

**ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE  
REGULATORY CONTACT RECORD**

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**Date/Time:** 3/26/03 – 1400 p.m.

**Site Contact(s):** D. A. Parsons (D&D) – (DAP-011)  
**Phone:** (303) 966-6458

**Regulatory Contact:** David Kruchek, CDPHE  
**Phone:** (303) 692-3328

**Agency:** CDPHE

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**Purpose of Contact:** Facility Anticipated Typing Reclassifications

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**Meeting Attendance**

D. Parsons, RISS	D. Kruchek, CDPHE	J. Hindman, CDPHE
K. Wiemelt, K-H	E. Bryson, RFFO	S. Tower, RFFO

**Discussion**

During the weekly RISS Area Status meeting held on Wednesday afternoon, 3/26/03, Duane Parsons (RISS) discussed the attached proposed Facility Anticipated Typing Reclassification table. The attached table lists buildings that have not yet undergone a reconnaissance level characterization (RLC), and a justification for changing the anticipated facility Typing prior to the RLC. Based on a suggestion from Steve Tower (RFFO) several weeks ago, additional information was gathered on the buildings listed below, and the attached table was developed.

Based upon the additional information gathered, it was determined that some facilities should be changed from an anticipated Type 1 facility to an anticipated Type 2 facility, prior to the performance of the RLC. Likewise, based upon the additional information gathered, it was determined that some facilities should be changed from an anticipated Type 2 facility to an anticipated Type 1 facility, prior to the performance of the RLC.



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Based on discussions of the attached table, it was determined that the following facilities should be changed from anticipated Type 1 facilities to anticipated Type 2 facilities prior to the performance of the RLC: Buildings 122, T122A, 891, T900A, T900B, and the 331 Garage. Refer to the attached table for the justifications for these re-typings. It was also discussed and agreed upon that any floor coverings and potentially contaminated equipment and/or systems that are not an integral part of these buildings (i.e., 122, T122A, 891, T900A, T900B, and the 331 Garage) will be removed from the buildings prior to the performance of the RLC. For example process waste drains embedded within the slab will remain; but carpet, floor tiles, loose equipment, and above-slab tanks and piping with potential low-levels of contamination will be removed prior to the RLC. In-process characterization will be performed prior to and during removal of the non-integral parts (e.g., floor coverings, equipment, systems, etc) of these buildings, as necessary to characterize this waste and to identify possible contamination in the buildings. Any elevated in-process characterization results will be provided to CDPHE and DOE. Once the floor coverings and potentially contaminated equipment and/or systems are removed, a combination RLC/PDS Type 2 characterization will be performed.

Based on discussions of the attached table, it was determined that the following facilities should be changed from anticipated Type 2 facilities to anticipated Type 1 facilities prior to the performance of the RLC: Buildings 664, 988A, 995-CCC-1, 995-CCC-2, 995-C-5, 995-EC1, 995-EC2, 995-EC3, 995-IC1, 995-IC2, 995-IC3, 790, 903A2, 906, 964, 569, and 570. Refer to the attached table for the justifications for these re-typings. It was also discussed and agreed upon that the Type 1 RLC of these buildings would be a more robust RLC than normal (i.e., more than the minimum amount of surveys and samples would be performed during the RLC of these buildings to ensure that adequate coverage is achieved in order to make appropriate final Typing and waste disposal decisions).

Based on discussions of the attached table, it was determined that Buildings 566 and 566A should be undergo additional in-process characterization surveys inside the ventilation ducting and remaining process waste piping. Then, based upon the in-process characterization surveys, evaluate if the 566 and 566A buildings should be reclassified to anticipated Type 1 facilities prior to the performance of the RLC. Once the Building 566 and 566A in-process characterization surveys are obtained, the results of the surveys will be presented to RFFO and CDPHE at a future date.

Based on discussions of the attached table, it was determined that the RLC of the 750 Pad Tents (Tents 2, 3, 4, 5, 6, 12 and 15) would be performed as a combination Type 2 RLC/PDS once all of the waste and equipment was removed from inside the tents (including the removal of the Tent 5 permacon). The 750 Pad Tents will remain as Type 2 facilities at least until the combination Type 2 RLC/PDS is completed.

Based on discussions of the attached table, it was determined that since T664B and T664C buildings are reusable, portable, modified semi-trailers, that they could be unconditionally released utilizing the Property Release Evaluation (PRE) process. Additionally, since S750 building was a small, skid-mounted portable shed, it could also be unconditionally released utilizing the PRE process. Therefore, an RLC is not required for buildings T664B, T664C or S750.

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**Contact Record Prepared By:** D. A. Parsons

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**Required Distribution:**

P. Arnold, K-H  
C. Deck, K-H  
R. DiSalvo, RFFO  
C. Gilbreath, K-H  
S. Gunderson, CDPHE  
T. Hopkins, K-H  
L. Kilpatrick, K-H  
J. Legare, RFFO

R. Leitner, K-H  
J. Mead, K-H  
S. Nesta, K-H  
K. North, K-H  
W. Prymak, DOE  
T. Rehder, USEPA  
D. Shelton, K-H

**Additional Distribution:**

C. J. Freiboth, K-H  
F. Gibbs, K-H  
D. Kruchek, CDPHE  
S. Tower, RFFO  
J. Hindman, CDPHE  
M. Auble, K-H  
D. Onyskiw, CDPHE  
E. Bryson, RFFO  
K. Wiemelt, K-H

The following two tables list buildings, and the justifications, for changing the "anticipated Typing" classification prior to the performance of the reconnaissance level characterization. Table 1 lists the facilities, and their justifications, for changing these buildings from "anticipated Type 1" to "anticipated Type 2" classifications. Table 2 lists the facilities, and their justifications, for changing these buildings from "anticipated Type 2" to "anticipated Type 1" classifications.

**Table 1 – Change from Anticipated Type 1 to Type 2 classification**

Facility	Justification
122	<p>During the fires in the 1950's and 1960's, contaminated personnel spread contamination throughout the original portions of B122. There are three (3) process waste drains in B122.</p> <p>Although B122 should be Type 2, the characterization of B122 should be handled similar to how B441 was characterized. Since the high potential areas are on the floor and are currently covered by floor tile and/or carpet, these coverings should be removed prior to characterization. The characterization could then be done as a combination RLC/PDS. The later additions to B122 (i.e., the south and north additions) are not expected to be contaminated.</p>
T122A	<p>This portable decontamination trailer next to B122. The trailer was installed in 1997, and has been used to decontaminate wounded personnel. Although the decontamination sink or shower is not contaminated, the drain piping and under-trailer process waste tanks are potentially contaminated.</p> <p>Since the only likely potentially contaminated areas of T122A are the sink and shower drain piping and under-trailer tank, this equipment should be disconnected and removed prior to characterization. Once this equipment is removed, a combination RLC/PDS should be performed.</p>
891	<p>B891 has piping and tanks that are posted as internally rad contaminated due to treating wastewater with low levels of rad contamination. The 891 sump is posted as a contamination area; however, the posting applies to a removable fiberglass liner in the sump that can be easily removed. RCRA and/or CERCLA hazardous constituents may also be present in low levels inside the B891 equipment.</p> <p>Since the levels of potential internal rad contamination in B891 are very low (pCi/gram range), this equipment should be disconnected and removed prior to characterization. Once this equipment is removed, a combination RLC/PDS should be performed.</p>
T900A	<p>T900A has piping and tanks that are posted as internally rad contaminated due to treating wastewater with low levels of rad contamination. RCRA and/or CERCLA hazardous constituents may also be present in low levels inside the T900A equipment.</p> <p>Since the levels of potential internal rad contamination in T900A are very low (pCi/gram range), this equipment should be disconnected and removed prior to characterization. Once this equipment is removed, a combination RLC/PDS should be performed.</p>
T900B	<p>T900B has piping and tanks that are posted as internally rad contaminated due to treating wastewater with low levels of rad contamination. RCRA and/or CERCLA hazardous constituents may also be present in low levels inside the T900B equipment.</p>

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	Since the levels of potential internal rad contamination in T900B are very low (pCi/gram range), this equipment should be disconnected and removed prior to characterization. Once this equipment is removed, a combination RLC/PDS should be performed.
331 Garage	<p>The garage portion of B331 used to be a metallurgical R&amp;D laboratory during the 1950's and 1960's. Uranium and beryllium contamination were used and stored in B331 during this R&amp;D period. There are three to four (3-4) process waste drains in B331.</p> <p>Although B331 should be Type 2, the characterization of B331 should be handled similar to how B441 was characterized. Since the high potential areas are on the floor and are currently covered by floor tile and/or carpet, these coverings should be removed prior to characterization. The characterization should then be done as a combination RLC/PDS. The later additions to B331 (i.e., Fire Department area) are not expected to be contaminated and will be treated as a separate facility.</p>

**Table 2 – Change from Anticipated Type 2 to Type 1 Classification**

Facility	Justification
664	<p>B664 was built in 1972 and has been used a waste storage, preparation, staging, and shipping facility. The facility was never utilized as a production facility, and never contained known un-encapsulated radioactive or hazardous materials. B664 is not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility are radioactive material storage areas. There are no old or new process waste systems associated with B664.</p> <p>Once all of the radioactive waste containers are removed from the building, no residual radiological or non-radiological hazards should remain, except asbestos.</p>
T664B and T664C	<p>T664B and T664C are modified semi-trailers used to house real-time radiographic equipment for counting waste drums prior to shipment, and were brought onsite in 2001. The facilities were never utilized as production facilities, and never contained known un-encapsulated radioactive or hazardous materials. T664B and T664C are not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facilities have shown no fixed or loose radioactive material. The only rad postings in the facilities are radioactive material storage areas. There are no old or new process waste systems associated with T664B or T664C.</p> <p>Once all of the radioactive waste containers are removed from the trailers, no residual radiological or non-radiological hazards should remain.</p>
S750	<p>Building S750 is a 48 square-foot skid mounted portable shed acquired in the early 1990's. The shed has aluminum siding and an aluminum roof, the floor is wood. This shed has been used as a storage shed for non-hazardous and non-radiological operation such as the site housekeeping services, food service organization and site maintenance organization. There is no history of any radiological or hazardous operations in the facility. Routine rad surveys of the facility have shown no fixed or loose radioactive material. There are no old or new process waste systems associated</p>

	with S750.
Tents 2, 3, 4, 6, & 12	<p>Tents 2, 3, 4, 6 and 12 were constructed in 1990 and have been used a waste storage, preparation, and staging facilities. The facilities were never utilized as a production facilities, and never contained known un-encapsulated radioactive or hazardous materials. Although the tents are on the "known beryllium area" list, routine surveys do not indicate the presence in the Tents. Minor spills have occurred on the Tent pad, but all spills were below reportable quantities and were cleaned up. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility are radioactive material storage areas. There are no old or new process waste systems associated with the Tents.</p> <p>Once all of the radioactive waste containers are removed from the building, no residual radiological or non-radiological hazards should remain.</p> <p>Note: Tent 5 contains a perma-con and will remain a Type 2.</p>
988A, 995-CCC-1, 995-CCC-2, 995-C-5, 995-EC1, 995-EC2, 995-EC3, 995-IC1, 995-IC2, 995-IC3	<p>Two waste streams are generated at the RFETS wastewater treatment plant, treated effluent and biosolids. For purposes of facility classification, those portions of the treatment process that have come into contact with the concentrated solids in the wastewater should be considered as anticipated Type 2 facilities (i.e., buildings 974 and 977, aeration basins 995-AB-1 and 995-AB-2; clarifier basins 995-C-1, 995-C-2, 995-C-3, 995-C-4, and digesters 995-D1 and 995-D2).</p> <p>Units that come into contact with raw sewage and effluent only should be considered as anticipated Type 1 facilities (i.e., building B988A, chlorine contact basins 995-CCC-1 and 995-CCC-2, clarifier basin 995-C-5; effluent cells 995-EC-1, 995-EC-2, and 995-EC-3; and influent cells 995-IC-1, 995-IC-2, and 995-IC-3). Raw sewage may carry contaminants, but the concentration of solids is extremely low, generally less than 0.5%. As solids are concentrated in the treatment process through the clarifiers and digesters, there is the potential for contaminants to be concentrated.</p> <p>All of these units should be reclassified as anticipated Type 1 facilities because they have only had contact with either raw sewage entering the treatment facility or treated wastewater just prior to release into the environment. Raw sewage is routinely analyzed for a number of operational parameters (pH, conductivity, suspended solids and others), and for a large suite of chemical parameters, including radionuclides, under various monitoring programs. There have been no recent incidents of contamination. The effluent is routinely monitored as well, and it routinely meets all requirements for release into the environment.</p> <p>B988A is the final disinfection step and monitoring point on the discharged effluent. CCC1 and 2 are the chlorine contact chambers, which have been out of service for several years (chlorination disinfection was replaced with UV disinfection), and have never had contact with any portion of the solids waste stream. C-5 is the tertiary clarifier, which receives only effluent from the secondary clarifiers and no solids. EC-1, 2, and 3 are the effluent storage cells, which have only had contact with treated effluent from the facility. Finally, the IC-1, 2, and 3 units are the influent storage cells, which come into contact with raw sewage only.</p> <p>The facilities were never utilized as production facilities. The facilities are not listed as a "known beryllium areas," nor is there any history of radioactive,</p>

	<p>RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facilities have shown no fixed or loose radioactive material. There are no old or new process waste systems associated with these facilities.</p> <p>Once sewage treatment operations cease, there should no residual radiological or non-radiological hazards remaining.</p>
790	<p>Building 790 is a 6,768-sq. ft. single-story concrete building constructed in 1991. The building consists of three irradiation cells (A, B, and C) an instrument calibration support area, a control room, and an office area. Building 790 was designed and used as radiometric calibration facility. Specifically, it is used to expose thermoluminescent dosimeters (TLD) and calibrate site health physics instrumentation. This facility used and stored sealed sources and X-ray generating equipment.</p> <p>No hazardous chemicals are stored in Building 790, other than general cleaning supplies and small quantities (less than 1 pint) of alcohol and acetone to clean some instrument parts. The facility was never utilized as a production facility, and never contained known un-encapsulated radioactive or hazardous materials. B790 is not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility are radioactive material storage areas. There are no old or new process waste systems associated with B790.</p> <p>Once all of the rad sources are removed from the building, no residual radiological or non-radiological hazards should remain. Sealed sources stored in Building 790 included, but are not limited to Pu, Am, Sr-90, Cf, Cs, Co-60, Ba, and Pm.</p>
566 and 566A	<p>Building 566 is a single structure divided in to a 13,700 sq. ft. Site Alarm Maintenance and Respirator Repair Facility. Building 556 was originally constructed to be the site laundry facility (1991). The laundry was only operational for about 2 years, was never approved to handle the highly contaminated laundry, and only laundered two (2) loads of potentially contaminated low-level laundry and numerous loads of clean modesty clothing. Building 566 has always housed the Respirator Cleaning and Repair Group. In 1999, the Alarms Maintenance Servicing Center moved into the building.</p> <p>Alarm maintenance involves cleaning equipment, replacing faulty components, and testing and inspecting equipment. The Respirator Cleaning and Repair area contains a respirator washers, fume hoods, laundry carts, and radioactivity monitoring equipment. Detergent, bleach and water are used in the respirator washing process. Wastewater drains into two storage tanks located in the Building 566 pit and is then pumped to the sanitary drain system. Building 566 had above-slab process waste lines connected to the washing machines. These lines have since been removed along with the washing machines, and the only remaining line has been cut and capped near the NE outer wall of 566. Respirators and Alarm equipment are surveyed for radioactivity (and beryllium as necessary) prior to being transported to Building 566 to ensure no loose contamination exists. In the late 1990s, the B566 washers and dryers were removed and the waste trench under the washers was surveyed. Only very low levels of contamination were found in the trench and the areas were</p>

	<p>decontaminated (using power washer).</p> <p>Building 556A is the filter plenum for the laundry ventilation system in Building 556. It is 4,000 sq. ft. and was constructed in 1991. In the late 1990s, the air filter plenum stages was surveyed and no radiological contamination was found and thus the radiological postings were removed from the plenum. Several pieces of ventilation equipment and ducting leading to the 566A plenums still have internal rad contamination labels, however it is believed that this labels are no longer valid.</p> <p>Based on the above information, and some additional in-process internal surveys of remaining ventilation equipment and process waste piping, it is very probable that 566 and 566A are not contaminated and could be reclassified to Type 1.</p>
903A2	<p>Building 903A2 is a 100 square-foot general storage shed acquired in 1993. This structure is a wood building with wood walls, wood floor and an asphalt shingle roof. This building sites on a concrete pad and is located west of the 903A Main Decontamination Facility (MDF). This building is used to store PPE and for general storage in support of the 903A MDF. There is no history of any radiological or hazardous operations in the facility. Routine rad surveys of the facility have shown no fixed or loose radioactive material. There are no old or new process waste systems associated with 903A2.</p>
906	<p>B906 was built in 1994 and has been used a TRU waste storage facility. The facility was never utilized as a production facility, and never contained known un-encapsulated radioactive or hazardous materials. B906 is not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility are radioactive material storage areas. There are no old or new process waste systems associated with B906.</p> <p>Once all of the radioactive waste containers are removed from the building, no residual radiological or non-radiological hazards should remain.</p>
964	<p>Building 964 is a 5,000 sq. ft. building and is currently identified as RCRA Unit 24. B964 was originally constructed in the mid-1960's and was used for general construction storage by a variety of site construction contractors. In 1986, the structure was modified for use as RCRA permitted Unit 24. These modifications include the installation of a spill containment system and the application of an epoxy concrete sealant. Ramps were installed to allow movement of containers in and out of the secondary containment system.</p> <p>The building currently stores solid wastes, but on occasions liquid waste has been stored in the building and was placed in metal secondary containment pans. Building 964 primarily stores solidified bypass sludge from Building 371. There have been no documented spills in B964.</p> <p>The facility was never utilized as a production facility, and never contained known un-encapsulated radioactive or hazardous materials. B964 is not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility are radioactive material</p>

	<p>storage areas. There are no old or new process waste systems associated with B964.</p> <p>Once all of the radioactive waste containers are removed from the building, no residual radiological or non-radiological hazards should remain, except asbestos.</p>
569	<p>Building 569, also known as the Crate Counting Facility, is a 7,620 sq. ft. single-story building constructed in 1987. B569 contains radioactivity assay equipment and temporary waste storage operations. B569 is also RCRA Unit 59. Containers of low-level, low-level mixed, transuranic and transuranic mixed waste are received from throughout the plant site and assayed using a passive-active counter. Containers are surveyed prior being accepted into B569. Containers whose contents meet the disposal site waste acceptance criteria are transported to Buildings 664, 440, or 906 for storage pending off-site shipment. Those containers not meeting the disposal site waste acceptance criteria, or which exhibit physical damage or improper packing, are identified for repackaging and sent back to the originating building. No unpacking or repackaging is performed in B569.</p> <p>The facility was never utilized as a production facility, and never contained known un-encapsulated radioactive or hazardous materials. B569 is not listed as a "known beryllium area," nor is there any history of radioactive, RCRA/CERCLA, beryllium, or PCB spills. Routine rad surveys of the facility have shown no fixed or loose radioactive material. The only rad postings in the facility are radioactive material storage areas. There are no old or new process waste systems associated with B569.</p> <p>Once all of the radioactive waste containers are removed from the building, no residual radiological or non-radiological hazards should remain.</p>
570	<p>Building 570 is the filter plenum facility for the Crate Counting Facility (569) and is a 683 sq. ft. building constructed in 1987. B570 has never been activated and has never housed any radiological or hazardous operation. Ventilation ducting leading from B569 to B570 was never connected, and has always been blank-flanged off. Routine rad surveys of the facility have shown no fixed or loose radioactive material. There are no old or new process waste systems associated with B570.</p>

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