-1	Uranium	Y	21	ug/L	U	F	0.05		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1		FQ	G	STD
73105	WL	7/16/2019	RFS01-10.1907018-005	7440-66-6	Zinc	Y	6.2	ug/L	J B	F	2		FQJ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7440-38-2	Arsenic	Y	0.57	ug/L	J	F	0.33		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7440-41-7	Beryllium	Y	0.08	ug/L	U	F	0.08		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7440-42-8	Boron	Y	62	ug/L	B	F	4.4		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	75-25-2	Bromoform	N	0.46	ug/L	U N	F	0.46		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7440-47-3	Chromium	Y	0.5	ug/L	U	F	0.5		FJQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
73205	WL	7/16/2019	RFS01-10.1907018-006	7440-50-8	Copper	Y	0.72	ug/L	J	F	0.56		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7439-92-1	Lead	Y	0.18	ug/L	U	F	0.18		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7439-97-6	Mercury	Y	0.027	ug/L	U	F	0.027		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	91-20-3	Naphthalene	N	0.22	ug/L	U	F	0.22		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7440-02-0	Nickel	Y	1.9	ug/L	J	F	0.3		FJQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7782-49-2	Selenium	Y	290	ug/L	F	F	0.37		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7440-22-4	Silver	Y	0.033	ug/L	U	F	0.033		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7440-61-1	Uranium	Y	110	ug/L	U	F	0.05		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1		FQ	G	STD
73205	WL	7/16/2019	RFS01-10.1907018-006	7440-66-6	Zinc	Y	4.2	ug/L	J/B	F	2		FQU	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	91-58-7	2-Chloronaphthalene	N	0.25	ug/L	U	F	0.25		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-008	83-32-9	Acenaphthene	N	0.011	ug/L	U	F	0.011		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-008	120-12-7	Anthracene	N	0.014	ug/L	U	F	0.014		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7440-38-2	Arsenic	Y	0.33	ug/L	U	F	0.33		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-008	50-32-8	Benzo(a)pyrene	N	0.005	ug/L	U	F	0.005		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-008	191-24-2	Benzo(g,h,i)Perylene	N	0.008	ug/L	U	F	0.008		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7440-41-7	Beryllium	Y	0.08	ug/L	U	F	0.08		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	108-60-1	Bis(2-chloroisopropyl) ether	N	0.27	ug/L	U	F	0.27		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	117-81-7	Bis(2-ethylhexyl) phthalate	N	0.69	ug/L	J	F	0.53		FQU	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7440-42-8	Boron	Y	42	ug/L	B	F	4.4		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	75-25-2	Bromoform	N	0.46	ug/L	U/N	F	0.46		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7440-47-3	Chromium	Y	0.5	ug/L	U	F	0.5		FJQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-008	218-01-9	Chrysene	N	0.012	ug/L	U	F	0.012		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7440-50-8	Copper	Y	0.56	ug/L	U	F	0.56		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-008	53-70-3	Dibenz(a,h)anthracene	N	0.0047	ug/L	U	F	0.0047		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	84-66-2	Diethyl phthalate	N	0.36	ug/L	U	F	0.36		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	131-11-3	Dimethyl phthalate	N	0.2	ug/L	U	F	0.2		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	84-74-2	Di-n-butyl phthalate	N	1.1	ug/L	U	F	1.1		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-008	206-44-0	Fluoranthene	N	0.034	ug/L	U	F	0.034		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-008	86-73-7	Fluorene	N	0.018	ug/L	U	F	0.018		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	67-72-1	Hexachloroethane	N	0.93	ug/L	U	F	0.93		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	78-59-1	Isophorone	N	0.2	ug/L	U	F	0.2		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7439-92-1	Lead	Y	0.18	ug/L	U	F	0.18		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7439-97-6	Mercury	Y	0.027	ug/L	U	F	0.027		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-008	91-20-3	Naphthalene	N	0.0052	ug/L	U	F	0.0052		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7440-02-0	Nickel	Y	0.73	ug/L	J	F	0.3		FJQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-008	129-00-0	Pyrene	N	0.0079	ug/L	U	F	0.0079		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7782-49-2	Selenium	Y	0.45	ug/L	J	F	0.37		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7440-22-4	Silver	Y	0.16	ug/L	J	F	0.033		FQ	G	STD

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
80005	WL	7/16/2019	RFS01-10.1907018-007	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7440-61-1	Uranium	Y	7.5	ug/L	U	F	0.05		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1		FQ	G	STD
80005	WL	7/16/2019	RFS01-10.1907018-007	7440-66-6	Zinc	Y	3.1	ug/L	J B	F	2		FQU	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	91-58-7	2-Chloronaphthalene	N	0.26	ug/L	U	F	0.26		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-010	83-32-9	Acenaphthene	N	0.011	ug/L	U	F	0.011		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-010	120-12-7	Anthracene	N	0.014	ug/L	U	F	0.014		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7440-38-2	Arsenic	Y	0.33	ug/L	U	F	0.33		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-010	50-32-8	Benzo(a)pyrene	N	0.0051	ug/L	U	F	0.0051		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-010	191-24-2	Benzo(g,h,i)Perylene	N	0.0081	ug/L	U	F	0.0081		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7440-41-7	Beryllium	Y	0.08	ug/L	U	F	0.08		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	108-60-1	Bis(2-chloroisopropyl) ether	N	0.28	ug/L	U	F	0.28		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	117-81-7	Bis(2-ethylhexyl) phthalate	N	0.56	ug/L	U	F	0.56		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7440-42-8	Boron	Y	120	ug/L	B	F	4.4		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	75-25-2	Bromoform	N	0.46	ug/L	U N	F	0.46		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7440-47-3	Chromium	Y	0.5	ug/L	U	F	0.5		FJQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-010	218-01-9	Chrysene	N	0.012	ug/L	U	F	0.012		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7440-50-8	Copper	Y	0.56	ug/L	U	F	0.56		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-010	53-70-3	Dibenz(a,h)anthracene	N	0.0048	ug/L	U	F	0.0048		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	84-66-2	Diethyl phthalate	N	0.38	ug/L	U	F	0.38		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	131-11-3	Dimethyl phthalate	N	0.21	ug/L	U	F	0.21		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	84-74-2	Di-n-butyl phthalate	N	1.2	ug/L	U	F	1.2		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-010	206-44-0	Fluoranthene	N	0.035	ug/L	U	F	0.035		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-010	86-73-7	Fluorene	N	0.019	ug/L	U	F	0.019		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	67-72-1	Hexachloroethane	N	0.99	ug/L	U	F	0.99		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	78-59-1	Isophorone	N	0.21	ug/L	U	F	0.21		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7439-92-1	Lead	Y	0.18	ug/L	U	F	0.18		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7439-97-6	Mercury	Y	0.027	ug/L	U	F	0.027		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-010	91-20-3	Naphthalene	N	0.0053	ug/L	U	F	0.0053		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7440-02-0	Nickel	Y	0.53	ug/L	J	F	0.3		FJQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-010	129-00-0	Pyrene	N	0.0081	ug/L	U	F	0.0081		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7782-49-2	Selenium	Y	0.37	ug/L	U	F	0.37		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7440-22-4	Silver	Y	0.033	ug/L	U	F	0.033		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7440-61-1	Uranium	Y	14	ug/L	U	F	0.05		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1		FQ	G	STD
80105	WL	7/16/2019	RFS01-10.1907018-009	7440-66-6	Zinc	Y	3.1	ug/L	J B	F	2		FQU	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16		FQ	G	STD

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
80205	WL	7/17/2019	RFS01-10.1907018-011	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	91-58-7	2-Chloronaphthalene	N	0.25	ug/L	U	F	0.25		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-012	83-32-9	Acenaphthene	N	0.01	ug/L	U	F	0.01		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-012	120-12-7	Anthracene	N	0.013	ug/L	U	F	0.013		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7440-38-2	Arsenic	Y	0.33	ug/L	U	F	0.33		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-012	50-32-8	Benzo(a)pyrene	N	0.0049	ug/L	U S	F	0.0049		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-012	191-24-2	Benzo(g,h,i)Perylene	N	0.0077	ug/L	U S	F	0.0077		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7440-41-7	Beryllium	Y	0.08	ug/L	U	F	0.08		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	108-60-1	Bis(2-chloroisopropyl) ether	N	0.27	ug/L	U	F	0.27		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	117-81-7	Bis(2-ethylhexyl) phthalate	N	0.53	ug/L	U	F	0.53		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7440-42-8	Boron	Y	72	ug/L	B	F	4.4		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	75-25-2	Bromoform	N	0.46	ug/L	U N	F	0.46		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7440-47-3	Chromium	Y	0.5	ug/L	U	F	0.5		FJQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-012	218-01-9	Chrysenes	N	0.012	ug/L	U S	F	0.012		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7440-50-8	Copper	Y	0.56	ug/L	U	F	0.56		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-012	53-70-3	Dibenz(a,h)anthracene	N	0.0046	ug/L	U S	F	0.0046		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	84-66-2	Diethyl phthalate	N	0.36	ug/L	U	F	0.36		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	131-11-3	Dimethyl phthalate	N	0.2	ug/L	U	F	0.2		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	84-74-2	Di-n-butyl phthalate	N	1.1	ug/L	U	F	1.1		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-012	206-44-0	Fluoranthene	N	0.033	ug/L	U	F	0.033		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-012	86-73-7	Fluorene	N	0.018	ug/L	U	F	0.018		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	67-72-1	Hexachloroethane	N	0.93	ug/L	U	F	0.93		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	78-59-1	Isophorone	N	0.2	ug/L	U	F	0.2		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7439-92-1	Lead	Y	0.18	ug/L	U	F	0.18		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7439-97-6	Mercury	Y	0.027	ug/L	U	F	0.027		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-012	91-20-3	Naphthalene	N	0.005	ug/L	U	F	0.005		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7440-02-0	Nickel	Y	4	ug/L		F	0.3		FJQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-012	129-00-0	Pyrene	N	0.0076	ug/L	U	F	0.0076		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7782-49-2	Selenium	Y	0.37	ug/L	U	F	0.37		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7440-22-4	Silver	Y	0.033	ug/L	U	F	0.033		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7440-61-1	Uranium	Y	39	ug/L		F	0.05		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1		FQ	G	STD
80205	WL	7/17/2019	RFS01-10.1907018-011	7440-66-6	Zinc	Y	3.2	ug/L	J B	F	2		FQU	G	STD
GS05	SL	7/3/2019	RFS01-01.1908020-003	7440-38-2	Arsenic	N	2.46	ug/L	B	F	2			C	GEN
GS05	SL	7/3/2019	RFS01-01.1908020-003	7440-41-7	Beryllium	N	0.2	ug/L	U	F	0.2			C	GEN
GS05	SL	7/3/2019	RFS01-01.1908020-003	7440-42-8	Boron	N	25.1	ug/L		F	5.2			C	GEN
GS05	SL	7/3/2019	RFS01-01.1908020-002	7440-43-9	Cadmium	Y	0.3	ug/L	U	F	0.3			C	GEN
GS05	SL	7/3/2019	RFS01-01.1908020-003	7440-47-3	Chromium	N	3	ug/L	U	F	3			C	GEN
GS05	SL	7/3/2019	RFS01-01.1908020-002	7440-50-8	Copper	Y	1.66	ug/L	B	F	0.3			C	GEN
GS05	SL	7/3/2019	RFS01-01.1908020-002	7439-92-1	Lead	Y	0.5	ug/L	U	F	0.5			C	GEN
GS05	SL	7/3/2019	RFS01-01.1908020-002	7440-02-0	Nickel	Y	0.921	ug/L	B	F	0.6			C	GEN
GS05	SL	7/3/2019	RFS01-01.1908020-003	7782-49-2	Selenium	N	2	ug/L	U	F	2			C	GEN
GS05	SL	7/3/2019	RFS01-01.1908020-002	7440-22-4	Silver	Y	0.3	ug/L	U	F	0.3			C	GEN
GS05	SL	7/3/2019	RFS01-01.1908020-003	7440-61-1	Uranium	N	0.559	ug/L	B	F	0.067			C	GEN

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
GS05	SL	7/3/2019	RFS01-01.1908020-002	7440-66-6	Zinc	Y	5.2	ug/L	B	F	3.3			C	GEN
GS05	SL	7/3/2019	RFS01-02.1907019-001	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	75-25-2	Bromoform	N	0.46	ug/L	U	F	0.46			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	7439-97-6	Mercury	N	0.045	ug/L	J B	F	0.027		U	G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	91-20-3	Naphthalene	N	0.22	ug/L	U	F	0.22			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16			G	STD
GS05	SL	7/3/2019	RFS01-02.1907019-001	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1			G	STD
GS05	SL	8/6/2019	RFS01-01.1910021-003	7440-38-2	Arsenic	N	2	ug/L	U	F	2			C	GEN
GS05	SL	8/6/2019	RFS01-01.1910021-003	7440-41-7	Beryllium	N	0.2	ug/L	U	F	0.2			C	GEN
GS05	SL	8/6/2019	RFS01-01.1910021-003	7440-42-8	Boron	N	7.97	ug/L	B	F	5.2		J	C	GEN
GS05	SL	8/6/2019	RFS01-01.1910021-002	7440-43-9	Cadmium	Y	0.3	ug/L	U	F	0.3			C	GEN
GS05	SL	8/6/2019	RFS01-01.1910021-003	7440-47-3	Chromium	N	3	ug/L	U	F	3			C	GEN
GS05	SL	8/6/2019	RFS01-01.1910021-002	7440-50-8	Copper	Y	1.4	ug/L	B	F	0.3			C	GEN
GS05	SL	8/6/2019	RFS01-01.1910021-002	7439-92-1	Lead	Y	0.5	ug/L	U	F	0.5			C	GEN
GS05	SL	8/6/2019	RFS01-01.1910021-002	7440-02-0	Nickel	Y	0.6	ug/L	U	F	0.6			C	GEN
GS05	SL	8/6/2019	RFS01-01.1910021-003	7782-49-2	Selenium	N	2	ug/L	U	F	2			C	GEN
GS05	SL	8/6/2019	RFS01-01.1910021-002	7440-22-4	Silver	Y	0.3	ug/L	U	F	0.3			C	GEN
GS05	SL	8/6/2019	RFS01-01.1910021-003	7440-61-1	Uranium	N	0.236	ug/L	B	F	0.067			C	GEN
GS05	SL	8/6/2019	RFS01-01.1910021-002	7440-66-6	Zinc	Y	5.37	ug/L	B	F	3.3			C	GEN
GS10	SL	7/2/2019	RFS01-13.1907024-001	14596-10-2	Americium-241	N	0.00426	pCi/L	U	F		0.00925		C	GEN
GS10	SL	7/2/2019	RFS01-13.1907024-001	7440-41-7	Beryllium	N	1	ug/L	U	F	1			C	GEN
GS10	SL	7/2/2019	RFS01-13.1907024-001	7440-43-9	Cadmium	Y	0.3	ug/L	U	F	0.3			C	GEN
GS10	SL	7/2/2019	RFS01-13.1907024-001	7440-47-3	Chromium	N	1	ug/L	U	F	1			C	GEN
GS10	SL	7/2/2019	RFS01-13.1907024-001	PU-239,240	Plutonium-239, 240	N	-0.0117	pCi/L	U	F		0.0128		C	GEN
GS10	SL	7/2/2019	RFS01-13.1907024-001	7440-22-4	Silver	Y	0.3	ug/L	U	F	0.3			C	GEN
GS10	SL	7/2/2019	RFS01-13.1907024-001	7440-61-1	Uranium	N	6.4	ug/L	U	F	0.067			C	GEN
GS10	SL	7/11/2019	RFS01-13.1907025-001	14596-10-2	Americium-241	N	0.00898	pCi/L	U	F		0.0153		C	GEN
GS10	SL	7/11/2019	RFS01-13.1907025-001	7440-41-7	Beryllium	N	1	ug/L	U	F	1			C	GEN
GS10	SL	7/11/2019	RFS01-13.1907025-001	7440-43-9	Cadmium	Y	0.3	ug/L	U	F	0.3			C	GEN
GS10	SL	7/11/2019	RFS01-13.1907025-001	7440-47-3	Chromium	N	1	ug/L	U	F	1			C	GEN
GS10	SL	7/11/2019	RFS01-13.1907025-001	PU-239,240	Plutonium-239, 240	N	0.00451	pCi/L	U	F		0.0114		C	GEN
GS10	SL	7/11/2019	RFS01-13.1907025-001	7440-22-4	Silver	Y	0.3	ug/L	U	F	0.3			C	GEN
GS10	SL	7/11/2019	RFS01-13.1907025-001	7440-61-1	Uranium	N	6.67	ug/L	U	F	0.067			C	GEN
GS10	SL	7/24/2019	RFS01-13.1908027-001	14596-10-2	Americium-241	N	0.00211	pCi/L	U	F		0.00927		C	GEN
GS10	SL	7/24/2019	RFS01-13.1908027-001	7440-41-7	Beryllium	N	1	ug/L	U	F	1			C	GEN
GS10	SL	7/24/2019	RFS01-13.1908027-001	7440-43-9	Cadmium	Y	0.3	ug/L	U	F	0.3			C	GEN
GS10	SL	7/24/2019	RFS01-13.1908027-001	7440-47-3	Chromium	N	1	ug/L	U	F	1			C	GEN
GS10	SL	7/24/2019	RFS01-13.1908027-001	PU-239,240	Plutonium-239, 240	N	-0.00369	pCi/L	U	F		0.0102		C	GEN
GS10	SL	7/24/2019	RFS01-13.1908027-001	7440-22-4	Silver	Y	0.3	ug/L	U	F	0.3			C	GEN
GS10	SL	7/24/2019	RFS01-13.1908027-001	7440-61-1	Uranium	N	5.62	ug/L	U	F	0.067			C	GEN
GS10	SL	8/6/2019	RFS01-13.1911028-001	14596-10-2	Americium-241	N	0.00795	pCi/L	U	F		0.011		C	GEN
GS10	SL	8/6/2019	RFS01-13.1911028-001	7440-41-7	Beryllium	N	1	ug/L	U	F	1			C	GEN
GS10	SL	8/6/2019	RFS01-13.1911028-001	7440-43-9	Cadmium	Y	0.3	ug/L	U	F	0.3			C	GEN
GS10	SL	8/6/2019	RFS01-13.1911028-001	7440-47-3	Chromium	N	6.37	ug/L	B	F	1			C	GEN
GS10	SL	8/6/2019	RFS01-13.1911028-001	PU-239,240	Plutonium-239, 240	N	0.0212	pCi/L	U	F		0.0154		C	GEN

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
GS10	SL	8/6/2019	RFS01-13.1911028-001	7440-22-4	Silver	Y	0.3	ug/L	U	F	0.3			C	GEN
GS10	SL	8/6/2019	RFS01-13.1911028-001	7440-61-1	Uranium	N	16.2	ug/L		F	0.067			C	GEN
GS13	SL	7/5/2019	RFS01-04.1908027-007	7440-61-1	Uranium	N	0.2	ug/L	B	F	0.05		U	C	STD
GS13	SL	7/15/2019	RFS01-04.1907025-007	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.99	mg/L	F	F	0.019			G	STD
GS13	SL	7/31/2019	RFS01-06.1908021-005	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	F	0.019			G	STD
GS13	SL	7/31/2019	RFS01-06.1908021-016	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	D	0.019			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	75-25-2	Bromoform	N	0.46	ug/L	U	F	0.46			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	7439-97-6	Mercury	N	0.042	ug/L	J B	F	0.027		U	G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	91-20-3	Naphthalene	N	0.22	ug/L	U	F	0.22			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16			G	STD
GS59	SL	7/3/2019	RFS01-02.1907019-002	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1			G	STD
GS59	SL	7/3/2019	RFS01-01.1908020-005	7440-38-2	Arsenic	N	3.14	ug/L	B	F	2			C	GEN
GS59	SL	7/3/2019	RFS01-01.1908020-005	7440-41-7	Beryllium	N	0.2	ug/L	U	F	0.2			C	GEN
GS59	SL	7/3/2019	RFS01-01.1908020-005	7440-42-8	Boron	N	32.4	ug/L	U	F	5.2			C	GEN
GS59	SL	7/3/2019	RFS01-01.1908020-004	7440-43-9	Cadmium	Y	0.3	ug/L	U	F	0.3			C	GEN
GS59	SL	7/3/2019	RFS01-01.1908020-005	7440-47-3	Chromium	N	3	ug/L	U	F	3			C	GEN
GS59	SL	7/3/2019	RFS01-01.1908020-004	7440-50-8	Copper	Y	0.989	ug/L	B	F	0.3			C	GEN
GS59	SL	7/3/2019	RFS01-01.1908020-004	7439-92-1	Lead	Y	0.5	ug/L	U	F	0.5			C	GEN
GS59	SL	7/3/2019	RFS01-01.1908020-004	7440-02-0	Nickel	Y	1.06	ug/L	B	F	0.6			C	GEN
GS59	SL	7/3/2019	RFS01-01.1908020-005	7782-49-2	Selenium	N	2	ug/L	U	F	2			C	GEN
GS59	SL	7/3/2019	RFS01-01.1908020-004	7440-22-4	Silver	Y	0.3	ug/L	U	F	0.3			C	GEN
GS59	SL	7/3/2019	RFS01-01.1908020-005	7440-61-1	Uranium	N	1.48	ug/L	B	F	0.067			C	GEN
GS59	SL	7/3/2019	RFS01-01.1908020-004	7440-66-6	Zinc	Y	4.93	ug/L	B	F	3.3			C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-005	7440-38-2	Arsenic	N	2.37	ug/L	B	F	2			C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-005	7440-41-7	Beryllium	N	0.2	ug/L	U	F	0.2			C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-005	7440-42-8	Boron	N	15.6	ug/L	U	F	5.2		J	C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-004	7440-43-9	Cadmium	Y	0.3	ug/L	U	F	0.3			C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-005	7440-47-3	Chromium	N	3	ug/L	U	F	3			C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-004	7440-50-8	Copper	Y	1.34	ug/L	B	F	0.3			C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-004	7439-92-1	Lead	Y	0.5	ug/L	U	F	0.5			C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-004	7440-02-0	Nickel	Y	0.815	ug/L	B	F	0.6			C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-005	7782-49-2	Selenium	N	2	ug/L	U	F	2			C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-004	7440-22-4	Silver	Y	0.3	ug/L	U	F	0.3			C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-005	7440-61-1	Uranium	N	1.1	ug/L	B	F	0.067			C	GEN
GS59	SL	8/6/2019	RFS01-01.1910021-004	7440-66-6	Zinc	Y	3.65	ug/L	B	F	3.3			C	GEN
P416589	WL	7/16/2019	RFS01-10.1907018-013	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21		FQ	G	STD

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
P416589	WL	7/16/2019	RFS01-10.1907018-013	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	91-58-7	2-Chloronaphthalene	N	0.26	ug/L	U	F	0.26		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-014	83-32-9	Acenaphthene	N	0.01	ug/L	U	F	0.01		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-014	120-12-7	Anthracene	N	0.014	ug/L	U	F	0.014		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7440-38-2	Arsenic	Y	0.43	ug/L	J	F	0.33		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	71-43-2	Benzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-014	50-32-8	Benzo(a)pyrene	N	0.005	ug/L	U	F	0.005		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-014	191-24-2	Benzo(g,h,i)Perylene	N	0.0079	ug/L	U	F	0.0079		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7440-41-7	Beryllium	Y	0.08	ug/L	U	F	0.08		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	108-60-1	Bis(2-chloroisopropyl) ether	N	0.28	ug/L	U	F	0.28		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	117-81-7	Bis(2-ethylhexyl) phthalate	N	0.55	ug/L	U	F	0.55		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7440-42-8	Boron	Y	10	ug/L	J B	F	4.4		FQU	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	75-25-2	Bromoform	N	0.46	ug/L	U N	F	0.46		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7440-47-3	Chromium	Y	0.5	ug/L	U	F	0.5		FQJ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-014	218-01-9	Chrysene	N	0.012	ug/L	U	F	0.012		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7440-50-8	Copper	Y	0.56	ug/L	U	F	0.56		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-014	53-70-3	Dibenz(a,h)anthracene	N	0.0047	ug/L	U	F	0.0047		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	84-66-2	Diethyl phthalate	N	0.37	ug/L	U	F	0.37		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	131-11-3	Dimethyl phthalate	N	0.21	ug/L	U	F	0.21		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	84-74-2	Di-n-butyl phthalate	N	1.1	ug/L	U	F	1.1		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-014	206-44-0	Fluoranthene	N	0.034	ug/L	U	F	0.034		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-014	86-73-7	Fluorene	N	0.018	ug/L	U	F	0.018		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	67-72-1	Hexachloroethane	N	0.97	ug/L	U	F	0.97		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	78-59-1	Isophorone	N	0.21	ug/L	U	F	0.21		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7439-92-1	Lead	Y	0.18	ug/L	U	F	0.18		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7439-97-6	Mercury	Y	0.027	ug/L	U	F	0.027		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-014	91-20-3	Naphthalene	N	0.0052	ug/L	U	F	0.0052		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7440-02-0	Nickel	Y	1.2	ug/L	J	F	0.3		FQJ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-014	129-00-0	Pyrene	N	0.0078	ug/L	U	F	0.0078		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7782-49-2	Selenium	Y	0.41	ug/L	J	F	0.37		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7440-22-4	Silver	Y	0.16	ug/L	J	F	0.033		FQU	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	1330-20-7	Total Xylenes	N	0.19	ug/L	U	F	0.19		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7440-61-1	Uranium	Y	1.6	ug/L	J	F	0.05		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	75-01-4	Vinyl chloride	N	0.1	ug/L	U	F	0.1		FQ	G	STD
P416589	WL	7/16/2019	RFS01-10.1907018-013	7440-66-6	Zinc	Y	4.5	ug/L	J B	F	2		FQ	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	11-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16		FQ	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21		FQ	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27		FQ	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	75-35-4	1,1-Dichloroethane	N	0.23	ug/L	U	F	0.23		FQ	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21		FQ	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	95-50-1	1,2-Dichlorobenzene	N	0.25	ug/L	J	F	0.15		FQ	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13		FQ	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18		FQ	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13		FQ	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	106-46-7	1,4-Dichlorobenzene	N	0.35	ug/L	J	F	0.16		FQ	G	STD

Appendix B
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RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-004	7440-38-2	Arsenic	N	7.2	ug/L		F	0.33			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	71-43-2	Benzene	N	2	ug/L		F	0.16			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-004	7440-41-7	Beryllium	N	0.24	ug/L	J W	F	0.08		U	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-004	7440-42-8	Boron	N	750	ug/L		F	4.4			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	75-25-2	Bromoform	N	0.46	ug/L	U	F	0.46			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	108-90-7	Chlorobenzene	N	0.6	ug/L	J	F	0.17			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-004	7440-47-3	Chromium	N	0.75	ug/L	J	F	0.5			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	7440-50-8	Copper	Y	0.56	ug/L	U	F	0.56			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	7439-92-1	Lead	Y	0.18	ug/L	U	F	0.18			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-004	7439-97-6	Mercury	N	0.038	ug/L	J B	F	0.027		U	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	91-20-3	Naphthalene	N	20	ug/L	U	F	0.22			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	7440-02-0	Nickel	Y	5.4	ug/L		F	0.3			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-004	7782-49-2	Selenium	N	0.37	ug/L	U	F	0.37			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	7440-22-4	Silver	Y	0.033	ug/L	U W	F	0.033		J	G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	108-88-3	Toluene	N	0.17	ug/L	J	F	0.17			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	1330-20-7	Total Xylenes	N	1.23	ug/L	J	F	0.19			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-004	7440-61-1	Uranium	N	0.12	ug/L		F	0.05			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	75-01-4	Vinyl chloride	N	0.25	ug/L	J	F	0.1			G	STD
PLFSEEPINF	TS	7/3/2019	RFS01-02.1907019-003	7440-66-6	Zinc	Y	80	ug/L		F	2			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	71-55-6	1,1,1-Trichloroethane	N	0.16	ug/L	U	F	0.16			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	79-34-5	1,1,2,2-Tetrachloroethane	N	0.21	ug/L	U	F	0.21			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	79-00-5	1,1,2-Trichloroethane	N	0.27	ug/L	U	F	0.27			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	75-35-4	1,1-Dichloroethene	N	0.23	ug/L	U	F	0.23			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	120-82-1	1,2,4-Trichlorobenzene	N	0.21	ug/L	U	F	0.21			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	95-50-1	1,2-Dichlorobenzene	N	0.15	ug/L	U	F	0.15			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	107-06-2	1,2-Dichloroethane	N	0.13	ug/L	U	F	0.13			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	78-87-5	1,2-Dichloropropane	N	0.18	ug/L	U	F	0.18			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	541-73-1	1,3-Dichlorobenzene	N	0.13	ug/L	U	F	0.13			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	106-46-7	1,4-Dichlorobenzene	N	0.16	ug/L	U	F	0.16			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	91-58-7	2-Chloronaphthalene	N	0.25	ug/L	U	F	0.25			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-007	83-32-9	Acenaphthene	N	0.99	ug/L		F	0.01			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-007	120-12-7	Anthracene	N	0.24	ug/L	B	F	0.014		U	G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-006	7440-38-2	Arsenic	N	2.1	ug/L		F	0.33			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	71-43-2	Benzene	N	0.49	ug/L	J	F	0.16			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-007	50-32-8	Benzo(a)pyrene	N	0.005	ug/L	U	F	0.005			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-007	191-24-2	Benzo(g,h,i)Perylene	N	0.0079	ug/L	U	F	0.0079			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-006	7440-41-7	Beryllium	N	0.69	ug/L	J	F	0.08		U	G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	108-60-1	Bis(2-chloroisopropyl) ether	N	0.27	ug/L	U	F	0.27			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	117-81-7	Bis(2-ethylhexyl) phthalate	N	0.55	ug/L	U	F	0.55			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-006	7440-42-8	Boron	N	740	ug/L		F	4.4			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	75-25-2	Bromoform	N	0.46	ug/L	U	F	0.46			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	7440-43-9	Cadmium	Y	0.27	ug/L	U	F	0.27			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	56-23-5	Carbon tetrachloride	N	0.19	ug/L	U	F	0.19			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	108-90-7	Chlorobenzene	N	0.17	ug/L	U	F	0.17			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	67-66-3	Chloroform	N	0.16	ug/L	U	F	0.16			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	74-87-3	Chloromethane	N	0.3	ug/L	U	F	0.3			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-006	7440-47-3	Chromium	N	0.5	ug/L	U	F	0.5			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-007	218-01-9	Chrysene	N	0.012	ug/L	J	F	0.012			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	156-59-2	cis-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	7440-50-8	Copper	Y	0.56	ug/L	U	F	0.56			G	STD

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-007	53-70-3	Dibenz(a,h)anthracene	N	0.0047	ug/L	U	F	0.0047			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	84-66-2	Diethyl phthalate	N	0.37	ug/L	U	F	0.37			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	131-11-3	Dimethyl phthalate	N	0.21	ug/L	U	F	0.21			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	84-74-2	Di-n-butyl phthalate	N	1.1	ug/L	U	F	1.1			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	100-41-4	Ethylbenzene	N	0.16	ug/L	U	F	0.16			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-007	206-44-0	Fluoranthene	N	0.26	ug/L	F	F	0.034			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-007	86-73-7	Fluorene	N	0.78	ug/L	F	F	0.018			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	87-68-3	Hexachlorobutadiene	N	0.36	ug/L	U	F	0.36			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	67-72-1	Hexachloroethane	N	0.96	ug/L	U	F	0.96			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	78-59-1	Isophorone	N	0.21	ug/L	U	F	0.21			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	7439-92-1	Lead	Y	0.2	ug/L	J	F	0.18			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-006	7439-97-6	Mercury	N	0.027	ug/L	U	F	0.027			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	75-09-2	Methylene chloride	N	0.94	ug/L	U	F	0.94			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-007	91-20-3	Naphthalene	N	3.4	ug/L	F	F	0.0052			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	7440-02-0	Nickel	Y	4.6	ug/L	F	F	0.3			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-007	129-00-0	Pyrene	N	0.19	ug/L	F	F	0.0078			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-006	7782-49-2	Selenium	N	0.37	ug/L	U	F	0.37			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	7440-22-4	Silver	Y	0.033	ug/L	U	F	0.033			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	100-42-5	Styrene	N	0.36	ug/L	U	F	0.36			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	127-18-4	Tetrachloroethene	N	0.2	ug/L	U	F	0.2			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	108-88-3	Toluene	N	0.17	ug/L	U	F	0.17			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	1330-20-7	Total Xylenes	N	0.94	ug/L	J	F	0.19			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	156-60-5	trans-1,2-Dichloroethene	N	0.15	ug/L	U	F	0.15			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	79-01-6	Trichloroethene	N	0.16	ug/L	U	F	0.16			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-006	7440-61-1	Uranium	N	0.69	ug/L	F	F	0.05			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	75-01-4	Vinyl chloride	N	0.15	ug/L	J	F	0.1			G	STD
PLFSYSEFF	TS	7/3/2019	RFS01-02.1907019-005	7440-66-6	Zinc	Y	36	ug/L	F	F	2			G	STD
SPIN	TS	7/15/2019	RFS01-04.1907025-005	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	550	mg/L	F	F	1.9			G	STD
SPIN	TS	7/15/2019	RFS01-04.1907025-014	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	570	mg/L	H	D	1.9		J	G	STD
SPIN	TS	7/15/2019	RFS01-04.1907025-005	7440-61-1	Uranium	N	82	ug/L	F	F	0.05			G	STD
SPIN	TS	7/15/2019	RFS01-04.1907025-014	7440-61-1	Uranium	N	80	ug/L	D	D	0.05			G	STD
SPIN	TS	7/31/2019	RFS01-06.1908021-006	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	630	mg/L	F	F	1.9			G	STD
SPIN	TS	7/31/2019	RFS01-06.1908021-006	7440-61-1	Uranium	N	78	ug/L	F	F	0.05			G	STD
SPIN	TS	8/15/2019	RFS01-04.1908026-005	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	680	mg/L	F	F	1.9			G	STD
SPIN	TS	8/15/2019	RFS01-04.1908026-005	7440-61-1	Uranium	N	70	ug/L	F	F	0.05			G	STD
SPIN	TS	8/29/2019	RFS01-06.1908022-006	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	600	mg/L	F	F	1.9			G	STD
SPIN	TS	8/29/2019	RFS01-06.1908022-006	7440-61-1	Uranium	N	80	ug/L	F	F	0.05			G	STD
SPIN	TS	9/16/2019	RFS01-04.1909028-005	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	450	mg/L	B	F	0.95			G	STD
SPIN	TS	9/16/2019	RFS01-04.1909028-015	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	460	mg/L	B	D	1.9			G	STD
SPIN	TS	9/16/2019	RFS01-04.1909028-005	7440-61-1	Uranium	N	62	ug/L	F	F	0.05			G	STD
SPIN	TS	9/16/2019	RFS01-04.1909028-015	7440-61-1	Uranium	N	63	ug/L	D	D	0.05			G	STD
SPOUT	TS	7/15/2019	RFS01-04.1907025-006	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	F	0.019			G	STD
SPOUT	TS	7/15/2019	RFS01-04.1907025-006	7440-61-1	Uranium	N	29	ug/L	F	F	0.05			G	STD
SPOUT	TS	7/31/2019	RFS01-06.1908021-007	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	F	0.019			G	STD
SPOUT	TS	7/31/2019	RFS01-06.1908021-007	7440-61-1	Uranium	N	37	ug/L	F	F	0.05			G	STD
SPOUT	TS	8/15/2019	RFS01-04.1908026-006	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	F	0.019			G	STD
SPOUT	TS	8/15/2019	RFS01-04.1908026-006	7440-61-1	Uranium	N	44	ug/L	F	F	0.05			G	STD
SPOUT	TS	8/29/2019	RFS01-06.1908022-007	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	F	0.019			G	STD
SPOUT	TS	8/29/2019	RFS01-06.1908022-016	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	D	0.019			G	STD
SPOUT	TS	8/29/2019	RFS01-06.1908022-007	7440-61-1	Uranium	N	57	ug/L	F	F	0.05		J	G	STD
SPOUT	TS	8/29/2019	RFS01-06.1908022-016	7440-61-1	Uranium	N	58	ug/L	D	D	0.05		J	G	STD
SPOUT	TS	9/16/2019	RFS01-04.1909028-006	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.072	mg/L	B	F	0.019		U	G	STD
SPOUT	TS	9/16/2019	RFS01-04.1909028-006	7440-61-1	Uranium	N	32	ug/L	F	F	0.05			G	STD
SW093	SL	7/5/2019	RFS01-13.1907026-002	14596-10-2	Americium-241	N	0.0108	pCi/L	U	F		0.0141		C	GEN
SW093	SL	7/5/2019	RFS01-13.1907026-002	7440-41-7	Beryllium	N	1	ug/L	U	F	1			C	GEN
SW093	SL	7/5/2019	RFS01-13.1907026-002	7440-43-9	Cadmium	Y	0.3	ug/L	U	F	0.3			C	GEN
SW093	SL	7/5/2019	RFS01-13.1907026-002	7440-47-3	Chromium	N	1	ug/L	U	F	1			C	GEN
SW093	SL	7/5/2019	RFS01-13.1907026-002	PU-239,240	Plutonium-239, 240	N	0.00237	pCi/L	U	F		0.00931		C	GEN
SW093	SL	7/5/2019	RFS01-13.1907026-002	7440-22-4	Silver	Y	0.3	ug/L	U	F	0.3			C	GEN
SW093	SL	7/5/2019	RFS01-13.1907026-002	7440-61-1	Uranium	N	3.16	ug/L	F	F	0.067			C	GEN
WALPOC	SL	7/5/2019	RFS01-13.1907023-004	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.017	mg/L	U	F	0.017			G	GEN
WALPOC	SL	7/5/2019	RFS01-13.1907025-003	14596-10-2	Americium-241	N	0.00963	pCi/L	U	F		0.0156		C	GEN
WALPOC	SL	7/5/2019	RFS01-13.1907025-003	PU-239,240	Plutonium-239, 240	N	0.00233	pCi/L	U	F		0.00792		C	GEN
WALPOC	SL	7/5/2019	RFS01-13.1907025-003	7440-61-1	Uranium	N	6.51	ug/L	F	F	0.067			C	GEN

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
RFLMA Data

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
WOMPOC	SL	7/11/2019	RFS01-13.1911028-002	14596-10-2	Americium-241	N	0	pCi/L	U	F		0.0146		C	GEN
WOMPOC	SL	7/11/2019	RFS01-13.1911028-002	PU-239,240	Plutonium-239, 240	N	0.00758	pCi/L	U	F		0.00786		C	GEN
WOMPOC	SL	7/11/2019	RFS01-13.1911028-002	7440-61-1	Uranium	N	2.08	ug/L		F	0.067			C	GEN

EXPLANATION

FILTRATION STATUS

N = Sample was not filtered
Y = Sample was filtered

UNITS

mg/L; ppm = milligrams per liter
pCi/L = picocuries per liter
ug/L = micrograms per liter
C = degrees celsius
mS/cm = milliSiemens per centimeter
NTU = normal turbidity units
s.u. = standard pH units
uS/cm = microSiemens per centimeter
umhos/cm = microSiemens per centimeter

SAMPLE_TYPE

F = Field Sample
D = Duplicate

DATA_VALIDATION_QUALIFIERS

<NULL> No qualifiers
F
G
J
L
Q
R
U
X
999 Validation not complete

LAB_QUALIFIERS

* Replicate analysis not within control limits.
+ Correlation coefficient for MSA < 0.995.
> Result above upper detection limit.
A TIC is a suspected aldol-condensation product.
B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
C Pesticide result confirmed by GC-MS.
D Analyte determined in diluted sample.
E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
H Holding time expired, value suspect.
I Increased detection limit due to required dilution.
J Estimated
M GFAA duplicate injection precision not met.
N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
S Result determined by method of standard addition (MSA).
U Analytical result below detection limit.
W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

LOCATION_TYPE

SL SURFACE LOCATION
TS TREATMENT SYSTEM
WL WELL

COLLECTION_METHOD

G Grab
C Composite

LAB_CODE

GEN Gel Laboratories
STD Test America

Appendix B
Analytical Results for Water Samples—Third Quarter CY 2019
Information for RFLMA Composite Samples with Unavailable Data

Location	Sample Dates*	Status
WALPOC	7/19/2019 12:03 -->	In Progress
GS13	8/15/2019 10:50 -->	In Progress
GS51	1/3/2019 15:45 -->	In Progress
SW027	1/3/2019 16:00 -->	In Progress
SW093	7/24/2019 9:46 -->	In Progress

Abbreviations:

* Analytical results are reported with the start date of the composite sampling period

--> Composite sample end date to be determined

ROCKY FLATS STEWARDSHIP COUNCIL

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Jefferson County ~ Boulder County ~ City and County of Broomfield ~ City of Arvada ~ City of Boulder
City of Golden ~ City of Northglenn ~ City of Thornton ~ City of Westminster ~ Town of Superior
League of Women Voters ~ Rocky Flats Cold War Museum ~ Rocky Flats Homesteaders
Kim Griffiths

MEMORANDUM

TO: Stewardship Council Board of Directors
FROM: Melissa Weakley
SUBJECT: DOE's Cleanup Overview Briefing
DATE: January 23, 2020

The April 6th Board meeting will focus on CDPHE's analysis of the Jefferson Parkway's soil sampling program. Jen Oplia, Division Director, CDPHE Hazardous Materials and Waste Management Division, provided an overview of the sampling at the November 18th meeting. To help lay the foundation for the April briefing, the February meeting will include a briefing by DOE that focuses on risk and the basis for the Rocky Flats cleanup standards. Understanding the science behind the cleanup is foundational to understanding the significance of the Jefferson Parkway soil sampling results.

Since its inception in 2006, the Stewardship Council has periodically focused on these questions. In preparation for this briefing, attached is a 2015 memorandum regarding cleanup levels and residual contamination. Its author, Rik Getty, served as the Stewardship Council's Technical Advisor from 2006 to 2018.

Highlights from his memo are below.

- The primary contaminant of concern (COC) and medium at Rocky Flats is plutonium (Pu) in surface soil (defined at the top 3 feet of soil).
- The surface soil cleanup level for Pu, in both the Central Operable Unit (COU) and the Perimeter Operable Unit (POU), was established in 2003 as 50 picocuries per gram (pCi/g) of soil. This standard was calculated based on risk to the most likely future site user—a wildlife refuge worker, who was likely to spend far more time on the Refuge than would a visitor.
- Prior to site closure, a community-led, independent panel proposed that a Pu soil cleanup level of 35 pCi/g would be protective of the most intensive future site user—a resident ranching family who would live on Rocky Flats and get all their food and water from the site.
- Extensive sampling conducted in the COU and POU prior to regulatory closure indicated that remaining Pu levels in surface soils average 4 pCi/g in the COU and less than 1 pCi/g in the POU.
- As such, DOE, CDPHE and EPA determined that remaining Pu levels at Rocky Flats are protective of a wildlife refuge worker and thus a visitor. The levels in the Refuge would likewise be protective of a subsistence family, even though the latter scenario is prohibited by law.

Please let me know what questions you may have.

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League of Women Voters -- Rocky Flats Cold War Museum -- Rocky Flats Homesteaders
Nancy Newell

MEMORANDUM

TO: Stewardship Council Board
FROM: Rik Getty
SUBJECT: Remaining Environmental Contaminant Levels Briefing
DATE: May 20, 2015

We have scheduled 50 minutes for Carl Spreng with CDPHE to brief on cleanup levels and remaining contaminants of concern. CDPHE will discuss the contaminants that were released to the three principle environmental media—soil/sediments, water, and air—and the remaining contamination levels throughout Rocky Flats.

The briefing will focus on three primary questions:

1. What are the primary contaminants of concern (COC) and their remaining contaminant levels at Rocky Flats?
2. How do we know what the contaminant levels are?
3. What risks do these contaminants pose?

In reviewing this material and preparing for the briefing, bear in mind that late in the cleanup Rocky Flats was divided into two major management units—the Central Operable Unit (COU), which are the primary DOE-retained lands, and the Peripheral Operable Unit (POU), which largely comprise the Rocky Flats National Wildlife Refuge. This memo and briefing will include both the COU and POU as, together, they comprise the historic weapons facility.

Executive Summary

1. What are the primary contaminants of concern (COC) and their remaining contaminant levels at Rocky Flats?

The primary COC are plutonium (Pu), americium (Am), uranium (U), volatile organic compounds (VOC), and semi-volatile organic compounds (SVOC). Cleanup levels vary between the different contaminants, but the contaminant of greatest concern during cleanup was plutonium. Pu remediation focused on soil remediation.

The final surface soil (defined as the top 3' of soil) cleanup level for Pu (and Am) was 50 picocuries per gram of soil (pCi/g). This standard was based on the most likely future use scenario (a wildlife refuge worker) and drove many aspects of the cleanup. Throughout the COU

and POU, soil sampling was performed to confirm that the remaining surface soils contained less than 50 pCi/g. For the COU, the remaining contaminant levels for Pu in the surface soils average 4 pCi/g. For the POU, the sampling data indicates the remaining soils contain on average less than 1 pCi/g of Pu, and in most places are background or close to background. Some of the subsurface soils in the COU contain far higher levels of Pu.

As discussed below, the other COCs exist throughout the COU. DOE manages and treats these contaminants (e.g., the Solar Ponds Plume Treatment System). Issues have emerged that require ongoing investigations and management actions (e.g., U levels in Walnut Creek)

2. How do we know what the contaminant levels are?

The short answer is extensive sampling. DOE collected and analyzed thousands of soil samples across the entire site prior to closure. Surface soils, subsurface soils, and drainage sediments were analyzed. These results were used in an intensive health risk assessment that was overseen by the EPA and CDPHE. In addition, the EPA performed further soil testing to verify DOE's results. The results were confirmed by the Agency for Toxic Substances and Disease Registry (ASTDR).

3. What risks do these contaminants pose?

DOE calculated the greatest risk from residual Pu contamination is to a refuge worker with an individual increased cancer risk estimated to be 2×10^{-6} , or two in one million. These levels are also protective of wildlife and refuge visitors. Accordingly, in 2007 the EPA certified the cleanup was complete and removed (de-listed) the POU lands from the CERCLA National Priorities List (NPL). The POU lands were deemed available for any and all uses. The COU lands remain on the NPL due to ongoing groundwater remediation.

Details on Primary COC and their levels at Rocky Flats

Pu, Am, U, VOC, and SVOC can be found in both soil and water. The radionuclides were released to the environment at many locations across the COU, as well as the POU, with some contamination moving offsite by wind-borne dispersion and via the surface waters of Walnut and Woman Creeks. VOC are found in groundwater plumes emanating from the East Trenches waste disposal area and the Mound Site waste disposal area. Both of these areas have groundwater treatment systems designed to remove the VOC from the contaminated groundwater plumes.

Examples of some of these COC releases to the environment were:

- Pu, Am, and U contamination from over 5,000 leaking drums (late 1950's and early 1960's) of machining fluids at the outside drum storage area (903 Pad) on the southeast side of the Industrial Area. Early attempts to remediate the area resulted in air-borne dispersal (primarily east and southeast) of radioactive particulates by high winds.
- leaking drums of VOC in the East Trenches and Mound Site which contaminated groundwater
- fires in Building 771 in 1957 and Building 776 in 1969 which released some radionuclides to the air but not near as much as the 903 pad releases
- releases of radionuclides within and surrounding production buildings which eventually led to contaminated surface and subsurface soils

- U releases in the Solar Ponds evaporation area which contaminated groundwater that eventually goes into North Walnut Creek (a groundwater plume treatment system is located near North Walnut which treats U-contaminated groundwater)
- releases from leaks in underground liquid process waste lines

Independent community assessment of Pu cleanup levels

The initial soil cleanup levels (called soil action levels) for Pu were 651 pCi/g. Due to widespread community concerns, DOE agreed to fund a community-designed and directed independent assessment. The community oversight panel hired the Risk Assessment Corporation (RAC), headed by Dr. John Till. Till and the community panel evaluated, among many factors, Pu movement, the impact of drought and fire, contaminant ingestion, and inhalation rates. RAC proposed a future use scenario where a resident ranching family with children would live on Rocky Flats and get all their food and water from the site. Based on the future use scenario (the most use intensive scenario possible) and model inputs, RAC and the oversight panel adopted a Pu soil cleanup level of 35 pCi/g. They concluded that 35pCi/g would protect the ranching family and comply with the EPA's risk range of excess cancer rates.

In 2003, the RFCA parties modified their soil action level for Pu to 50 pCi/g, though most of the surface soils in the COU and all of the soils in the POU are far cleaner than 50pCi/g. According to DOE, EPA and CDPHE data, soils in the POU contain on average less than 1 pCi/g of Pu, and in most cases are at background. The remaining soil in the COU contains on average about 4 pCi/g of Pu.

In other words, with few exceptions, the Pu soil cleanup levels at Rocky Flats are largely cleaner than the RAC's resident ranching scenario of 35pCi/g. The notable exception is the subsurface soils in the COU as there are areas along building foundations and old process waste that are substantially higher than the 50pCi/g level. Cleanup levels were predicated on those subsurface contaminants remaining in the subsurface or, alternatively, being brought to the surface through natural process in quantities that do not exceed the surface soil standards.

Contaminants and water quality

The Pu and Am water standards for surface water at the site are both 0.15 pCi/liter of water. This site-specific standard is 100 times lower (more protective) than the EPA's nationwide standard for gross alpha. The site standard for U in surface water is 16.8 microgram/liter, which is not based on radioactive risk but rather on heavy metal toxicity risk.

Throughout the past few years there have been radionuclide exceedances at Point of Compliance water monitoring location WALPOC (on Walnut Creek at COU boundary) and Point of Evaluation water monitoring location GS-10 on South Walnut Creek upstream from former Pond B-1. Over the last few years U at WALPOC has exceeded the water standard of 16.8 ug/l. Although these instances were reportable conditions, they were not finable because the U dropped below the standard. There have also been reportable conditions for U, Pu, and Am at GS-10 but these elevated levels also dropped below the corresponding standard. An independent study by Wright Water Engineers on U transport in the Walnut Creek drainage was recently completed which helps shed light on the cyclical nature of U levels in Walnut Creek.

The East Trenches and Mound Site VOC- contaminated groundwater plumes exceed the EPA water quality standards, but after treatment and discharge into surface water the VOC levels are below regulatory standards. As noted above, the COU remains on the CERCLA NPL due to ongoing groundwater treatment.

Details on how we know the remaining COC levels in soils

Before and during cleanup there were thousands of soil and sediment samples collected both onsite and offsite (primarily east of Indiana Street). During cleanup, Rocky Flats was divided into 12 exposure units (EUs; CERCLA nomenclature). (See attached map). These EUs were based on topography, past uses, and other factors.

Beginning in 2004, within each EU, DOE and its prime contractor performed a complex risk-based analysis using results from environmental sampling. This CERCLA analysis is termed a comprehensive risk assessment (CRA). CRAs examine environmental sampling results for soil, air, and water, and try to determine what impact, if any, contamination may have on human health and the environment. There were two CRAs performed in each EU, one for human health and the other for environmental (risk to flora and fauna). Although there was extensive historical soil testing, a few data sets could not be used due to suspect data quality, so additional testing was required. Accordingly, DOE, with oversight from EPA and CDPHE, implemented a new sampling effort. That work generated additional characterization data for these EUs.

In addition, the EPA also performed additional soil testing in each of the EUs. Based on DOE's Buffer Zone testing, the EPA picked the grid cell location within each EU which had the highest level of Pu contamination. The EPA then collected five soil samples from that grid location and analyzed them separately (they did not composite the five samples into one sample). The EPA results aligned with those obtained by DOE.

For a more detailed discussion on EU sampling results see the board packet from the April 2011 Stewardship Council meeting:

http://www.rockyflatssc.org/RFSC_agendas/RFSC_Bd_mtg_packet_4_11.pdf

Remaining risks

In 2007, the EPA certified the cleanup was complete and removed (de-listed) the POU lands from the CERCLA National Priorities List (NPL). The POU lands were deemed available for any and all uses. DOE calculates the greatest risk from residual contamination is to a refuge worker; the calculated increased cancer risk is 2×10^{-6} , or 2 in one million. These levels are also protective of wildlife and visitors.

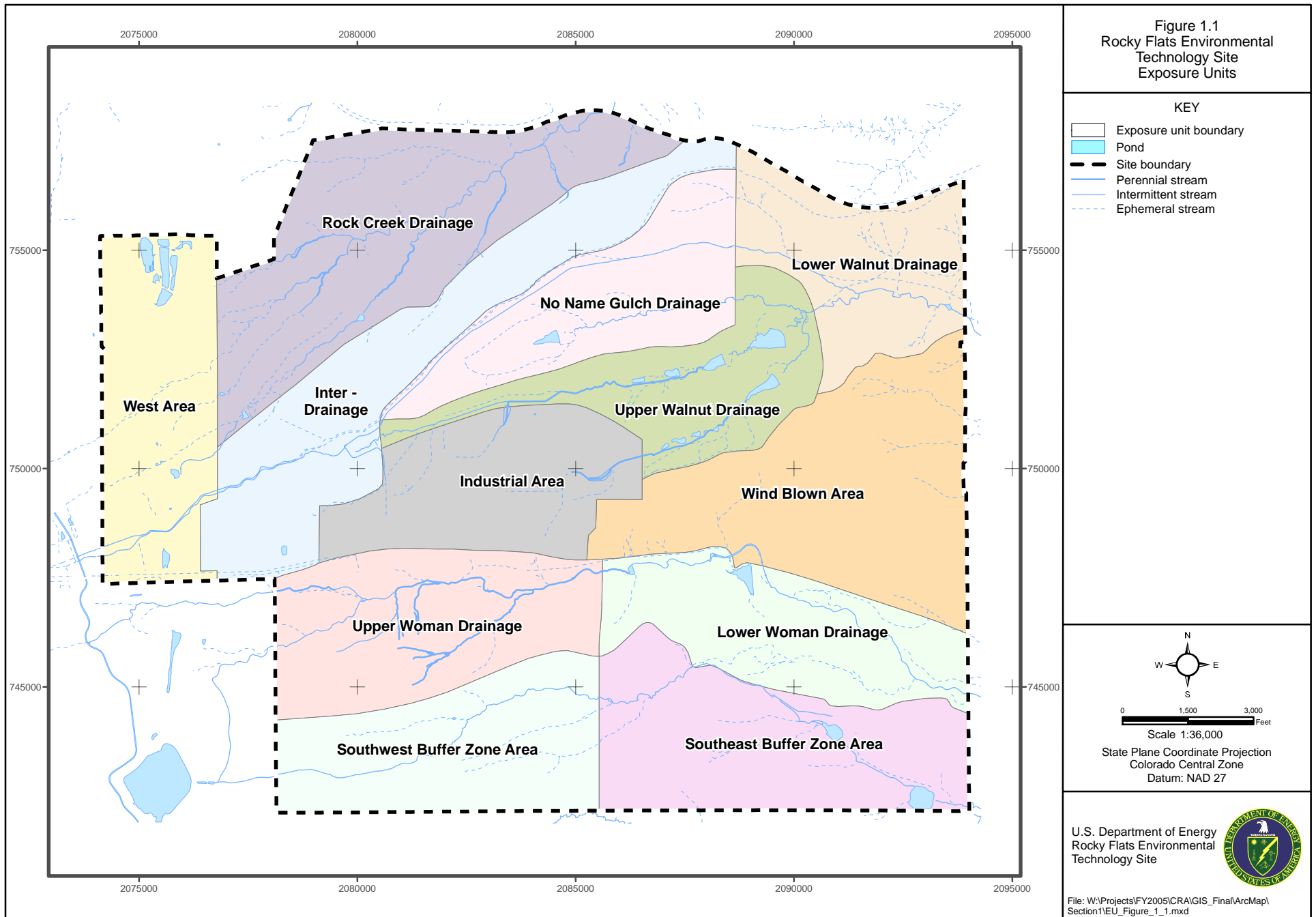
A refuge worker's annual dose is calculated to be less than 1 mrem/year. The dose visitors to the Rocky Flats National Wildlife Refuge would receive would be significantly less. 1 mrem/year compares to other doses as follows:

- Average dose to US public from all sources: 360 mrem/year
- Average dose to US public from natural sources: 300 mrem/year
- Average dose to US public from medical sources: 53 mrem/year
- Average dose to US public from nuclear power: < 0.1 mrem/year







Average US terrestrial radiation: 28 mrem/year
Terrestrial background (Atlantic coast): 16 mrem/year
Terrestrial background (Rocky Mountains): 40 mrem/year
Cosmic radiation (Sea level): 26 mrem/year
Cosmic radiation (Denver): 50 mrem/year
Radionuclides in the body (e.g., potassium): 39 mrem/year
Building materials (concrete): 3 mrem/year
Drinking water: 5 mrem/year
Pocket watch (radium dial): 6 mrem/year
Eyeglasses (containing thorium): 6 - 11 mrem/year
Coast-to-coast airplane (roundtrip): 5 mrem
Chest x-ray: 8 mrem
Dental x-ray: 10 mrem
(source: Idaho State University, Radiation Information Network)

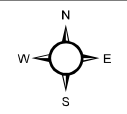
Please let me know if you have any questions.

Figure 1.1
Rocky Flats Environmental
Technology Site
Exposure Units



KEY

-  Exposure unit boundary
-  Pond
-  Site boundary
-  Perennial stream
-  Intermittent stream
-  Ephemeral stream



0 1,500 3,000
Feet

Scale 1:36,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental
Technology Site



Appendix

- Meeting Protocols
- Acronym List

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Kim Griffiths

Rocky Flats Stewardship Council – Meeting Overview and Protocols

The central purpose of the meeting of the Rocky Flats Stewardship Council Board of Directors is for the Board and public to learn about current site activities and monitoring results, to be briefed on any issues or challenges DOE and the regulatory agencies are facing, and other issues that come before the Board. The Board reserves time at each meeting to address governance-related issues. Those issues are identified in the meeting agenda, and could include the budget, work plan, minutes, and related items.

All meetings of the Board of Directors are open to the public. From time to time, and in accordance with § 24-6-402(4), Colorado Revised Statutes, the Board may go into executive session. Public notice of the executive session is provided in the meeting agenda.

Public Engagement Protocols: Time is allotted at each meeting for the public to address the Board of Directors and presenters. The following procedures apply to all meetings of the Board of Directors. The Chair reserves the right to modify these procedures.

1. **Public comment periods:** The public comment periods are identified on the meeting agenda. The goal is to have two public comment periods—one near the start of the meeting and another near the end. The public comment periods are not a Q&A with the Board.
2. **Time limit:** The Board requests that comments be to the point. If individual comments are too long and/or if there are a number of people who wish to speak, the Chair reserves the right to enact a time limit.
3. **Additional public comment:** As time allows, and as called on by the Chair, the public is allowed to ask questions or express an opinion during presentations. The Board will have the first opportunity to ask questions or make comments.

No personal attacks: All people speaking at the meeting must refrain from personal attacks and address the issues at hand.

Public Comment on Stewardship Council Website: The Stewardship Council website includes a section for public comment. To have your comment posted, you must email a copy of your comments to David Abelson (dabelson@rockyflatssc.org).

Noise: In order to help reduce background noise, sidebar and backroom conversations should be taken into the hall.

To be added to the Stewardship Council's email distribution list, please email David Abelson (dabelson@rockyflatssc.org).

Rocky Flats Acronym List
 Prepared for the Rocky Flats Stewardship Council
 Rev. 05/19

Acronym or Term	Means	Definition
Alpha radiation		A type of radiation that is not very penetrating and can be blocked by materials such as human skin or paper or one inch of air. Alpha radiation presents its greatest risk when it is inhaled or ingested. Plutonium, the radioactive material of greatest concern at Rocky Flats, produces this type of radiation.
Am	americium	A man-made radioactive element that is a byproduct of plutonium (Pu) production. Am emits gamma radiation, which can penetrate many types of protective shielding. During the production era at Rocky Flats, Am was chemically separated from Pu to reduce personnel exposures.
AME	Actinide Migration Evaluation	An exhaustive, years-long study by independent researchers who studied how actinides such as plutonium, americium, and uranium move through the soil and water at Rocky Flats.
AMP	Adaptive Management Plan	Additional water quality sampling and analysis that DOE is conducting, beyond the normal environmental assessments, to inform decisions regarding future breaches of remaining dams.
AOC well	Area of Concern well	A particular type of groundwater well.
B	boron	An inorganic compound that has been found in some surface water and groundwater samples at Rocky Flats.
Be	beryllium	A very strong and lightweight metal that was used at Rocky Flats in the manufacture of nuclear weapons. Exposure to beryllium is now known to cause respiratory disease in those persons sensitive to it.
Beta radiation		A type of radiation that is more penetrating than alpha (but less penetrating than gamma). Beta particles can be stopped after traveling through 10 feet of air or a thin layer of glass or metal. Some forms of uranium emit beta radiation.
BMP	Best Management Practices	A term used to describe actions taken by DOE that are not required by regulation but warrant action.
BZ	Buffer Zone	The portion of the Rocky Flats site that was added during production to provide a "buffer" between the neighboring communities and the industrial portion of Rocky Flats. The buffer zone covered approximately 6,100 acres. Most of the buffer zone lands now make up the Rocky Flats National Wildlife Refuge.
CAD/ROD	Corrective Action Decision/Record of Decision	The complete final plan for cleanup and closure for Rocky Flats. The Federal/State laws that governed the cleanup at Rocky Flats required a document of this sort.
CCP	Comprehensive Conservation Plan	The refuge plan adopted by the U.S. Fish and Wildlife Service in 2007.
CDPHE	Colorado Department of Public Health and Environment	The state agency that regulates Rocky Flats.

Rocky Flats Acronym List
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 Rev. 05/19

Acronym or Term	Means	Definition
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	Federal legislation that governs the Rocky Flats cleanup. Also known as the Superfund Act.
cfs	cubic feet per second	A volumetric measure of water flow.
COC	Contaminant of Concern	A hazardous or radioactive substance that is present at Rocky Flats.
COU	Central Operable Unit	A CERCLA term used to describe the DOE-retained lands (about 1,300 acres) at Rocky Flats. The COU overlays the former Industrial Area (where manufacturing activities took place) and contains all engineered elements of the remedy (two landfills and four groundwater treatment systems) and areas of residual subsurface contamination.
CR	Contact Record	A regulatory procedure where CDPHE reviews a proposed action by DOE and either approves the proposal as is or requires changes to the proposal before approval. CRs apply to a wide range of activities performed by DOE. After approval, the CR is posted on the DOE-Legacy Management (LM) website and the public is notified via email.
Cr	chromium	Potentially toxic metal used at Rocky Flats.
CRA	Comprehensive Risk Assessment	A series of analyses that assess human health risks and risks to the environment (flora and fauna).
D&D	decontamination and decommissioning	The process of cleaning up and tearing down buildings and other structures.
DG	Discharge Gallery	The location where the treated effluent of the Solar Ponds Plume Treatment System (defined below) empties into North Walnut Creek.
DOE	U.S. Department of Energy	The federal agency that manages portions of Rocky Flats. The site office is the Office of Legacy Management (LM).
EA	Environmental Assessment	A study required by NEPA (defined below) when a federal agency proposes an action that could impact the environment. The agency is responsible for conducting the analysis to determine what, if any, impacts to the environment might occur due to a proposed action.
EIS	Environmental Impact Statement	An evaluation that is undertaken by a government agency when it is determined, via the EA, that a proposed action by the agency may have significant impacts to the environment.
EPA	U.S. Environmental Protection Agency	The federal agency that regulates Rocky Flats activities.
EEOICPA	Energy Employees Occupational Illness Compensation Program Act	An act passed by Congress in 2000 to compensate sick nuclear weapons workers and certain survivors.

Rocky Flats Acronym List
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Acronym or Term	Means	Definition
ETPTS	East Trenches Plume Treatment System	The treatment system near the location of the East Waste Disposal Trenches. This system treats groundwater emanating from the trenches that is contaminated with organic solvents. Treated effluent flows into South Walnut Creek.
FC	functional channel	Man-made stream channels constructed during cleanup to help direct water flow.
FACA	Federal Advisory Committee Act	The federal law that regulates federal advisory boards. The law requires balanced membership and open meetings with published Federal Register meeting dates.
Gamma Radiation		The most penetrating type of radiation at Rocky Flats. Thick, dense shielding is necessary to protect against gamma rays. Americium (Am) is a strong gamma emitter.
GAO	Government Accountability Office	Congressional investigative office that reports to Congress.
g	gram	A metric unit of mass.
gpm	gallons per minute	A volumetric measure of water flow.
GWIS	Groundwater Intercept System	A below-ground system that directs contaminated groundwater toward the Solar Ponds Plume and East Trenches Plume Treatment Systems.
IA	Industrial Area	The central core of Rocky Flats where all manufacturing activities took place. The IA covered 385 of Rocky Flats's 6,500 acres.
IC	Institutional Control	Administrative and legal controls employed to protect the integrity of the remedies in place and minimize the potential for human exposure to residual contamination.
IGA	intergovernmental agreement	A cooperative agreement between local governments that establishes the framework of the Stewardship Council.
IHSS	Individual Hazardous Substance Site	A name given during cleanup to a discrete area of known or suspected contamination. There were formerly over two hundred IHSSs at Rocky Flats.
ITPH	interceptor trench pump house	The location where contaminated groundwater collected by the interceptor trench is pumped to either the Solar Ponds Plume Treatment System or the East Trenches Plume Treatment System.
L	liter	Metric measure of volume (slightly larger than a quart).
LANL	Los Alamos National Laboratory	One of the US government's premier research institutions located near Santa Fe, NM. LANL is continuing to conduct highly specialized water analysis for Rocky Flats. Using sophisticated techniques, LANL is able to determine the percentages of both naturally occurring and man-made uranium, which helps to inform water quality decisions.
LHSU	lower hydrostratigraphic unit	Hydrogeological term for deep unweathered bedrock that is hydraulically isolated from the upper hydrostratigraphic unit (see UHSU). Data show that site COCs have not contaminated the LHSU.
LM	Legacy Management	DOE office responsible for overseeing activities at closed sites.

Rocky Flats Acronym List
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Acronym or Term	Means	Definition
LMPIP	Legacy Management Public Involvement Plan	A plan that follows DOE and EPA guidance on public participation and outlines the methods of public involvement and communication used to inform the public of site conditions and activities. It was previously known as the Post-Closure Public Involvement Plan (PCPIP).
O&M/OM&M	Operations, monitoring, and maintenance	Term that describes ongoing activities at Rocky Flats.
MOU	Memorandum of Understanding	The formal agreement between EPA and CDPHE specifying that CDPHE is the lead post-closure regulatory agency with EPA providing assistance when needed.
MSPTS	Mound Site Plume Treatment System	The remediation system in place that is designed to treat groundwater contaminated with organic solvents emanating from the Mound Site (a portion of Rocky Flats where waste barrels were buried). Treated effluent flows into South Walnut Creek.
NEPA	National Environmental Policy Act	Federal legislation that requires the federal government to perform analyses of environmental consequences of major projects or activities.
nitrates		Contaminant of concern originating from Solar Ponds wastes. Nitrates have been detected in the North Walnut Creek drainage. Nitrates are very soluble in water and move readily through the aquatic environment.
Np	neptunium	A man-made radioactive isotope that is a by-product of nuclear reactors and plutonium production.
NPL	National Priorities List	A list of Superfund sites. The refuge lands were de-listed from the NPL, while the DOE-retained lands are still on the NPL because of residual groundwater contamination and associated remediation activities.
NWCS	North Walnut Creek Slump	Slumping observed on the hillside east of the Solar Ponds Plume Treatment System.
OLF	Original Landfill	Hillside dumping area of about 20 acres that was used from 1951 to 1968. The OLF underwent remediation with the addition of a soil cap and groundwater monitoring locations.
OU	Operable Unit	A distinct area within a cleanup site. These areas may address geographic areas, specific problems, or medium (e.g., groundwater, soil) where a specific action is required.
PCE	perchloroethylene (a.k.a. tetrachloroethylene)	A volatile organic solvent used in past operations at Rocky Flats.
pCi/g	picocuries per gram	A unit of radioactivity in soil.
pCi/L	picocuries per liter	A unit of radioactivity in water. CDPHE's regulatory limit for Pu and Am in surface water at Rocky Flats is 0.15 pCi/L. This standard is 100 times stricter than the EPA's drinking water standard.
PLF	Present Landfill	Landfill constructed in 1968 to replace the OLF. During site remediation, the PLF was closed under RCRA regulations with an extensive cap and monitoring system.

Rocky Flats Acronym List
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Acronym or Term	Means	Definition
PMJM	Preble's Meadow Jumping Mouse	A species of mouse found along the Front Range that is on the endangered species list. There are several areas in the Refuge and COU that provide adequate habitat for the mouse, usually found in drainages. Any operations that are planned in potential mouse habitat are strictly controlled.
POC	Point of Compliance (surface water)	A surface water monitoring location at Rocky Flats where contaminant concentrations must be in compliance with federal and state standards for hazardous constituents. Violations of water quality standards at the points of compliance could result in DOE receiving financial penalties.
POE	Point of Evaluation (surface water)	A surface water monitoring location at Rocky Flats where water quality is monitored. There are no financial penalties associated with water quality exceedances at these locations, but DOE may be required to develop a plan of action to improve the water quality.
POU	Peripheral Operable Unit	A CERCLA term used to describe the 4,800-acre area surrounding the Central Operable Unit.
Pu	plutonium	A metallic substance that was fabricated to form the core, or "trigger", of a nuclear weapon. Formation of these triggers was the primary production mission of the Rocky Flats site. There are different forms of plutonium, called isotopes. Each isotope is known by a different number, such as plutonium 239 (Pu-239) and plutonium 241 (Pu-241). Pu-239 is the primary radioactive COC at Rocky Flats.
RCRA	Resource Conservation and Recovery Act	Federal law regulating hazardous waste. In Colorado, EPA delegates to CDPHE the authority to regulate hazardous wastes.
RFCAB	Rocky Flats Cleanup Agreement	The regulatory agreement that governed cleanup activities. DOE, EPA, and CDPHE were signatories.
RFCAB	Rocky Flats Citizen Advisory Board	The group formed as part of DOE's site-specific advisory board network. The RFCAB provided community feedback to DOE on a wide variety of Rocky Flats issues from 1993 through regulatory closure in 2006.
RFCLOG	Rocky Flats Coalition of Local Governments	The predecessor organization of the Rocky Flats Stewardship Council.
RFETS	Rocky Flats Environmental Technology Site	The moniker for Rocky Flats during cleanup years.
RFLMA	Rocky Flats Legacy Management Agreement	The post-cleanup regulatory agreement between DOE, CDPHE, and EPA that governs site activities. The CDPHE has the lead regulatory role, with support from EPA as required.
RFNWR	Rocky Flats National Wildlife Refuge	The 4,000 acres of Rocky Flats where unrestricted use is allowed. This land is now a wildlife refuge.
RFSOG	Rocky Flats Site Operations Guide	The nuts-and-bolt guide for post-closure site activities performed by DOE and its contractors.

Acronym or Term	Means	Definition
RSAL	Radionuclide Soil Action Level	Concentration of radionuclide in soil above which remedial action should be considered so that people are not exposure to radiation doses above permitted levels.
SEP	Solar Evaporation Ponds	An area of Rocky Flats used in the 1950s to hold excess wastewater generated during manufacturing operations. Wastewater that could not be treated in the onsite treatment plant was sent to open-air holding ponds where solar energy was utilized to evaporate and concentrate the waste. The original SEPs were unlined, and substantial quantities of uranium and nitrates made their way into groundwater. As a result, the Solar Ponds Plume Treatment System was constructed to treat contaminated groundwater before it emerged as surface water in North Walnut Creek.
SID	South Interceptor Ditch	A water feature designed to intercept runoff from the southern portion of the COU. The SID flows from west to east into Pond C-2. Woman Creek water does not enter Pond C-2, but is diverted around Pond C-2 through the Woman Creek Diversion Canal.
SPPTS	Solar Ponds Plume Treatment System	Engineered system designed to treat groundwater contaminated with uranium and nitrates. The nitrates originate from the former solar evaporation ponds, which had high levels of nitric acid. The uranium is primarily naturally occurring. Effluent from the SPPTS flows into North Walnut Creek.
SVOCs	semi-volatile organic compounds	Organic compounds that are not as volatile as solvent-related VOCs. SVOCs are found in many environmental media at Rocky Flats. They are found in materials like oil, coal, asphalt, and tar.
TCE	trichloroethylene	A volatile organic compound used as a solvent in past site operations. TCE is also a degradation product of PCE.
U	uranium	Naturally occurring radioactive element. There were two primary isotopes of U used during production activities. The first was enriched U, which contained a very high percentage (>90%) of U-235 and was used in nuclear weapons. The second isotope was U-238, also known as depleted uranium. U-238 has low levels of radioactivity.
ug/L or µg/L	micrograms per liter	A unit of contaminant concentration in water.
UHSU	upper hydrostratigraphic unit	A hydrogeological term describing the surficial materials and weathered bedrock found at Rocky Flats. The UHSU is hydraulically isolated from the lower hydrostratigraphic unit (see LHSU). Groundwater in some UHSU areas of Rocky Flats is contaminated with site-related COCs, while groundwater in other UHSU areas is not impacted. All groundwater in the UHSU emerges to surface water before it leaves Rocky Flats.
USFWS	United States Fish & Wildlife Service	The agency within the US Department of the Interior that is responsible for maintaining the nation-wide system of wildlife refuges, among other duties. The regional office is responsible for the RFNWR.

Rocky Flats Acronym List
 Prepared for the Rocky Flats Stewardship Council
 Rev. 05/19

Acronym or Term	Means	Definition
VOC	volatile organic compound	These compounds include cleaning solvents that were used in the manufacturing operations at Rocky Flats. The VOCs used at Rocky Flats include carbon tetrachloride (often called carbon tet), trichloroethene (TCE), perchloroethylene (PCE), and methylene chloride.
WCRA (or “the Authority”)	Woman Creek Reservoir Authority	The group composed the cities of Westminster, Northglenn, and Thornton. These cities use Standley Lake as part of their drinking water supply network. Surface water from Rocky Flats formerly flowed through Woman Creek to Standley Lake, but the Woman Creek Reservoir was constructed to sever that connection. The Authority has an operations agreement with DOE to manage the Woman Creek Reservoir.
WQCC	Water Quality Control Commission	State board within CDPHE tasked with overseeing water quality issues throughout the state. DOE has petitioned the WQCC several times in the last few years regarding water quality issues.
WRW	Wildlife Refuge Worker	User scenario on which exposure risks are calculated.
ZVI	zero valent iron	A type of fine iron particles formerly used to treat VOCs in the ETPTS and MSPTS.