To: David Abelson
Rocky Flats Stewardship Council

From: Anne Fenerty
Jon Lipsky

Subject: Rebuttal of DOE's 4/6/2015 Presentation on September 14, 2015

Date: September 14, 2015

Accompanying (with exception) this cover page are the following:

1. Due to the file size, the "Rocky Flats Overview" 66-slide presentation by Scott Surovchak, DOE/LM, presented at the April 6, 2015 meeting of the Rocky Flats Stewardship Council (RFSC) is not included however available for download at http://www.lm.doe.gov/Rocky_Flats/Sites.aspx?view=5 under 'Community Involvement,' 'Rocky Flats Overview' document, not dated;
2. "Rebuttal to Scott Surovchak's – DOE/LM – Presentation of April 6, 2015 – Rocky Flats Stewardship Council" two-page "scope of briefing" document prepared on June 15, 2015;
3. "Rebutting the Re-writing of Rocky Flats history: Removing the vestige of "residual risk" eight-page "background" document prepared on August 24, 2015;
4. "Rebuttal of DOE's 4/6/2015 Presentation" 54-slide "presentation" document presented at the September 14, 2015 meeting of the Rocky Flats Stewardship Council.

The dual purpose of this cover letter is to provide a copy of the September 14, 2015 presentation by Anne Fenerty and Jon Lipsky at the September 14, 2015 meeting of the Rocky Flats Stewardship Council (RFSC) as requested by Boulder City Councilperson Lisa Morzel, member of the RFSC and RFSC Executive Committee, to David Abelson for inclusion on the RFSC web site. The authors wish to encourage that this cover letter and above four (4) references remain intact as an RFSC web site document.

By way of background; on April 6, 2015 following the presentation of the David Abelson and Rik Getty timeline document and Scott Surovchak, DOE/LM, PowerPoint presentation the RFSC was requested to accommodate a rebuttal by Anne Fenerty and Jon Lipsky. Following the June 1, 2015 RFSC meeting the RFSC Executive Committee deliberated and voted to allocate time during the September 14, 2015 RFSC meeting for Anne Fenerty and Jon Lipsky to present their rebuttal. The conditions of the rebuttal were communicated by David Abelson which is set forth below:

"Hello Anne and Jon –

At the meeting today, the Board agreed to have you two present at its September meeting. I have not developed the draft agenda, but I believe you will have 45-60 minutes. That time will include questions from the Board and public. I will be able to confirm the details in early August.

In agreeing to this request, the Board's primary question concerned the scope of your presentation. Lisa explained that you two want to "rebut" DOE's claims, though what that entails is vague to us. The Board therefore asked the following:

1. *Explain with greater specificity the scope of your briefing*
2. *Provide background information (including a briefing memo if you would like) prior to the meeting. This information will be included in the meeting packets.*
3. *Provide a copy of your presentation (assuming you intend to use slides) prior to the meeting.*

The most immediate thing you need to address is item #1 above. Please provide me with an overview of the topics you will want to discuss and any concerns you have. It does not need to be too detailed, so 1-2 pages should suffice. It would be best if I can have this information by June 15th.

As we approach mid-August I will let you know when I will need your briefing materials. The maximum page limit will be 20 pages. I will also help facilitate providing the Board with a copy of your presentation prior to the meeting.

Finally, for the meeting, the Stewardship Council relies on DOE to provide the computer and projector. DOE prohibits all of us from giving them a USB drive at the meeting – DOE security requirements – so you will need to email your presentation to Bob Darr during the week prior to the meeting. I will provide additional information about emailing Bob as we get close to the September 14th meeting. You are also free to bring your own computer and projector.

Please confirm that these parameters are acceptable to you, and please let me know what questions or concerns you have.

Thanks,

David

Cc: Joyce"

The authors of instant communication fulfilled the requested parameters with the exception of providing DOE with a copy of the PowerPoint digital file. Authors opted to utilize a personal-property computer instead of a DOE computer. DOE graciously allowed authors to utilize the DOE overhead projector during the September 14, 2015 meeting.

The concern by authors to not provide DOE with a copy of the PowerPoint digital file was due to the DOE policy and regulations concerning Personal Identifying Information (PII) protection requirements. A layperson's reading of the PII protection requirement policy, for example at http://humansubjects.energy.gov/other-resources/09hswg-mtg/associated_files/HolmerPIIWorkshopBriefing_ac.ppt, tends to indicate that authors' digital file was subject to confiscation at worst or at least redaction due to PII with the use of proper names. The Privacy Act of 1974, as amended at Title 5, U.S. Code, Section 552a affords the use of symbol-numbered source codes in the DOE central system of records. The conversion by DOE of names to numbers in our presentation would have significantly reduced the impact of our content. Particularly since all of the displayed names of individuals in our presentation are in the public domain.

Anne Fenerty and Jon Lipsky appreciated the opportunity to participate in the above captioned subject and to include this cover letter and four (4) references as a permanent document of the RFSC system and web site.

Rebuttal to Scott Surovchak's – DOE/LM - Presentation of April 6, 2015 – Rocky Flats Stewardship Council

By: Anne Fenerty, M.S.
Jon Lipsky, M.A.S.

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INTRODUCTION

The April 6, 2015 presentation by Scott Surovchak, DOE-LM, before the Rocky Flats Stewardship Council (RFSC) and the public is the primary focus of the scheduled September 14, 2015 rebuttal by Anne Fenerty and Jon Lipsky. Our rebuttal includes the March 25, 2015 memo authored by David Abelson & Rik Getty and the "Rocky Flats History: Timeline of Key Events," version 3.0 of December 2014. Jon Lipsky stated during the second Public Comment portion of the April 6, 2015 RFSC meeting that "some" of the information provided in Surovchak's presentation "re-writes the history of Rocky Flats."

Anne and Jon's rebuttal will be evidenced-based, with citations in the public domain. The production era attributed to the former Rocky Flats Nuclear Weapons Plant entails many more historical facts than what were presented. Many key timeline events presented were not mentioned or marginalized to shed a more positive light on the U.S. Department of Energy and its predecessor agencies, its contract operators, and minimized human health and environmental hazards at or near the site, to include the Rocky Flats National Wildlife Refuge.

Mr. Surovchak's presentation was presented in a format consistent with a PowerPoint presentation comprised of individual "slides." The slide presentation was converted to a PDF file and made publicly available on April 9, 2015 at http://www.lm.doe.gov/Rocky_Flats/Sites.aspx?view=5, and slide number 60 appears to be obscured or redacted. Additionally, Mr. Surovchak narrated more information than what was written on the slide or captured in the meeting minutes. The RFSC meeting was not recorded and the meeting minutes were published more than two (2) months after the meeting.

The following 22 slides of Mr. Surovchak's April 6, 2015 66-slide presentation before the RFSC will be discussed and/or mentioned during our presentation:

Slide 1 – Timeline

Slide 2 – Production Era (1953-1994)

Slide 11 – 1989 – End of the Cold War (changed the Mission at Rocky Flats)

Slide 13 – The Cleanup (1994-2005)

Slide 14 – Rocky Flats Closure Project

Slide 15 – Rocky Flats Closure Project

Slide 16 – Rocky Flats Closure Project

Slide 23 – Rocky Flats Closure Project

Slide 30 – Building 850 Gone

Slide 38 – Material Disposition

Slide 39 – SNM and Waste Shipping

Slide 44 – Rocky Flats Closure Project (Environmental Remediation)

Slide 47 – Erosion Control on the 991 Hillside

Slide 48 – Characterization of the 903 Pad

Slide 49 – Rocky Flats Closure Project (Continued)

Slide 50 – Extensive Stakeholder Involvement

Slide 52 – Physical Completion

Slide 53 – Regulatory Completion

Slide 56 – Legacy Management

Slide 59 – Central Operable Unit

Slide 61 – Central Operable Unit (Residual Risk)

Slide 63 – ETPTS Air Stripper and Structure

Rebutting the Re-writing of Rocky Flats history: Removing the vestige of "residual risk"

By: Anne Fenerty, M.S.
Jon Lipsky, M.A.S.

Reference the Rocky Flats Stewardship Council meeting packet of April 6, 2015; Jon Lipsky's public comment dated April 6, 2015; and, various emails between David Abelson, Anne Fenerty and Jon Lipsky dated June 1, 2015, June 2, 2015, June 15, 2015, August 3, 2015, August 7, 2015, and August 11, 2015.

The Rocky Flats Stewardship Council meeting packet in regards to "Rocky Flats History: Timeline of Key Events"[i] (Version 3.0 – December 2014) and Department of Energy's "Rocky Flats Overview"[ii] presentation on April 6, 2015 is the subject of this rebuttal.

Slide 1 – Timeline

Why would Mr. David Abelson, Mr. Rik Getty of the Rocky Flats Stewardship Council with their "Rocky Flats History: Timeline of Key Events" and Mr. Scott Surovchak, U.S. Department of Energy, Legacy Management (DOE/LM), with his "Rocky Flats Overview" obscure the many salient facts and dilute Rocky Flats truths pertaining to systemic contamination of dangerous and lethal radioactive elements, denying the public's right to know and the present ongoing dangers of the Rocky Flats Superfund Site, nuclear dump and National Wildlife Refuge? For example some key events that were omitted:

- Perry S. McKay, et al., Plaintiffs, William C. Ackard, et al., Intervenors, v. United States of America, et al., Defendants, U.S. District Court for the District of Colorado, case number 75-M-1162. A federal civil case with a finding that plutonium and americium concentrations in excess of the Colorado standard for soil were a result of air releases from the Rocky Flats Plant including the 1957 fire, leaky oil storage drums and their removal from 1958 to 1969, and a fire in 1969;
- Merilyn Cook, et al., Plaintiffs, v. Dow Chemical, Rockwell International, et al., Defendants, U.S. District Court for the District of Colorado, case number 1:90-cv-00181-JLK. A federal civil case involving nuisance and trespass of plutonium contamination to adjacent property owners' land;
- USA v. Rockwell International Corporation, U.S. District Court for the District of Colorado, case number 92-CR-107. A federal joint criminal investigation from 1987 that concluded with the 1992 Plea Agreement involving four (4) felonies, six (6) misdemeanor convictions and fine;
- U.S. Environmental Protection Agency: Rocky Flats Plant (USDOE), Federal Facility Final National Priority List (NPL also known as Superfund Site)[iii]. A summary of the EPA listing Rocky Flats as a Superfund Site as of September 1989.

Slide 2 – Production Era (1953-1994)

Why would Mr. Scott Surovchak, DOE/LM, use '1953' as the start date?

The U.S. Department of Energy (DOE), Legacy Management (LM) data base indicates – July 1, 1952 – "Operations began on regular production materials."

Slide 11 – 1989 – End of the Cold War (changed the Mission at Rocky Flats)

Why would Mr. Scott Surovchak, DOE/LM, declare that "1989 – End of the Cold War" and that the Rocky Flats mission changed - as the W88 program was cancelled? Evidence to the contrary:

The U.S. Department of Defense (DOD), by U.S. Congressional authority, recognizes the Cold War era from September 2, 1945 to December 26, 1991.[iv]

On September 23, 1989 the New York Times reported – "Rockwell Is Giving Up Rocky Flats Plant"[v] – "The company generates poisonous liquid wastes laced with radiation, for which there is no legal disposal method." Obviously the former Rocky Flats Nuclear Weapons Plant was not capable of operating legally in 1989.

The W88 Program – Plutonium Pits are a critical core component of a nuclear weapon - was not cancelled in 1989. The National Nuclear Security Administration (NNSA) web page – Plutonium Pits[vi] – states that "NNSA lost the capability to manufacture replacement pits since Rocky Flats Plant closed in fiscal year 1992. For the W88 warhead, this was a concern because there were not enough W88 pits to replace ones that were destroyed during the surveillance process. By 2007, NNSA reconstituted its ability to manufacture pits, which is now done at Los Alamos National Laboratory."

Slide 13 – The Cleanup (1994-2005)

Why would Mr. Scott Surovchak, DOE/LM, state that "The Cleanup" at Rocky Flats was from 1994-2005?

The DOE/LM data base notes that Kaiser-Hill Company was hired effective July 1, 1995. In 1994 the DOE/LM data base notes that 200,000 gallons of sludge from the Solar Evaporation Ponds were emptied, among other things, however the Solar Evaporation Ponds were closed under the Resource Conservation and Recovery Act (RCRA) in 1985. Despite RCRA Closure in 1985 Solar Evaporation Pond 207C was utilized for production activities in 1987 and 1988. Arguably, DOE began the cleanup of Rocky Flats in 1985 with the regulatory enforced closure of the Solar Evaporation Ponds, albeit short-lived, in 1985.

Slide 14 – Rocky Flats Closure Project

Why would Mr. Scott Surovchak mention only the 1996 Rocky Flats Cleanup Agreement (RFCA)?

In 1995 Kaiser-Hill was awarded the "Rocky Flats Performance-Based Integrating Management" contract effective July 1. The Rocky Flats Ceanup Agreement evolved as a result of several other notions.

The 1996 Rocky Flats Legacy Management Agreement (RFLMA)[vii] was a result of a Federal Facility Agreement and **Consent Order** (emphasis added) that complies with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA). In other words DOE has agreed to and is expected to comply with U.S. and Colorado law.

Slide 15 – Rocky Flats Closure Project

Why would Mr. Surovchak, DOE/LM highlight the closure project without noting the Independent Verification surveys?

In July 2008 E.N. Bailey authored "Lessons Learned from Independent Verification Activities, DCN 0476-TR-02-0."[viii] The report cited the need for more extensive field investigations by the contractor, the contractor overlooked contamination, the 903 Lip Area demonstrated Pu239/240 concentrations exceeding the 50 pCi/g action level and nine samples exceeded the maximum hot spot criteria of 150 pCi/g. Oak Ridge Institute for Science and Education (ORISE) identified a discrepancy in the calibration methods wherein the contractor did not account for surface efficiency in their calibrations resulting in half the reported activities for the same locations as Oak Ridge Institute for Science and Education (ORISE) surveyed.

Independent scientists hired by adjacent municipalities brought up many concerns about the validity of the planned remediation. Many of those concerns were not addressed.

Slide 16 – Rocky Flats Closure Project

Why would Mr. Surovchak omit the following in his "overview?"

Again, the July 2008 Bailey document (please see endnote viii), ORISE identified a discrepancy in calibration methods early in the Decontamination & Decommissioning (D&D) process. ORISE, utilizing MARSSIM, identified numerous locations of elevated activity within Buildings 371, 374, 707, 771/774, 776/777, and 865. "Several localized "hot spots" as well as several larger areas of contamination were identified and subsequently addressed by the contractor. In most instances the identified contamination was undocumented by the contractor."

Areas of concern that remain at Rocky Flats: Two (2) landfills (OLF and PLF); Original process waste lines for which no schematics are available where the lines are located; Valve vaults; 903 Pad and Lip Area; Ash pits; East Trenches; Mound Site; Contaminated Groundwater plumes; Contaminated foundations in the Building 371 and 771 areas; Sediments in the "B" (South Walnut Creek) series ponds; and, Solar Evaporation Pond contaminated plume.

Slide 23 – Rocky Flats Closure Project

Why would Mr. Scott Surovchak, DOE/LM omit the MARSSIM Independent Verification results and detail how DOE/LM rectified the discrepancies?

- Were the extensive sampling procedures corrected as reported by the Independent Verification process?
- "Rubble Shipped". According to workers on the site much of it is underground. There is no limit of radioactive material left below 6'.
- Building 881 was exploded, large amounts of dust were created, there were no hoses and many workers were exposed to include beryllium.

Slide 38 – Material Disposition

Can Mr. Scott Surovchak, DOE/LM, account for the disposition of all Rocky Flats material?

On November 22, 1996 Thomas B. Cochran, Ph.D. published his report, "Plutonium Inventory Differences at the Rocky Flats Plant and Their Relationship to Environmental Releases."[ix] The following encapsulates the issue, "Unexplained inventory differences continue to be a major deficiency in the operation of plutonium production processes at Rocky Flats."

Slide 39 – SNM and Waste Shipping

- 2008 Secretary report to Congress, need for 2nd Nuclear Waste Repository though the 1st Nuclear Waste Repository has not opened;
- February 2014 WIPP explosion and subsequent closure;
- Mixed Oxide (MOX) is an experimental nuclear waste for public nuclear power plants that industry has indicated no interest in utilizing;
- Not all Rocky Flats nuclear waste was removed.

Slide 44 – Rocky Flats Closure Project (Environmental Remediation)

Why would Mr. Scott Surovchak, DOE/LM, state that "Building Foundations removed?"

Many buildings were imploded in place. For example Buildings 371, 771 and 881 and their appurtenance.

- RCRA Closure of Old Landfill (OLF) not utilized or realized.

Slide 48 – Characterization of the 903 Pad

Why does Mr. Surovchak state that Rocky Flats soil was cleaned up?

- The Colorado Plutonium-239 cleanup standard at Rocky Flats was changed to accommodate DOE at Rocky Flats. Surface soil to a depth of three (3) feet is now 50 pCi/g of soil; below three (3) feet to six (6) feet up to 1000 pCi/g of soil; and, below six (6) feet no standard exists;
- The Multi Agency Radiation Survey and Site Investigation Manual (MARSSIM)[x], is the manual for the accepted procedure for cleanup of radioactive soils. The DOD, Nuclear Regulatory Commission (NRC), EPA and DOE endorse the guidance; however MARSSIM did not prevail at Rocky Flats. The MARSSIM Independent Verification noted that the contractor had calibration issues early on in the project with noted exceedances of the 50 pCi/g and "hot spot" criteria of 150 pCi/g in soil.

Slide 49 – Rocky Flats Closure Project

Why would Mr. Scott Surovchak, DOE/LM, state that "Majority of the site is below 7 pCi/g plutonium" that implies a regulatory standard?

During a Rocky Flats Coalition of Local Governments Board Meeting on June 6, 2005: Shaun McGrath[xi], then Boulder, Colorado Mayor and currently the EPA Region VIII Administrator at Denver, asked about the use of 7 picocuries per gram (pCi/g) in the buffer zone as a standard. John [Rampe, DOE] responded that 7 pCi/g has no regulatory basis and that it is used in the context of institutional controls.

The Independent Verification, MARSSIM (see endnote viii), observed that the contractor overlooked contamination, the 903 Lip Area demonstrated Pu239/240 concentrations exceeding the 50 pCi/g action level and nine samples exceeded the maximum hot spot criteria of 150 pCi/g. The Independent Verification was not applied to much of the Rocky Flats site.

In July 2006 DOE announces the Proposed Plan for the Rocky Flats Environmental Technology Site[xii] noted that "a few sampling locations within the Peripheral OU that exceed a level of 9.8 picocuries per gram (pCi/g)." The highest result "at these locations" is approximately 20 pCi/g.

Also, Plutonium in the soil is not static as the radionuclide is capable of migrating.

Slide 50 – Extensive Stakeholder Involvement

- Limited by DOE decisions;
- The DOE Environmental Impact Statement tallied greater than 80% of public comments opposed opening the Refuge for extensive public access;
- The RFLMA provides for DOE to disturb the soil at Rocky Flats and only after CDPHE approves the DOE request is the information made public. The public is left without recourse.

Slide 52 – Physical Completion

- The present sampling protocol of 12 month rolling averages for water, plus the composite soil samples don't show exceedances. Dilution is not the Solution for Pollution.

Slide 53 – Regulatory Completion

- The Peripheral Operating Unit, the designated Refuge was delisted as a Superfund Site however the Refuge completely surrounds the Rocky Flats Superfund Site (Central Operable Unit 1). The Refuge consists of approximately 4,000 acres of this former nuclear weapons plant was declared clean, not in need of remediation.
- The Church-McKay lawsuit versus DOE and the 1992 Plea Agreement between U.S.A. versus Rockwell International demonstrates that "[E]essentially uncontaminated former buffer area" is not factually correct.

Slide 56 – Legacy Management

- Community and public interaction? Periodic reporting? To whom? The Rocky Flats Stewardship Council (RFSC), largely DOE funded, does not publicize its meetings except on its web site. Except the time when FWS planned a burn north of a development there usually are only one or two members of the general public present. The public is restricted to a brief Public Comment period and are not recognized to ask questions during DOE/LM presentations. The RFSC minimizes its efforts to encourage public attendance.

Slide 59 – Central Operable Unit

- DOE/LM "residual contamination" discounts and disregards harmful respirable dust of Pu239.
- DOE/LM has reported extensive contamination of surface water creeks which effect the Rocky Flats National Wildlife Refuge.

Slide 61 – Central Operable Unit (Residual Risk)

Why would Mr. Survochak, DOE/LM, accept on behalf of the public "residual risk?"

DOEs acceptable risk involves a Wildlife Refuge Worker scenario who spends 20 hours per week at Rocky Flats. The incidence of cancer scenario should reflect that people – especially children who are more vulnerable – and those who live in the area would involve many more hours per week.

DOE calculates that the Wildlife Refuge Worker scenario equates to less than 25 mrem/year. The EPA, Radiation Protection[xiii] guidelines for Plutonium (alpha emitter) is 10 mrem for humans under the auspices of the Clean Air Act. The DOE should have to quantitatively prove that 50 pCi/g of surface soil Plutonium-239 contamination does not generate more than 10 mrem for humans.

Mr. Surovchak stated that "Surface water meets drinking water standards." The EPA surface water standard for Plutonium is 0.15 pCi/L. The Colorado Water Quality Control Commission, The Basic Standards for Ground Water[xiv] for Plutonium and Americium, both are contaminants of concern emanating from Rocky Flats, is 0.15 pCi/L, calculated using a $1x10^{-6}$ risk level based on residential use. Certain Rocky Flats systems have monitored Plutonium exceeding the water standard and Safe Drinking Water Act[xv]. When Rocky Flats Plutonium exceeds 0.15 pCi/L in surface water it is not possible to meet the Safe Drinking Water standard.

The DOE/LM Rocky Flats Superfund Site is completely engulfed by the Rocky Flats National Wildlife Refuge (Refuge). Stronger Institutional Controls (IC) should be in-place to protect anyone wandering on the Refuge. For example, fences and signage that clearly indicate the potential increased hazards within the Rocky Flats Superfund Site.

Conclusions

The Rocky Flats Stewardship Council should refrain from considering abridged facts regarding the former Rocky Flats Nuclear Weapons Plant.

In 1999 nuclear workers were promised compensation for illness, injury and loss of life for their service while working in the U.S. nuclear weapons complex. In 2000 the promise was made into Public Law when the Energy Employees Occupational Illness Compensation Program Act (EEOICPA) was made into law. Fortunately the Rocky Flats, Special Exposure Cohort (SEC) Petition, number 192[xvi], includes the start date of April 1, 1952 and not "1953" as suggested by Scott Surovchak, DOE/LM.

DOE/LM at Rocky Flats should be pressed (as in contact your Congressperson and Senators) to publicly disclose the costs of the Plume Treatment Systems for the East Trenches, Mound Site and Solar Evaporation Ponds. In regards to the latter the DOE/LM

should also include the amount of funds expended since 1985. The East Trenches, Mound Site and Solar Evaporation Ponds are contamination sources with longevity therefore DOE/LM should also be pressed to disclose the realistic, projected costs to provide an appropriate remedy: RCRA Closure.

Due to ongoing reportable exceedances of contaminants DOE/LM at Rocky Flats monitoring and treatment should be independently verified.

DOE/LM for the Rocky Flats Superfund Site and the U.S. Fish and Wildlife Service for the Rocky Flats National Wildlife Refuge should be required to ensure that alpha emissions do not exceed 10 millirems for humans as a result of Land Management should be based on quantified science and not qualified science (Health Physics).

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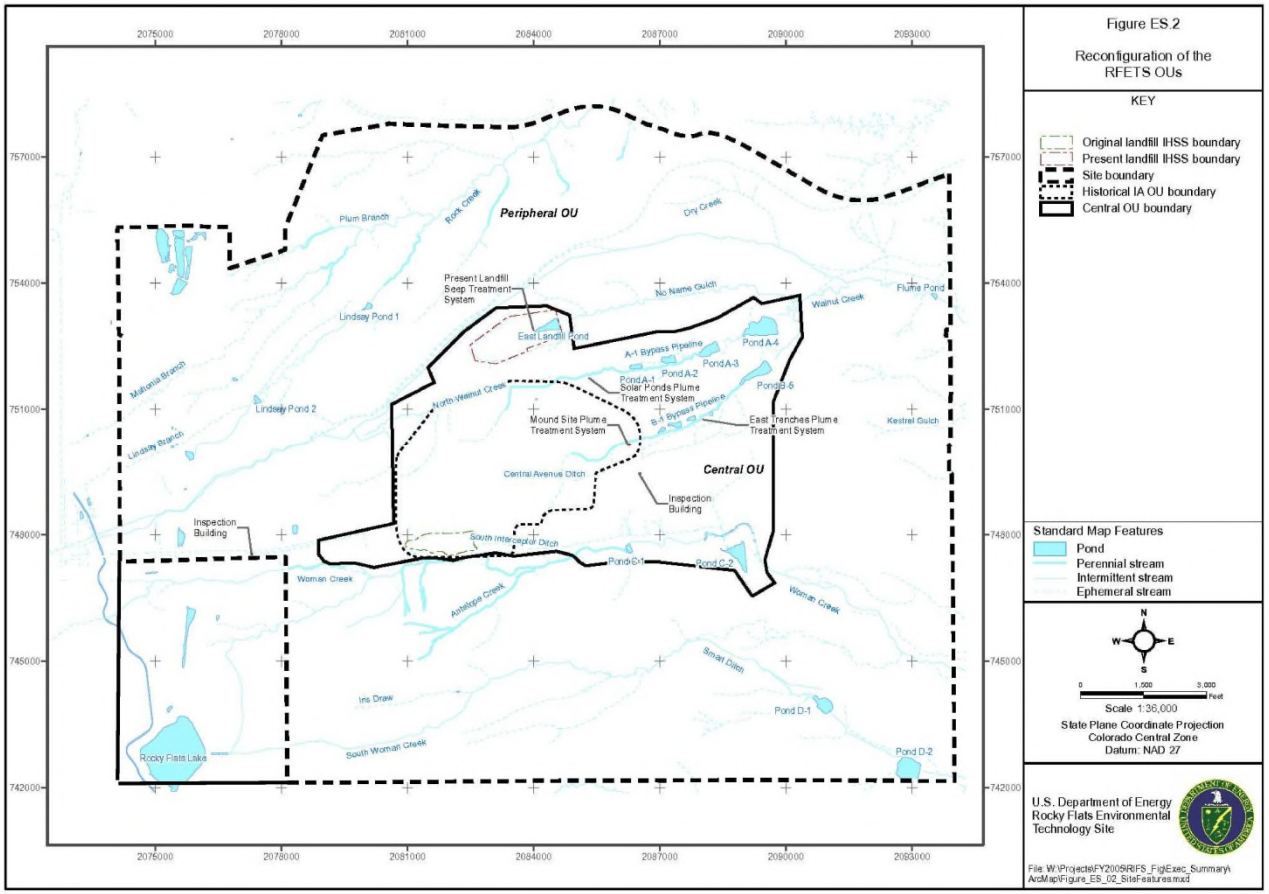
[i] http://www.rockyflatssc.org/RFSC_agendas/RFSC_Bd_mtg_packet_4_15.pdf
[ii] www.lm.doe.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=9247
[iii] http://www2.epa.gov/region8/rocky-flats-plant-usdoe
[iv] http://www.defense.gov/releases/release.aspx?releaseid=2031
[v] http://www.nytimes.com/1989/09/23/us/rockwell-is-giving-up-rocky-flats-plant.html
[vi] http://nnsa.energy.gov/ourmission/managingthestockpile/plutoniumpits
[vii] https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CB4QFjAAahUKEwjGpPTI5r7HAhUQNIgKHZl_Ak4&url=http%3A%2F%2Fwww.lm.doe.gov%2FRocky_Flats%2FRFLMA.pdf&ei=RobZVcbpDZDooASZ_4nwBA&usg=AFQjCNGpy82PwCsWh9Xya3EWBV7W8ZPMTw&cad=rja
[viii] https://www.orau.org/documents/ivhp/survey-projects/lessons-learned-from-independent-verification-activities.pdf
[ix] http://docs.nrdc.org/nuclear/files/nuc_11229601a_178.pdf
[x] http://www.epa.gov/radiation/marssim/faqs.html
[xi] http://www.lm.doe.gov/cercla/documents/rockyflats_docs/SW/SW-A-005523.pdf
[xii] https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CCYQFjABahUKEwjTnYK5o73HAhXVV4gKHXlwAYY&url=http%3A%2F%2Fwww.lm.doe.gov%2FRocky_Flats%2FProposed_Plan_FINAL_DOCUMENT.pdf&ei=q7nYVZOcPNWvoQT54IWwCA&usg=AFQjCNFdkzOTrulLRNwRcxqGcy4-D3htnQ&cad=rja
[xiii] http://www.epa.gov/radiation/radionuclides/plutonium.html
[xiv] https://www.colorado.gov/pacific/sites/default/files/Regulation-41.pdf
[xv] http://www.epa.gov/radiation/radionuclides/plutonium.html
[xvi] http://www.cdc.gov/niosh/ocas/rocky.html

Rebuttal of DOE's 4/6/2015 Presentation



September 14, 2015

~ Anne Fenerty, MS ~ Jon Lipsky, MAS ~

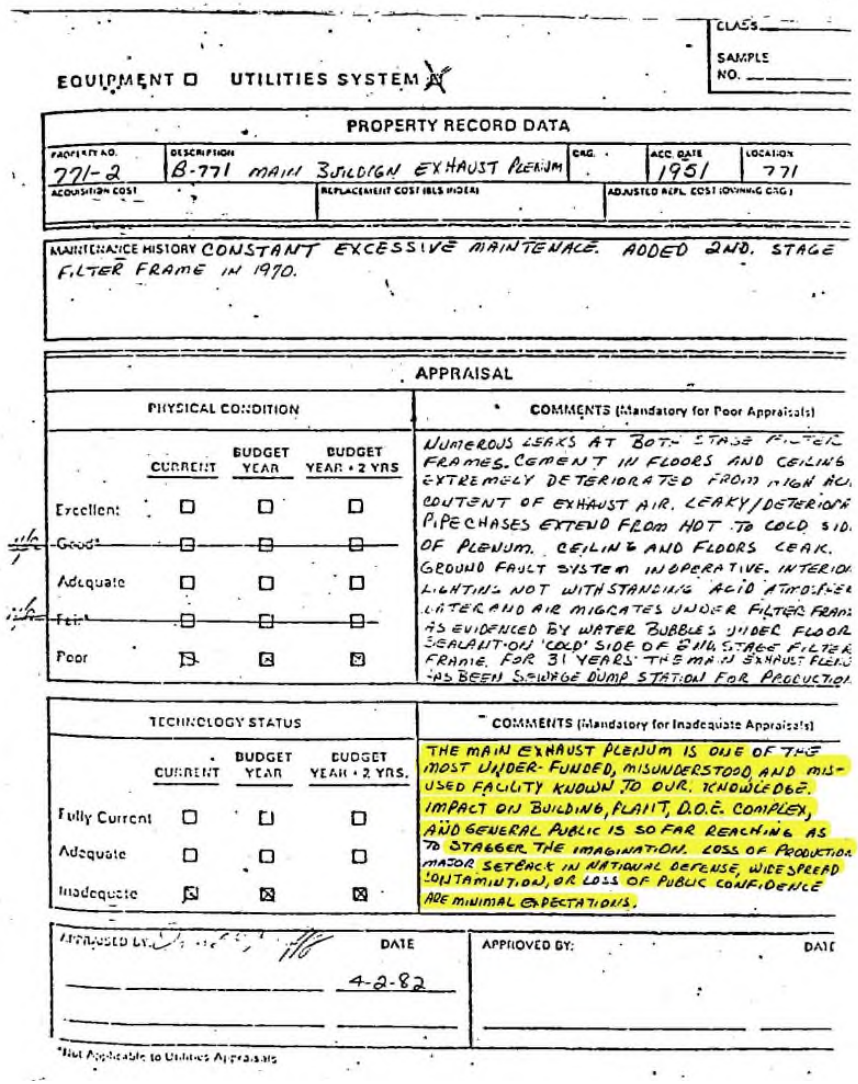
Rocky Flats - Introduction

- Began operations in 1952 to produce plutonium-239 and beryllium components for the thermo-nuclear bomb;
- Plutonium-239 is considered the most toxic substance known with a half-life of over 24,000 years;
- Respirable particles of airborne plutonium were released;
- By 1986 DOE attorney documented “Patently Illegal Activities” at Rocky Flats;
- In 1989 a criminal investigation was initiated by the FBI and EPA/OCI with a raid at Rocky Flats for U.S. environmental law violations;
- It then became a Superfund site, a designation for the worst contaminated places, which pose major danger to the surrounding population;
- In 1992 Rockwell International agreed to plead guilty to 4 felonies and 6 misdemeanors;
- A proper CERCLA investigation with “meaningful community involvement” was inhibited or denied because of destroyed and hidden documents;

Rocky Flats Introduction

- Upon closure, the Superfund law (CERCLA) mandated that the cleanup follow environmental laws.
- In 2004, independent scientists were critical of the planned cleanup.
- In spite of their recommendations DOE's plan was to do this in the cheapest and fastest manner. "Accelerated Action" decisions, ROD made before overall plan, and "Adaptive Management" or learning by doing, are practices that are not usually used at nuclear sites and not at places where the worst contamination is found.

Building 771 Main Building Exhaust Plenum Report 4/2/1982



CLASS

SAMPLE NO.

EQUIPMENT ☐ UTILITIES SYSTEM ☒

PROPERTY RECORD DATA

PROPERTY NO.	DESCRIPTION	CAG.	ACC. DATE	LOCATION
771-2	B-771 MAIN BUILDING EXHAUST PLENUM		1951	771

ACQUISITION COST	REPLACEMENT COST (BLS INDEX)	ADJUSTED REPL. COST (DOWNING CAG.)

MAINTENANCE HISTORY CONSTANT EXCESSIVE MAINTENACE. ADDED 2ND. STAGE FILTER FRAME IN 1970.

APPRAISAL

PHYSICAL CONDITION

	CURRENT	BUDGET YEAR	BUDGET YEAR + 2 YRS
Excellent	☐	☐	☐
Good	☐	☐	☐
Adequate	☐	☐	☐
Fair	☐	☐	☐
Poor	☒	☒	☒

COMMENTS (Mandatory for Poor Appraisals)

NUMEROUS LEAKS AT BOTH STAGE FILTER FRAMES. CEMENT IN FLOORS AND CEILING EXTREMELY DETERIORATED FROM HIGH ACI CONTENT OF EXHAUST AIR. LEAKY/DETERIORA PIPECHASES EXTEND FROM HOT TO COLD SID OF PLENUM. CEILING AND FLOORS LEAK. GROUND FAULT SYSTEM INOPERATIVE. INTERIOR LIGHTING NOT WITHSTANDING ACID ATMOSPHER WATER AND AIR MIGRATES UNDER FILTER FRAM AS EVIDENCED BY WATER BUBBLES UNDER FLOOR SEALANT ON 'COLD' SIDE OF 2ND STAGE FILTER FRAME. FOR 31 YEARS THE MAIN EXHAUST PLENU HAS BEEN SEWAGE DUMP STATION FOR PRODUCTION

TECHNOLOGY STATUS

	CURRENT	BUDGET YEAR	BUDGET YEAR + 2 YRS.
Fully Current	☐	☐	☐
Adequate	☐	☐	☐
Inadequate	☒	☒	☒

COMMENTS (Mandatory for Inadequate Appraisals)

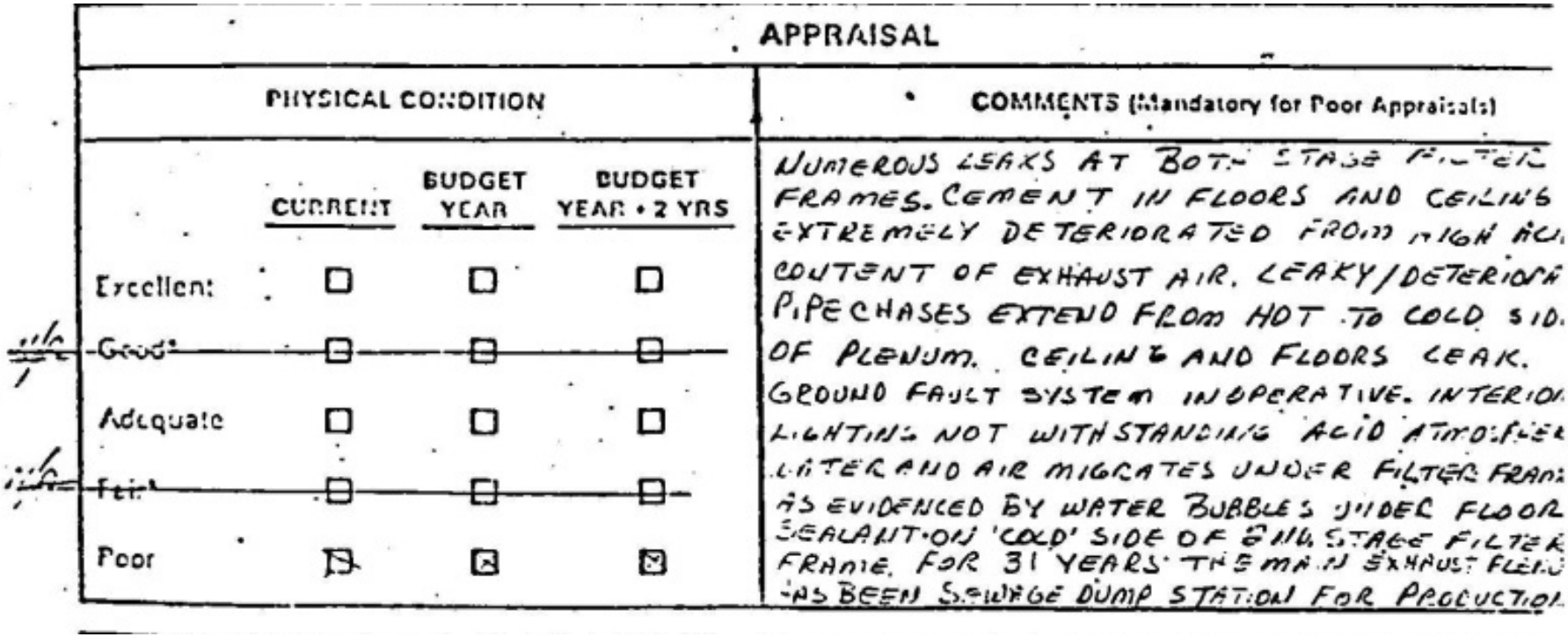
THE MAIN EXHAUST PLENUM IS ONE OF THE MOST UNDER-FUNDED, MISUNDERSTOOD AND MIS-USED FACILITY KNOWN TO OUR KNOWLEDGE. IMPACT ON BUILDING, PLANT, D.O.E. COMPLEX, AND GENERAL PUBLIC IS SO FAR REACHING AS TO STAGGER THE IMAGINATION. LOSS OF PRODUCTION MAJOR SETBACK IN NATIONAL DEFENSE, WIDESPREAD CONTAMINATION, OR LOSS OF PUBLIC CONFIDENCE ARE MINIMAL EXPECTATIONS.

APPRAISED BY: DATE 4-2-82

APPROVED BY: DATE

*Not Applicable to Utilities Appraisals

Poor Physical Condition of Building 771 Exhaust Plenum 4/2/1982



APPRAISAL

PHYSICAL CONDITION	CURRENT	BUDGET YEAR	BUDGET YEAR + 2 YRS	COMMENTS (Mandatory for Poor Appraisals)
Excellent	☐	☐	☐	NUMEROUS LEAKS AT BOTH STAGE FILTER FRAMES. CEMENT IN FLOORS AND CEILING EXTREMELY DETERIORATED FROM HIGH AC CONTENT OF EXHAUST AIR. LEAKY/DETERIOR PIPECHASES EXTEND FROM HOT TO COLD SID OF PLENUM. CEILING AND FLOORS LEAK. GROUND FAULT SYSTEM INOPERATIVE. INTERIO LIGHTING NOT WITHSTANDING ACID ATMOSPHER WATER AND AIR MIGRATES UNDER FILTER FRAM AS EVIDENCED BY WATER BUBBLES UNDER FLOOR SEALANT ON 'COLD' SIDE OF 2ND STAGE FILTER FRAME. FOR 31 YEARS THE MAIN EXHAUST FLEN HAS BEEN SEWAGE DUMP STATION FOR PRODUCTIO
Good	☐	☐	☐	
Adequate	☐	☐	☐	
Fair	☐	☐	☐	
Poor	☒	☒	☒	

Numerous leaks at both stage filter frames;
Deteriorated cement in floors and ceiling;
Ceiling and floors leaked;
Ground fault system inoperative;

Building 771 Main Building
Exhaust Plenum Report 4/2/1982

TECHNOLOGY STATUS	CURRENT	BUDGET YEAR	BUDGET YEAR + 2 YRS.	COMMENTS (Mandatory for Inadequate Appraisals)
Fully Current	☐	☐	☐	THE MAIN EXHAUST PLENUM IS ONE OF THE MOST UNDER-FUNDED, MISUNDERSTOOD AND MIS-USED FACILITY KNOWN TO OUR KNOWLEDGE. IMPACT ON BUILDING, PLANT, D.O.E. COMPLEX, AND GENERAL PUBLIC IS SO FAR REACHING AS TO STAGGER THE IMAGINATION. LOSS OF PRODUCTION MAJOR SETBACK IN NATIONAL DEFENSE, WIDESPREAD CONTAMINATION, OR LOSS OF PUBLIC CONFIDENCE ARE MINIMAL EXPECTATIONS.
Adequate	☐	☐	☐	
Inadequate	☒	☒	☒	

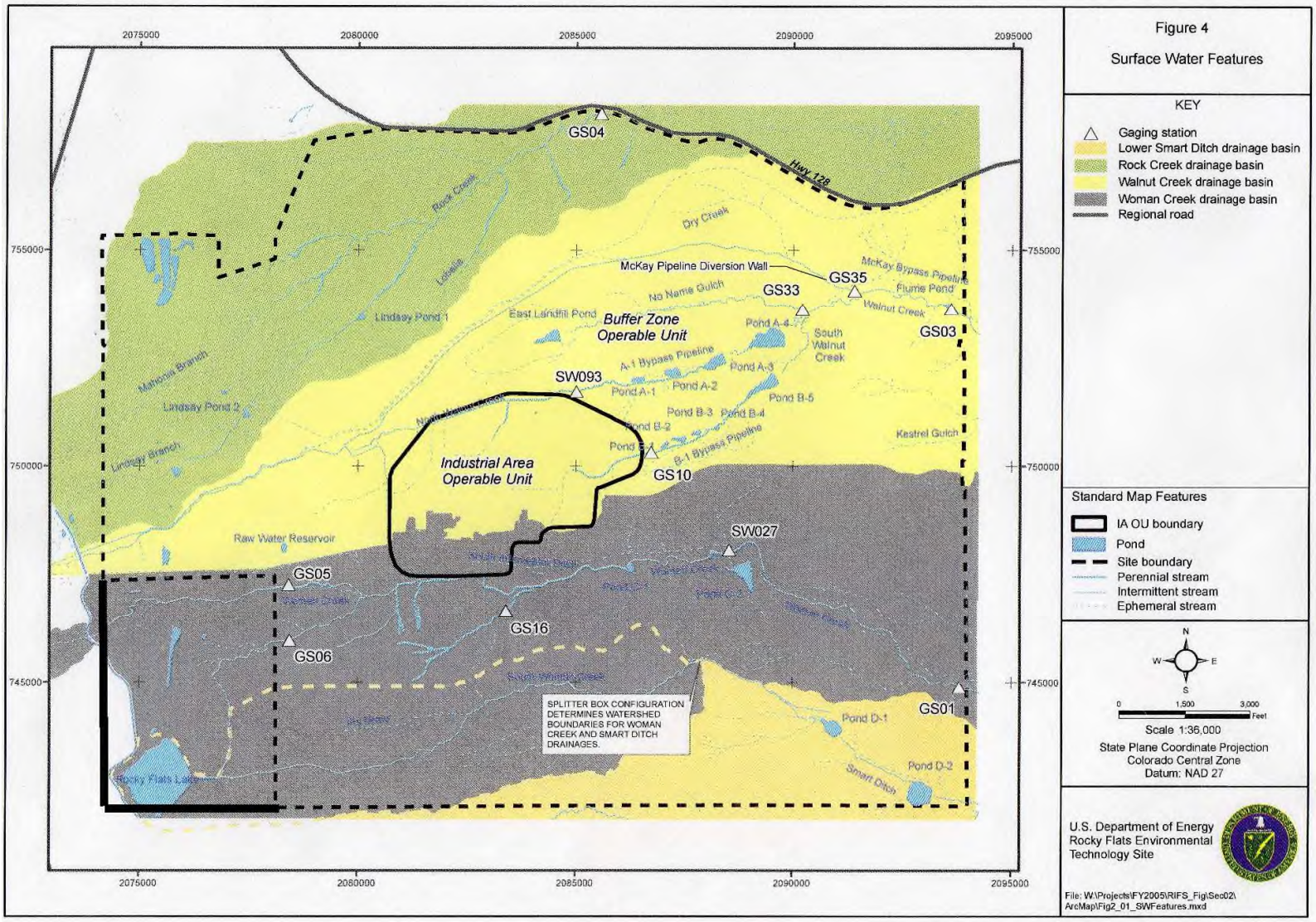
"Main exhaust plenum is one of the most under-funded, misunderstood and misused facility known to our knowledge. Impact on building, plant, DOE complex, and general public is so far reaching as to stagger the imagination. Loss of production, major setback in national defense, widespread contamination, or loss of public confidence are minimal expectations."

1979 Christmas Party
Rocky Flats Building 444 (beryllium)

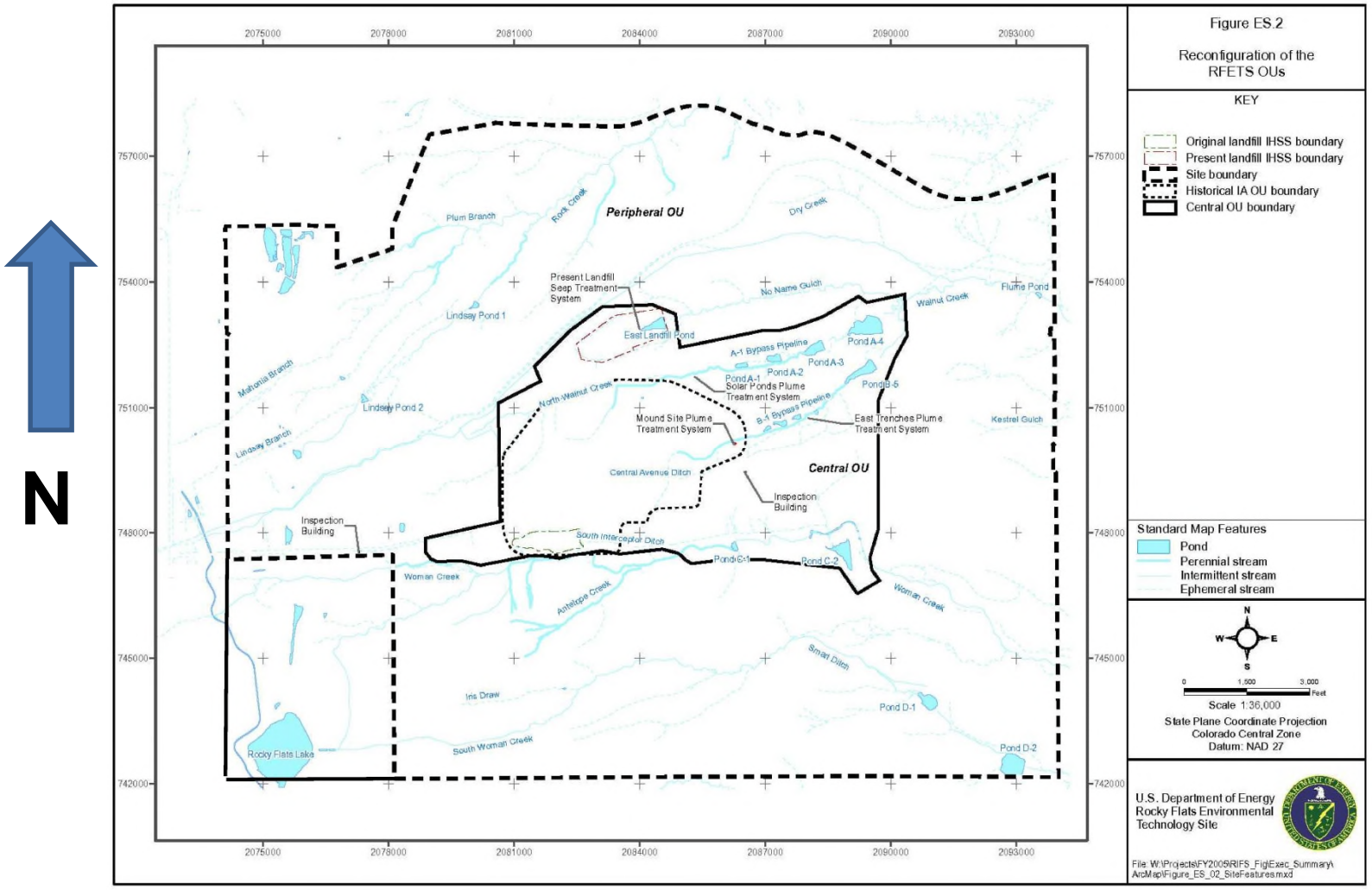
Issues:
No Respirators
No booties
Personal clothes
Facial hair
No Supv control
Chronic Be disease

August 2015 OSHA intends to reduce Be exposure – a carcinogen that also causes berylliosis - by 90%

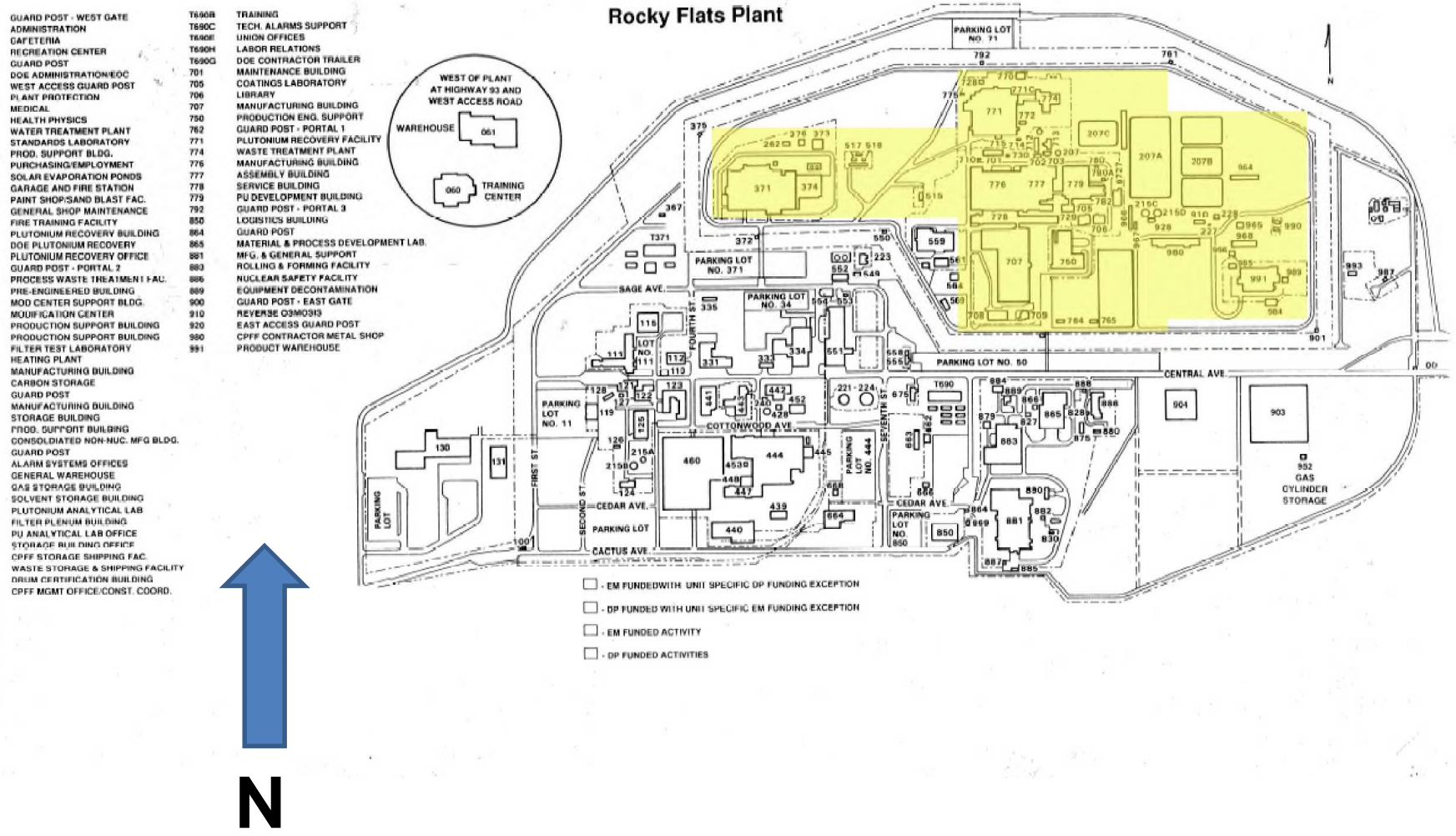
Rocky Flats Surface Water Drainage



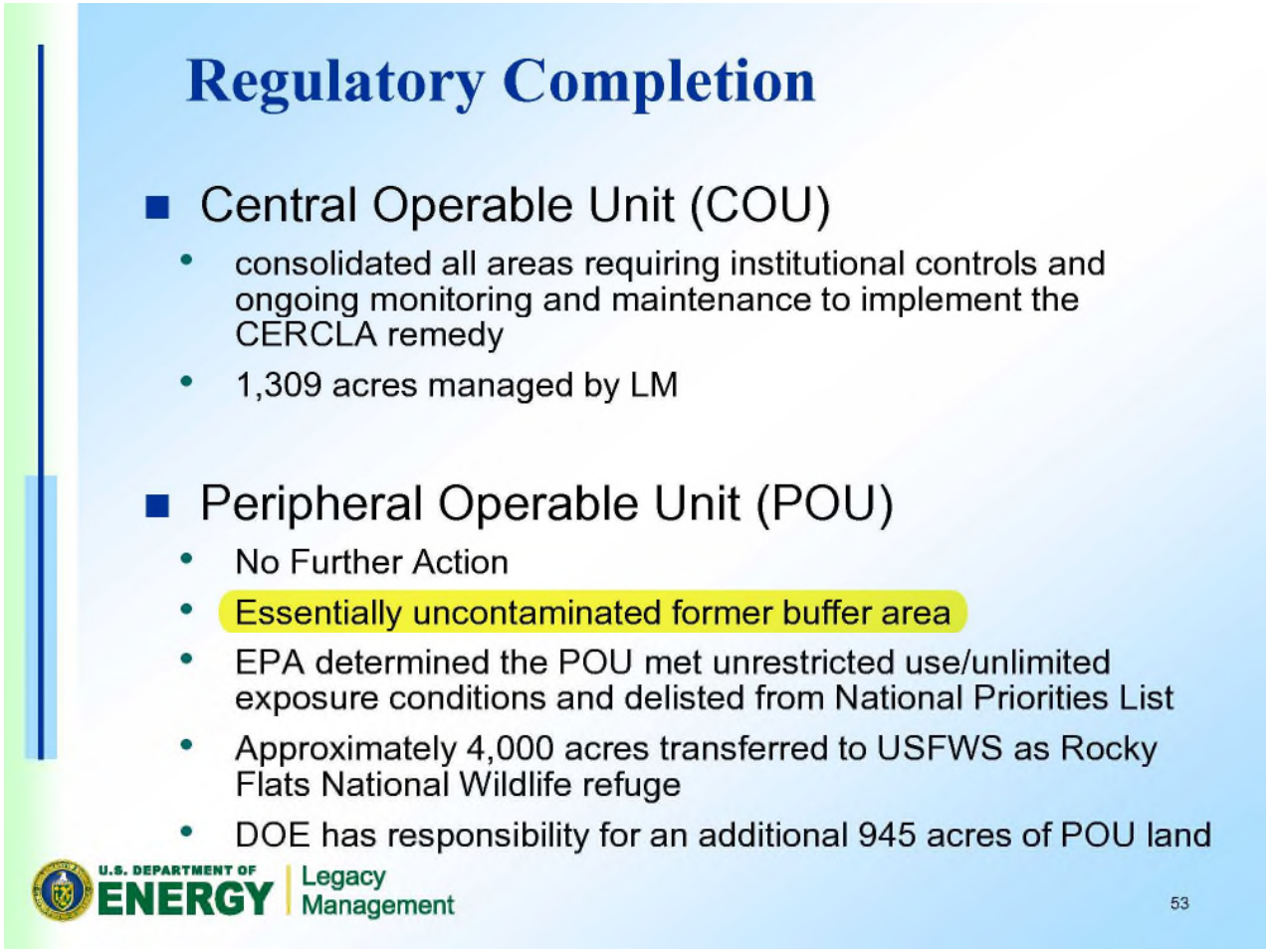
Rocky Flats
Industrial area, COU and POU



Rocky Flats Industrial Area



Scott Surovchak, DOE, LM
April 6, 2015



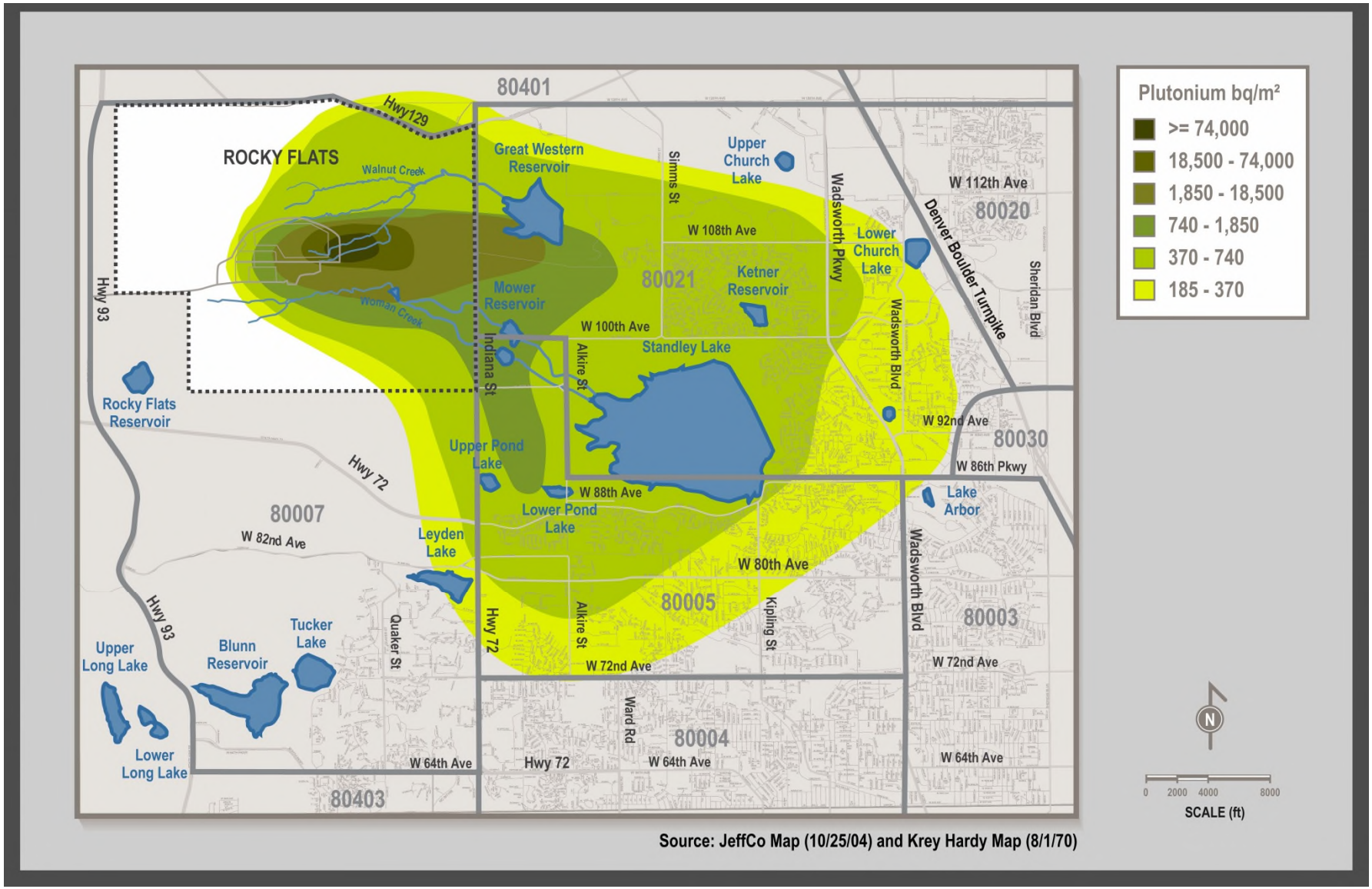
Problem Areas

- **Buffer Zone is not "essentially uncontaminated;"**
- **Historical releases – accidental & intentional – of plutonium-239 contamination in the air, soil and water;**
- **EPA/CDPHE disregarded or made unavailable evidence in favor of the DOE and not the public;**
- **DOE sponsored document destruction contravened its responsibility and nuclear worker/public right-to-know;**
- **Three current Plume Treatment Systems (solar evaporation ponds, east trenches and mound) are replacing legally required remedial action plans at additional cost to the taxpayer;**
- **Present controls do not protect human health and the environment;**
- **Thus Rocky Flats Superfund area threatens human health on the Refuge;**
- **Rocky Flats Superfund site and National Wildlife Refuge requires Independent Verification and study – not public access.**

Dr. Edward Martell, Ph.D.
Radio-Chemist

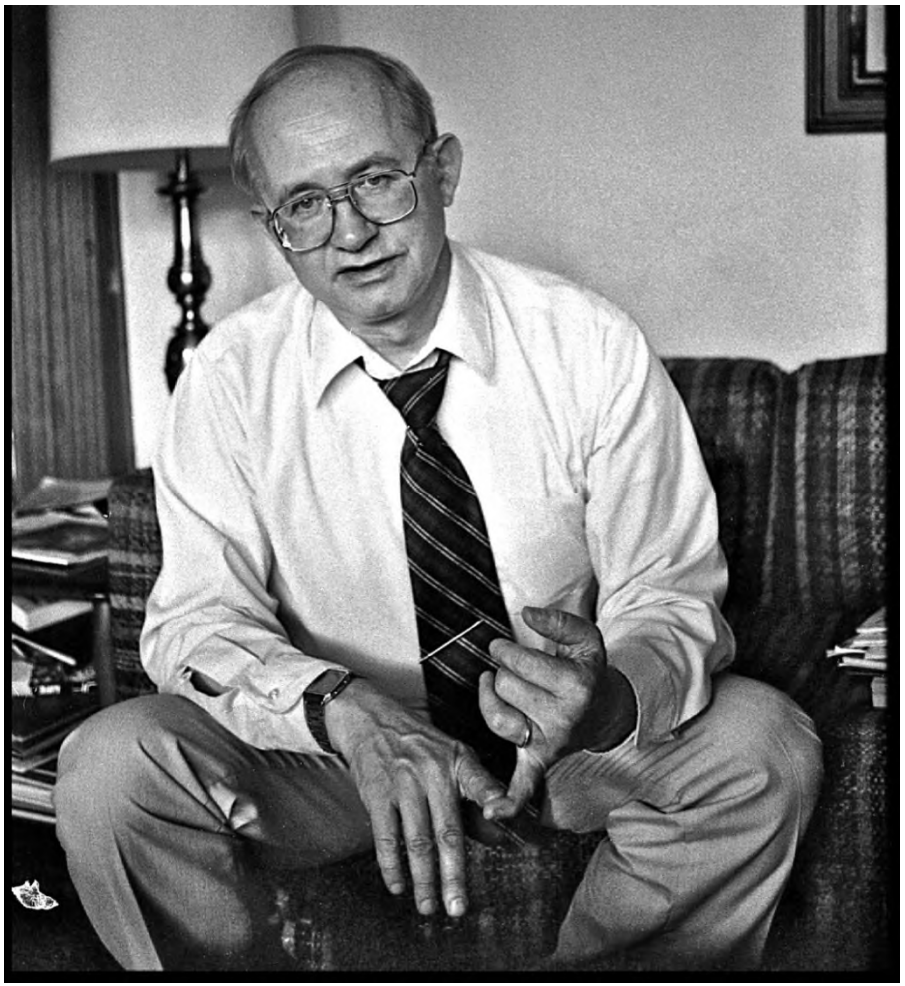
Raised public awareness of the 1957 and 1969 RF fires

Krey-Hardy kriging map
49,950 pCi/g at eastside of RFNWR



Source: JeffCo Map (10/25/04) and Krey Hardy Map (8/1/70)

Dr. Carl J. Johnson, M.D., MPH



Raised public awareness of elevated cancer risk

Pu Hazard in RESPIRABLE DUST on the Surface of Soil

Plutonium Hazard in Respirable Dust on the Surface of Soil

Abstract. *Plutonium-239 in the fine particulate soil fraction of surface dust is subject to suspension by air currents and is a potential health hazard to humans who may inhale it. This respirable particulate fraction is defined as particles ≤ 5 micrometers. The respirable fraction of surface dust was separated by ultrasonic dispersion and a standard water-sedimentation procedure. Plutonium concentrations in this fraction of off-site soils located downwind from the Rocky Flats Nuclear Weapons Plant (Jefferson County, Colorado) were as much as 380 times the background concentration. It is proposed that this method of evaluation defines more precisely the potential health hazard from the respirable fraction of plutonium-contaminated soils.*

Methods of evaluating Pu inventories in soils are important because of the possibility of soil contamination near Pu processing plants and nuclear generating stations and areas where Pu has been accidentally released—for example, at Palomares, Spain, and Thule, Greenland, where Pu was released in airplane accidents in January 1966 and January 1968, respectively. Evaluation of Pu (*1*) in the soil is of special importance in contaminated areas that are now considered for residential development. One such area is in the vicinity of the Rocky Flats Nuclear Weapons Plant (Jefferson County, Colorado), which is currently operated by Rockwell International for the Energy Research and Development Administration (ERDA). Activities at the plant include processing radioactive chemicals and making weapons from radioactive metals (*2*).

The Colorado State Health Department in 1973 proposed an interim standard for soil contaminated with Pu, setting the maximum allowable concentration at 2 disintegrations per minute per gram (dpm/g) (*3*). Land with Pu concentrations in excess of the standard would require ameliorative treatment before residential development could be approved. However, the standard fails to define "soil." Either single or composite samples of the soil at a depth of 0 to 0.5 cm from numerous locations in a development area are required. Because such samples include soil particles much too large to be resuspended or inhaled, the possible risk to health cannot be properly evaluated (*4*). Further, no provision is made to prevent the treated soil from being recontaminated by redeposition of Pu from more highly contaminated soils upwind. This redeposition mechanism potentially exists because winds in the area exceed 30 km/hour for 500 to 600 hours yearly. Wind speeds commonly reach 130 km/hour or more, with winds blowing predominantly to the east and southeast toward the Denver metropolitan area (Figs. 1 and 2).

The plant is located about 16 km northwest of Denver and about 8 km from the cities of Boulder, Westminster, and Arvada. Approximately 200,000 people live within 16 km and 600,000 people within 32 km of the plant. Residential development is now proposed within about 5 km of the plant (Fig. 1), involving as many as 3000 homes or a potential population of about 10,000 persons (*5*).

Since the plant began operation in 1953, there have been two major fires (1957 and 1969), a large release of Pu to off-site soils from a spill of metal-laden cutting oil, and an accidental release of Pu to the air in 1974. The major sources of off-site contamination are considered to be emissions from the 1957 fire and the oil leakage from corroded barrels of contaminated cutting oil that were stored

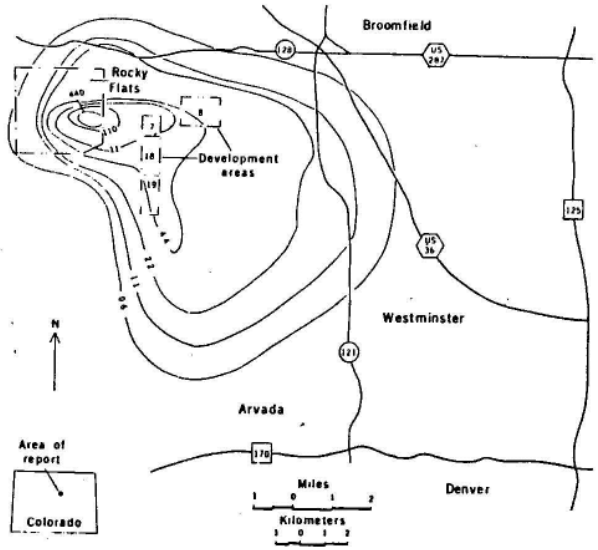


Fig. 1. Rocky Flats Nuclear Weapons Plant and proposed housing development area. Isopleths are labeled in disintegrations per minute per gram of whole soil, calculated from values in (*2*).

Science
August 6, 1976

Professor Harvey Nichols, Ph.D.

Public awareness of Pu239 particle size and lethal amount emitted

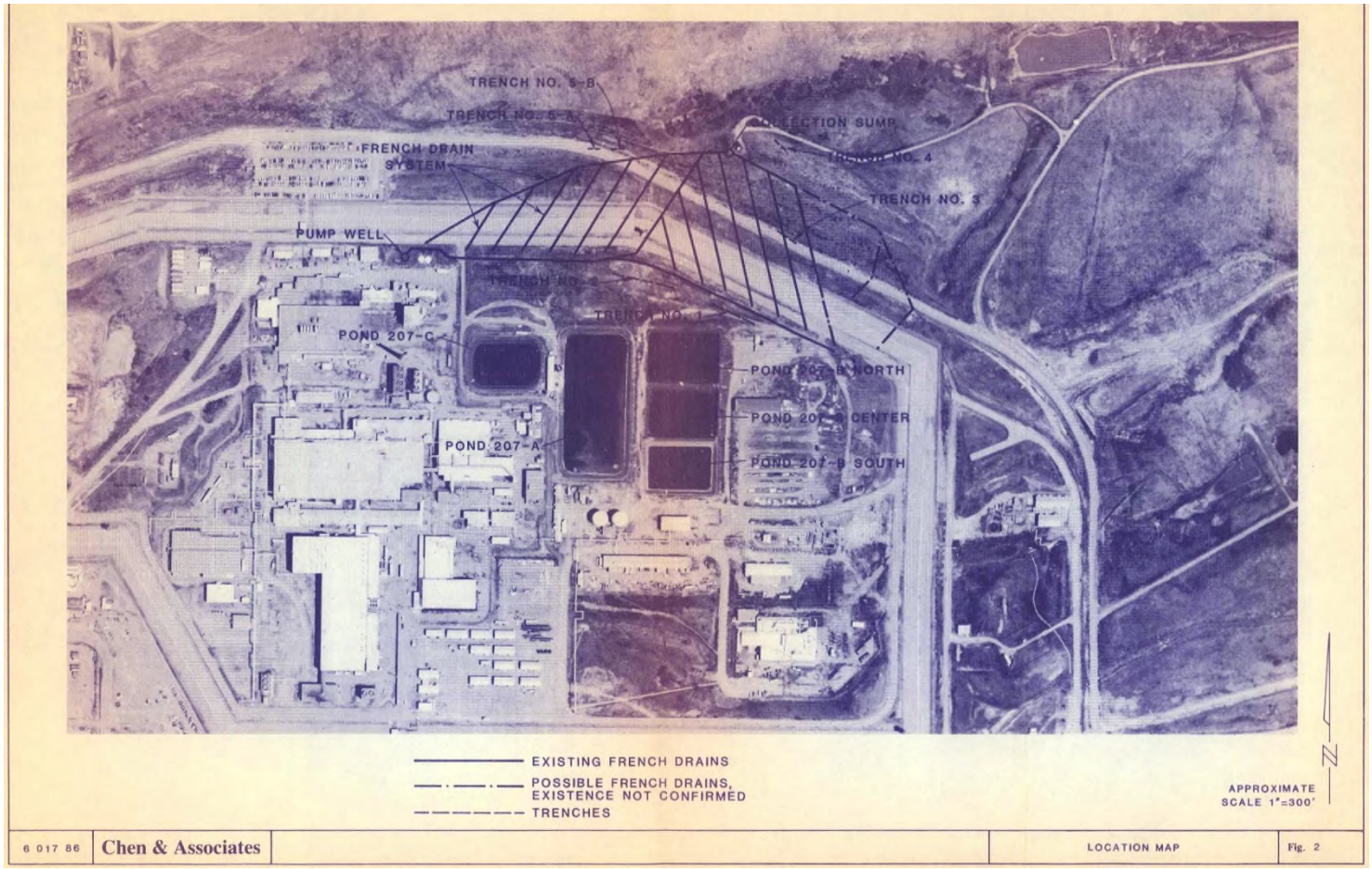
Airborne Pu Particles at RF

1) My contract research (ERDA Contract EY-76-S-02-2736) was initiated by a 1974 invitation from DOE to study airborne particles at Rocky Flats based on my palynological research in the arctic (in *Science* and *Nature* etc.). I demonstrated that very large numbers of radionuclide particles (size ranges 5-0.5, and 0.5-0.05 microns) were deposited in snowfalls at eight study sites in the current Refuge area during the winter of 1975 – 6. Snow scavenged the plutonium particles emitted through the HEPA filters in the effluent stacks. This was admitted in response to my questioning of Rockwell International contractors for DOE Rocky Flats in a recorded sub-committee meeting of the Colorado House of Representatives' on 9/30/1987, convened by Senator Dorothy Rupert. Rockwell, for DOE, claimed that there were no health implications from their operations, which Sen. Rupert found incredible. (See below for my estimate of the number of plutonium particles to be released by the April 2015 burning).

"600 Million potentially-fatal doses of Pu released from RF operations"

Solar Evaporation Ponds – RCRA Closure

August 29, 1986 (RF Weston/Hydro-Search)



207A: 1956

207B: 1960

207C: 1970

9.5 M Gallons Max. Operating

4.9 Acres

French Drains - Interceptor Trenches Inadequate

Groundwater Wells

N

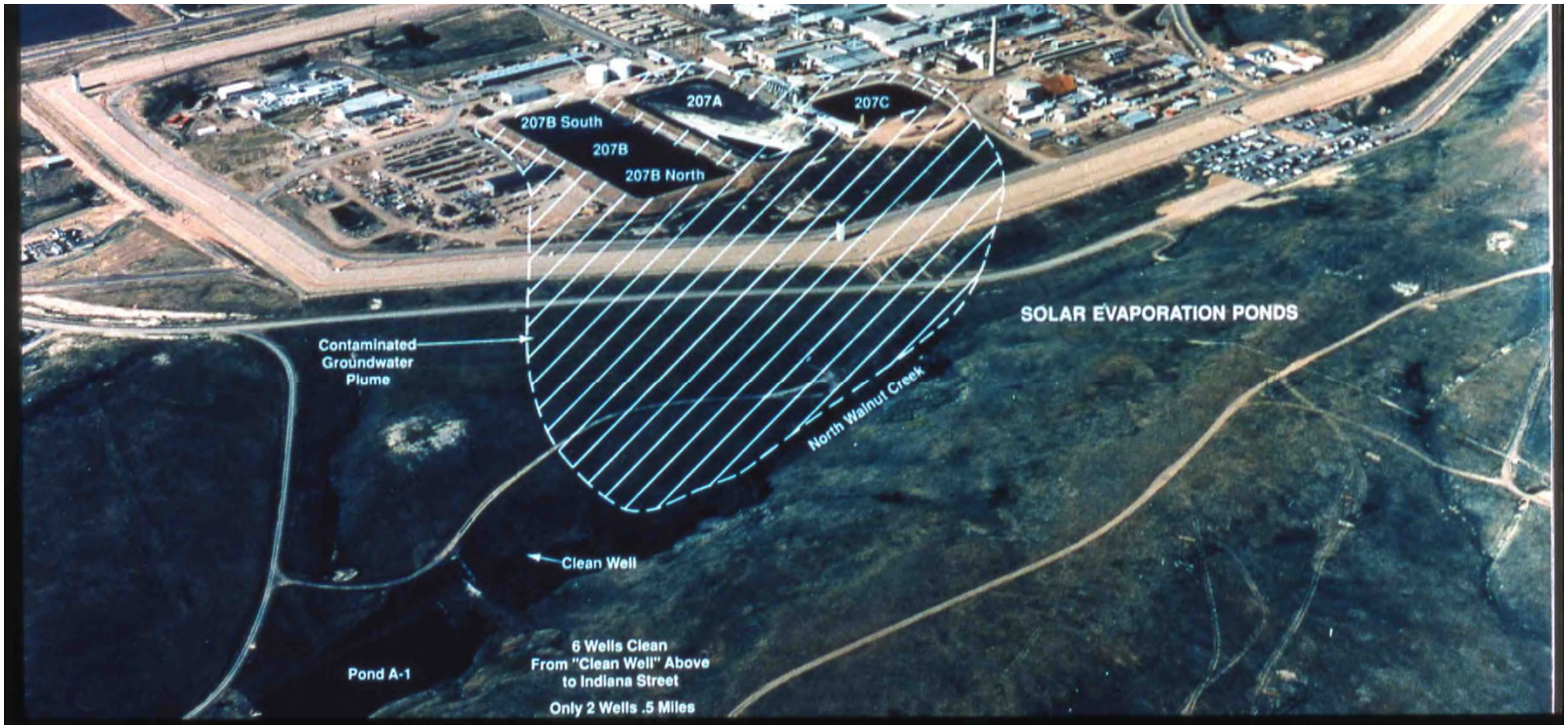
Solar Evaporation Ponds

Contaminated Groundwater Plume

1950s –1985 Reused After RCRA Closure

Enriched/Depleted U, VOCs, Nitrates

Pathway to Walnut Creek



N

McKay Award **$7,062,207.72**

Ackard et al Award **$2,092,506.03**

~ 2000 contaminated acres from Spray Irrigation Currently the RFNWR

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

Civil Action No. 75-M-1162

FILED
UNITED STATES DISTRICT COURT
DENVER, COLORADO
JUL 8 1985
JAMES R. MANSPEAKER
CLERK

PERRY S. McKAY, et al.,

Plaintiffs,

vs.

WILLIAM C. ACKARD, et al.,

Intervenors,

vs.

UNITED STATES OF AMERICA, et al.,

Defendants.

ORDER DIRECTING PAYMENT OF FUNDS

This matter is before this Court on the Motion of the parties to this action for the entry of an Order directing the Payment of Funds.

Based upon the representation of the parties, through their counsel of record, that: (a) the provisions of the Settlement Agreement have been properly performed by the parties and that a closing is set for July 8, 1985, at 10:00 a.m., and (b) the sums of $7,062,207.72 to the McKay/First Interstate/Landry plaintiffs, and $2,092,506.03 to the Ackard/Butler/Great Western plaintiffs are properly payable pursuant to the Settlement Agreement;

1985 – Solar Evaporation Ponds

Remediation bought and paid for

DOE Solution: ongoing SPPTS, not removal

Solar Evaporation Ponds – RCRA Closure was incomplete but $$$ spent

Projected Cert. Closure April 1991

1.5 Final Closure Plan Summary

1.5.1 Closure Objectives

This closure plan has been prepared to meet the performance standards of 40 CFR 265.111. The promulgated standards require a facility must be closed in a manner that:

- minimizes the need for further maintenance, and
- controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground or surface waters or to the atmosphere.

U.S.A. v. Rockwell International
92-CR-107 (March 1992)

COUNT 3
(Illegal Treatment, Storage of Hazardous Wastes)
(42 U.S.C. § 6928(d)(2)(A))

On or about August 13-17, October 9-12 and 14-18, November 15-19 and 24-27 and December 17-18 and 20-25, 1987, and January 4-8, 23-27 and January 29-February 1, February 3-7, 20-24 and February 27-March 2, March 6-10 and April 8-12, 1988, in the State and District of Colorado, at Rocky Flats, ROCKWELL knowingly stored and treated, by way of solar evaporation, mixed hazardous wastes -- that is, concentrated salt brine, a corrosive hazardous waste, in a surface impoundment known as Solar Evaporation Pond 207C, without a permit or interim status to treat or store such wastes under Title 42, United States Code, Sections 6925 or 6926, in violation of Title 42, United States Code, Section 6928 (d)(2)(A), and 6 C.C.R. 1007-3, Colorado Hazardous Waste Regulations, Sections 100.11 and 100.20.

Rockwell International Felony Plea
Incomplete RCRA Closure use of Solar Evaporation Pond 207C
Mixed – Radioactive and Hazardous – Wastes to leaking 207C
Effecting Groundwater and Walnut Creek

Pondcrete Debacle
1986 - 1990

- Solar Evaporation Pond 207-A sludge;
- Unpermitted RCRA storage: 750 and 904 Pads;
- EPA/NEIC dye test of 750 Pad 4/12/1990
  - Leaking berms
  - Pondcrete spillage noted
- Dye detected east of 750 Pad, west of Building 991 and below waste water treatment plant;
- 1992 Felony pleas by Rockwell International.

Pondcrete
Engineered as a Solid Block

Pondcrete

Lack of berms: 750 and 904 Pads

Leakage to surface water paths

Pondcrete at 904 Pad
92-CR-107 USDC for Colorado (3/1992)

COUNT 2
(Illegal Storage of Hazardous Wastes)
(42 U.S.C. § 6928(d)(2)(A))

On or about October 5-9, November 16-20 and December 14-18, 1987, and January 18-22, February 22-26, March 21-25, April 18-22 and May 16-20, 1988, in the State and District of Colorado, at Rocky Flats, ROCKWELL knowingly stored mixed hazardous wastes -- that is, pondcrete (including EP toxic cadmium wastes) and saltcrete (including EP toxic chromium wastes), at the 904 Pad, without a permit or interim status to store such wastes under Title 42, United States Code, Sections 6925 or 6926, in violation of Title 42, United States Code, Section 6928(d)(2)(A), and 6 C.C.R. 1007-3, Colorado Hazardous Waste Regulations, Sections 100.11 and 100.20.

Pondcrete Radioactive Values
750 and 904 Pad spills and leaks

95. On September 7, 1988, Rockwell made a presentation to DOE-RFAO's C.C. Jierree and C.H. Barkmeier and others at the weekly RCRA/CERCLA meeting concerning monitoring data from the 904 and 750 pads. At the meeting, Rockwell distributed documents which showed that at the 904 pad: (1) gross alpha levels ranged as high as 1,300 pCi/l versus a control value of 40 pCi/l; (2) gross beta levels ranged as high as 2,200 pCi/l versus a control value of 50 pCi/l; and (3) nitrate levels ranged as high as 3,370 mg/l versus a control value of 10 mg/l. The distributed documents also showed 750 pad sampling data, including data from before pondcrete storage on the pad and data from the earliest pondcrete storage. Rockwell does not presently know the identity of DOE representatives who attended the meeting or otherwise have knowledge of the foregoing.

18

Pondcrete 904 Pad
Runoff = Elevated Radiation Runoff

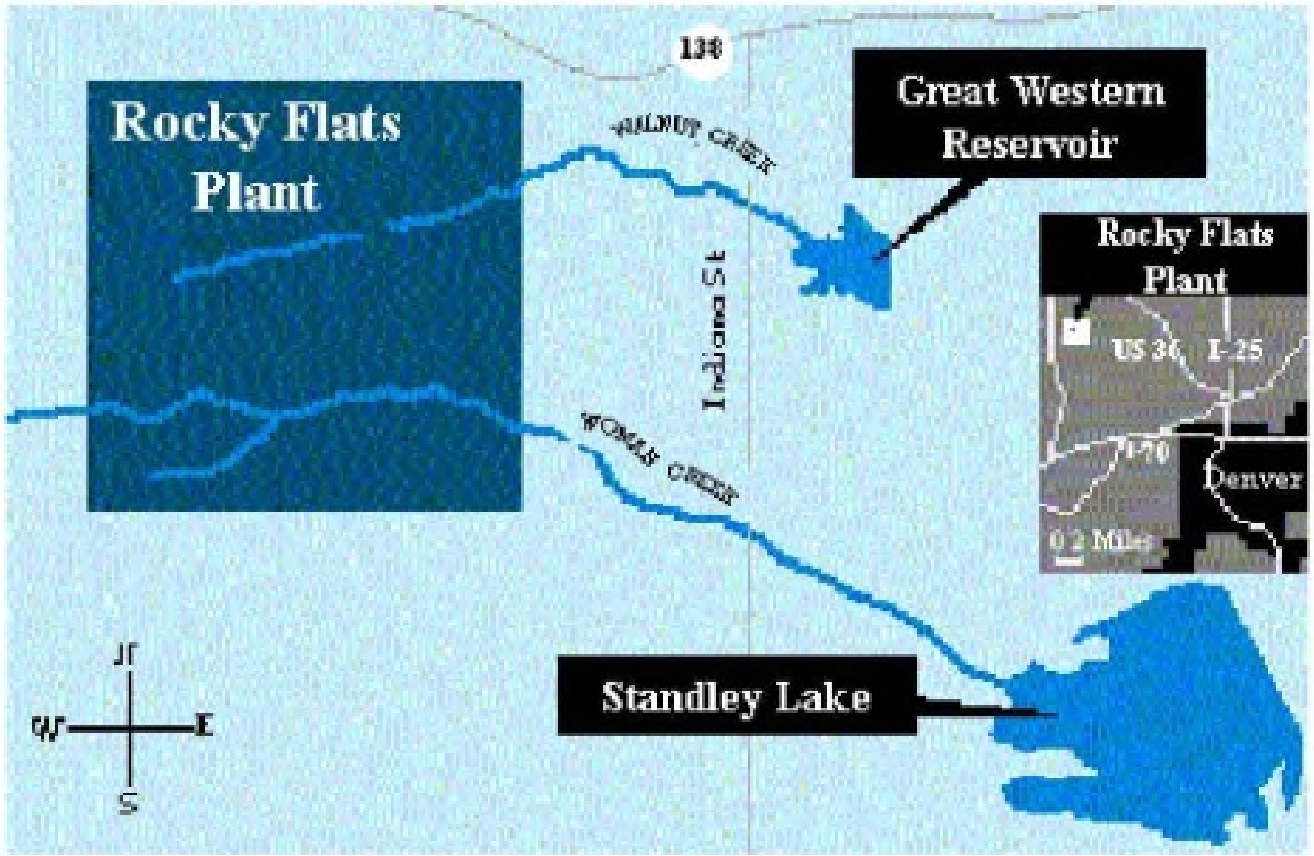
171. On May 16, 1989, DOE-AL's J.G. Themelis sent a document to DOE-AL's B.G. Twining, D.C. Krenz, Marquez, Sedmester, R.F. Sena and Rumkle that described, for Admiral Watkins' use in testifying before Congress, the pondcrete situation. The document stated that "[m]atrix problems have occurred due to improper process controls during pondcrete formation," and that "[n]itrates leach from the boxes after precipitation events."

172. On May 17, 1989, Doty & Associates submitted a memorandum it prepared concerning the history of operations at the 904 pad. The memorandum stated that "runoff water from the pad, even during periods when no Pondcrete spills occur, can have elevated levels of gross alpha, gross beta and nitrate."

173. By letter dated May 30, 1989, Rockwell's E.R. Naimon sent to DOE-RFAO's R.O. Inlow a status report for pondcrete operations for the period April 24 through May 21, 1989. The report notes that "[a]pproximately 157,000 gallons of precipitation runoff [from 904 pad] were collected by tanker truck and transported to Building 374 for evaporation." Rockwell believes that persons who may have knowledge of the foregoing include the persons identified on the document as receiving a copy of the document.

It is all about the water

CONTAMINANTS RELEASED TO SURFACE WATER FROM ROCKY FLATS



RF Spray Irrigation (B-3) since 1979

George Setlock (Rockwell) report 12/11/1987

- NPDES permit: EPA required “zero discharge;”
- Sewage Treatment Plant (STP): ~ 80 million gallons/year of effluent of radioactive and hazardous wastes;
- Pond B-3 (South Walnut Creek) was STP effluent discharge point and spray irrigated in “buffer zone” and next to radioactive/hazardous waste burial sites;
- Runoff: Walnut and Woman Creeks, Groundwater and what is now the Refuge;
- 1992 misdemeanor pleas: Rockwell International.

Pond B-3, daytime
Treatment Plant Holding
Spray Irrigation Source

Pond B-3, nighttime 12/15/1988
7 degrees Fahrenheit at ~ 10pm

East Spray Field

1988 Prohibited Areas

Surface runoff to Walnut/Woman Creeks
Recharged the rad/haz burial sites

N

Spray Field Operations

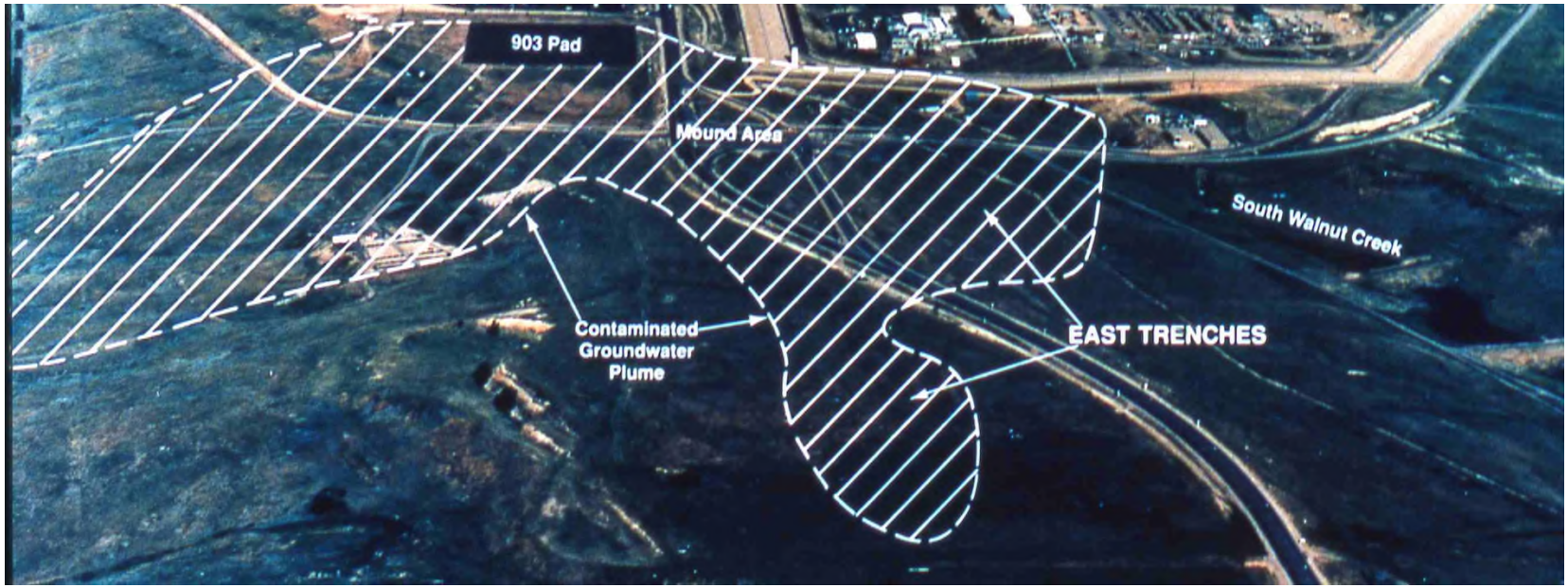
Trans-evaporation or percolation
Otherwise not to Spray Irrigate

Spray Irrigation Technique at RF

Not Best Management Practices

881 Hillside, East Trenches

Radionuclides and VOCs
Pathway to Walnut/Woman Creeks
DOE Solution: ongoing ETPTS, not removal



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U.S. Fish & Wildlife Service
Smoke Management Application 2014

6. Rocky Mountain Arsenal NWRC

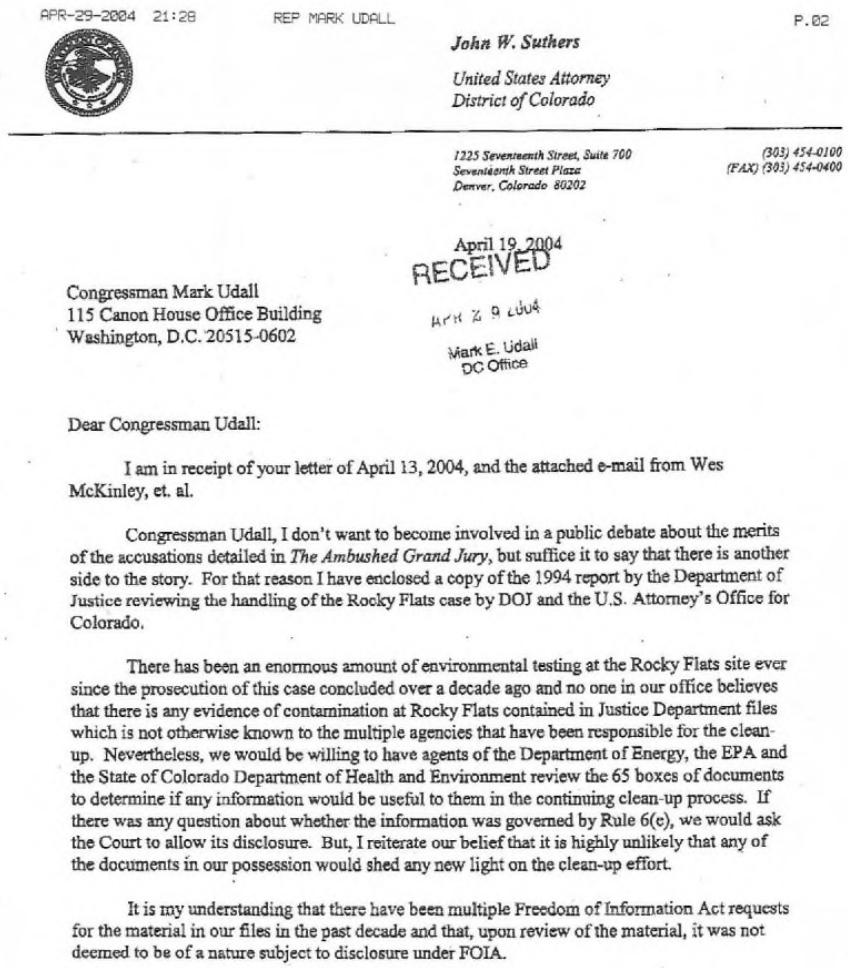
This National Wildlife Refuge Complex consists of the Rocky Mountain Arsenal, Rocky Flats, and Two Ponds NWRs located in the Denver Metro area. Due to the limited acreage and proximity of smoke sensitive receptors, prescribed fire is not planned at the Two Ponds NWR. The habitat at Two Ponds is managed using a combination of mowing and chemical application. The habitat at Rocky Flats NWR is managed through the use of mowing, chemical application, and limited grazing by cattle in one section of the refuge. Refuge personnel are currently evaluating the possible future use of prescribed fire at Rocky Flats NWR.

Despite the statement:

CDPHE issued the permit in Jan. 2015

USFWS unable to determine safe burn

Suthers to Udall, 2004



APR-29-2004 21:28 REP MARK UDALL P.02

John W. Suthers
United States Attorney
District of Colorado

1225 Seventeenth Street, Suite 700
Seventeenth Street Plaza
Denver, Colorado 80202

(303) 454-0100
(FAX) (303) 454-0400

April 19, 2004

RECEIVED
APR 2 9 2004
Mark E. Udall
DC Office

Congressman Mark Udall
115 Canon House Office Building
Washington, D.C. 20515-0602

Dear Congressman Udall:

I am in receipt of your letter of April 13, 2004, and the attached e-mail from Wes McKinley, et. al.

Congressman Udall, I don't want to become involved in a public debate about the merits of the accusations detailed in *The Ambushed Grand Jury*, but suffice it to say that there is another side to the story. For that reason I have enclosed a copy of the 1994 report by the Department of Justice reviewing the handling of the Rocky Flats case by DOJ and the U.S. Attorney's Office for Colorado.

There has been an enormous amount of environmental testing at the Rocky Flats site ever since the prosecution of this case concluded over a decade ago and no one in our office believes that there is any evidence of contamination at Rocky Flats contained in Justice Department files which is not otherwise known to the multiple agencies that have been responsible for the clean-up. Nevertheless, we would be willing to have agents of the Department of Energy, the EPA and the State of Colorado Department of Health and Environment review the 65 boxes of documents to determine if any information would be useful to them in the continuing clean-up process. If there was any question about whether the information was governed by Rule 6(e), we would ask the Court to allow its disclosure. But, I reiterate our belief that it is highly unlikely that any of the documents in our possession would shed any new light on the clean-up effort.

It is my understanding that there have been multiple Freedom of Information Act requests for the material in our files in the past decade and that, upon review of the material, it was not deemed to be of a nature subject to disclosure under FOIA.

"Ambushed Grand Jury"

1992 SFGJ Evidence sealed by the court

"D&D" 1995-2005 Ambushed Grand Jury 65 SFGJ Box Review

DOE, EPA, CDPHE

Nuclear Workers SEC Petition since 2006

Docs. Remain sealed

Document from Front Range CC Rocky Flats Reading Room, 2005

Waste Stream Identification and Characterization

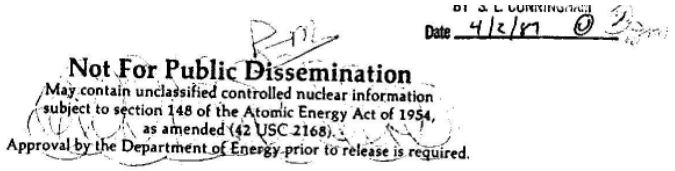
AREA 4

U.S.D.O.E.– Rocky Flats Plant

No Personal Identifying Information

- However –

Not Declassified When Obtained



Building 373 Blowdown

Radioactive/Hazardous Mixed Waste

Waste Stream Identification
Rocky Flats Plant
April 6, 1987

Waste : 11650 BLOWDOWN

Building : 373 COOLING TOWER & PUMP HOUSE
Process : 1 WATER COOLING

Reg. Class : RADIOACTIVE

Type : AQUEOUS
Quantity : 480000 gal/yr
Gen. Freq. : OCCASIONALLY
Pretreatment: NONE

Transport : SANITARY DRAIN
Storage : NONE
Next Dest. : SEWAGE TREATMENT PLANT
Final Disp. : SEWAGE TREATMENT PLANT

Description:

Blowdown occurs when conductivity readings on the cooling water indicate too high a dissolved solids concentration. Blowdown samples can be collected from a valve in the pumphouse.

SWMU Association: No SWMU identified for this waste stream.

Sampling Report:

SAMPLE NO	SAMPLE DATE	SAMPLE METHOD	ANALYSIS REQUESTED	SAMPLING LOCATION
11650	11/13/86	dipper	Corrosivity, EP Tox Metals, Radio Chemistry	TOWER ON SOUTH SIDE, VALVE ON RECIRCULATING PUMP

EPA Environmental Samples at RF Search Warrant Return 89-730M

- Results not Publicly Disclosed -

FD-597 (Rev. 3-29-84)

UNITED STATES DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION
Receipt for Property Received/Returned/Released/Seized

Page 1 of 1

On (date) 6/6/89 to 6/14/89

Item(s) listed below were:
- ☐ Received From
- ☐ Returned To
- ☐ Released To
- ☒ Seized

(Name) ROCKY FLATS NUCLEAR PLANT

(Street Address) HIGHWAY 93

(City) GOLDEN, COLORADO

Description of Item(s): 681 BOTTLES FROM 94 SAMPLE STATIONS WERE SEIZED AT THE SITE.

April 25, 1996 Moratorium
DOE Manager Mark Silverman

lted States Government — Department of Energy

emorandum — Rocky Flats Field Office

TE: APR 25 1996

.Y TO

N OF: AMGO:HRIMD:MJA:04345

JECT: Moratorium on the Destruction of Records

All Rocky Flats Environmental Technology Site Employees

Effective immediately, I am issuing a moratorium on the destruction of all records at the Rocky Flats Environmental Technology Site, including the records located at the Denver Federal Record Center. Until further notice, no destruction will take place of any records unless approved by the RFFO Chief Counsel.

Original Landfill

20 acres, 40 feet deep

contents uncharacterized

N

Figure 1. Original Landfill Observed Surface Cracking Location and Inclinometer Locations

Original Landfill (OLF)

- Unlined dump used until 1968. It is in a landslide and floodplain area, uphill from Woman Creek.
- Put another way, this area is four stories deep and over 15 football fields in size.
- Dr. Dwyer of DOE's Sandia lab describes it this way: "Groundwater passes through the subsurface waste while surface water passes over it toward Westminster and Broomfield. Contaminants include VOCs, organic compounds, metals and radionuclides". He recommended the RCRA "C" cover required by CERCLA.
- It consists of a compacted clay cover (7'thick), layered with gas vent layer on the waste, covered by a thick clay layer, followed by a geomembrane layer, a drainage layer, a biointrusion layer, and two feet of topsoil.
- DOE called it a municipal dump and covered it with 2 feet of soil.
- This is what is happening: A long series of Contact Reports (CR) between LM and CDPHE as attempts are being made to fix it as the OLF is leaking, slumping and contaminating Woman Creek: CRs are required when there is violation of institutional regulations such as digging below 3' occur. CDPHE has to approve these violations and the usually do:
  --- 9/2008 (CR) CDPHE approves repairs of slumping and settling and berm maintenance
  ----7/2010 CR subsidence
  ---11,2013 soil cover cracks, problems with the berm and the East perimeter channel
  ---3/2015 subsidence. Repairs haven't been able to keep up with rain.

Groundwater Plan Evaluation by GEI Consultants, Inc.

- Evaluation of groundwater and surface water remediation plan in the (IM/IRA) " Because of the following issues it is questionable if these remedies provide sufficient risk reduction to protect human residents of the surrounding cities." Extensive reasons -- available --. Denial of colloidal Pu and U transport in groundwater, despite of scientific evidence to the contrary.
- Present problems include Pu and U in creeks. POCs in creeks were moved from Indiana to the DOE boundary which will make it impossible to measure contaminants in the Refuge.
  Water analyses are usually reported as 12 months rolling averages, not a useful number in this climate.
- <u>Walnut Creek Drainage Ponds by Muller Engineering Company</u>
- This company built the terminal dams A-4, B-5 and C-2 in Walnut and Woman Creeks, along with the design of other protective structures at RF. Their comments:
  1. the runoff from N&S Walnut creeks is underestimated
  2. Surface water monitoring in the drainages should identify contaminants before they reach the terminal ponds.
- AT THIS POINT MANY OF THE RETAINING PONDS HAVE BEEN BREACHED. They were protective of the Refuge

Soil sampling evaluated by ORISE and MACTEC

- Both asked why the MARSSIM radiological soil survey was not used. This is the method accepted by NRC,DOE, DOD and EPA.
- When a scientifically accepted method is not used to present a result it is not generally accepted in science.
- Maybe this is why we get unsubstantiated numbers like 7.1 pCI/g of soil in the whole Refuge. Or Scott Surovchak's statements such as" The low level of contamination remaining in the Central OU do not pose an unacceptable risk to human health" (WM conference 2/24/2008) or the statement at the Arvada meeting that "I might release the whole site".
- Presently LM is monitoring 2 closed landfills, 4 groundwater treatment systems, more than a 100 monitoring locations and three surface water retention ponds according to the RFLMA.

Contamination left at Rocky Flats

- * 2 landfills
  * Original process waste lines at unknown areas
  * 903 lip area
  *Ash pits
  *East trenches
  * Mound site
  * Contaminated ground water plumes
  * Contaminated foundations at 371/771 areas
  *Sediments in the B series ponds
  *Solar evaporation pond. contaminated plume RF

Closure

- CERCLA process consists of: Site investigation (how much contamination?)
  study : What is the best way
  the ROD to see what needs to be done
  But at RF the RFCA was "accelerated actions" w/out site investigation and followed by "adaptive management" in violation of CERCLA;
- Large areas of the buffer zone were contaminated thru the 903 incident.
- Current EPA laws for emissions from radionuclides are greatly reduced to 10 mrems per workers per year at DOE facilities.
- OSHA has reduced workers' beryllium exposure by 90% from 2 micrograms per cubic meter to 0.2 for an 8 hr period.
- In 2004, then representing the city of Boulder commenting on the FWS DEIS Current EPA Region 8 Administrator Shaun McGrath suggested that "there remain a clear demarcation between the refuge and the DOE retained land even though DEIS refers to a seamless site. The purpose is that no one plays in the settling ponds, walks on the caps and damages the groundwater and surface water monitoring stations." He then continues "unforeseen issues do exist such as at the Arsenal, a wildlife refuge where sarin bombs were found in 2001, … the Lowry Air Force Base where asbestos was found during new home construction in 2003 and ... Rocky Flats where a 32' incinerator was discovered during cleanup at the uranium ash pits, in 2001."
- ADDITIONALLY POST CLOSURE MONITORING IS REQUIRED BY THE DOE ACCORDING TO THE ROCKY FLATS NATIONAL REFUGE ACT.

Closure

- The huge plutonium fires in 1957 and 1969 at the plant sprayed huge amounts of plutonium into the surrounding communities mainly to the south and southeast. it is accepted that 1 microgram, a millionth of a gram is potentially fatal. Pu is a heavy element, this is a very small particle. These particles are respirable dust and when inhaled they cause cancer. DOE's duct equipment misdesigned and uncalibrated was unable to measure the volume of air and radiation of Pu emitted from the stacks as found by meteorologist Dr Gale Biggs.
- At RF Pu is found in the groundwater, in the creeks, on plants and in the soils of RF from where it is blown into the air.
- In the 70s a school was built on a toxic waste dump in Niagara Falls. The Love Canal story -- after children became ill, some died -- mothers had to fight to be heard. This was the beginning of environmental laws, such as the Superfund law. It is ironic that now a school will be built east of Rocky Flats.

Communicate to your Lawmaker

- Protect Colorado water supplies – keep Pu239 levels at or below 0.15 pCi/L;
- USFWS should withdraw their faulty RFNWR smoke management permit;
- CDPHE should prohibit USFWS burn permits at RFNWR due to Respirable Dust;
- Cease public access to RFNWR during existence of Rocky Flats Superfund Site status;
- 3rd Party Independent Verification of RFNWR of contaminant standards;

Communicate with your Lawmaker

- DOE should remediate Solar Evaporation Ponds, East Trenches, Mound areas and Landfills by Independent Verification;
- DOE to continue Plume Treatment Systems after remediation to monitor radioactive groundwater and burial sites with Independent Verification;
- All Independent Verification activities are to have the force of law and DOE appropriations.

QUESTIONS?