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Gary Morgan, Director
Project Support
DOE, RFPO

BUILDING 995/SANITARY SEWER CLOSEOUT REPORT RESPONSE -- DWF-068-05

In response to the electronic correspondence from Dave Kruchek, Colorado Department of Public Health and Environment, dated July 8, 2005 (attached), the Closeout Report for Building 995 has been revised. The revised report addresses the 12 areas of concern identified in his message.

If you have any additional questions or concerns, please contact Steve Nesta at extension 6386.

Dennis W. Ferrera
Vice President and Project Manager
Remediation, Industrial D&D, and Site Services

SMN:pvt

Attachment:
As Stated

Orig. and 1 cc -- Gary Morgan

cc:
John Rampe

Instructions for Completion of Type 1 Facility Closeout Report

Low-Level Mixed Waste Disposal	Solids from B990 Equalization Basins
Disposal Site:	EnviroCare of Utah
Waste Volume (m³):	5
Additional Information:	
Recycled Material	N/A
Recycle Facility:	
Waste Volume (m³):	
Additional Information:	
Property Disposition	N/A
Receiver Locations (major items only):	
Volume (m³):	
Weight (tons):	
Additional Information:	

Section D. Approvals	
Kaiser-Hill Project Manager	GAREN WIEMELT <i>Garen Wiemelt</i> 7/26/05
	Name/Signature Date

Facility Descriptions, Operation and Closure of the Sanitary Collection and Treatment Systems at RFETS

Facility Descriptions

The Rocky Flats Sanitary Collection system comprised approximately 40,000 feet of sewer line and over 200 manholes used to convey domestic wastewater to the site's wastewater treatment plant at what was collectively known as Building 995. The components of the Building 995 facility are described below in Table 1. Several lift stations operated in the lower portions of the Site and moved sanitary waste into the gravity flow portion of the system. The collection system was divided generally into two areas roughly corresponding to the north and south sides of the industrial area. The two parts of the system joined at Building 990, which housed the original equalization basins with a capacity of 120,000 gallons. Wastewater then flowed by gravity to B995, the treatment facility.

Sanitary waste was also hauled from the East and West Gates (B920 and B120, respectively) to B995, the only sanitary waste hauling activity on-site. Each gate was equipped with sanitary facilities and a holding tank from which waste was regularly removed and transported to B995. The gate facilities had previously been equipped with modified septic systems which were installed in the late 1980s. These systems never operated as promised and were abandoned in favor of the waste hauling option.

B995 (and the related structures discussed in Table 1 below) was designed to have a capacity of 0.5 million gallons per day (MGD) using activated sludge plus a tertiary clarifier and sand filtration as a final step. The activated sludge process was divided into two trains of similar size, with primary clarifiers, aeration basins and secondary clarifiers. The original installation in 1953 had one treatment train (primary clarifier, aeration basin and secondary clarifier), which was supplemented with the second train in 1970. Biosolids were anaerobically digested then air dried prior to disposal. Effluent was disinfected with chlorine and dechlorinated with sulfur dioxide and discharged to an effluent pipeline that directed the discharge to Pond B-3. Numerous upgrades were made to the facility in the mid-1990s, including the installation of influent and effluent storage tanks (with a total capacity of over 800,000 gallons), the addition of a belt filter press for biosolids processing, and conversion from chlorine-based disinfection to ultraviolet light.

The following table describes the components of the B995 complex.

Table 1: Components of the RFETS Wastewater Treatment Facility

Building	Description
930 and 931	Access points to the sanitary collection system housing radiological detection apparatus. These structures were also given manhole numbers (144 and 145 for B930 and 149 for B931); there were two detectors at the 930 location, one on the influent line from the Protected Area (PA), and one on the non-PA influent line. Removed and closed separately from the demolition of B990 and B995 in December 2004. Utilities: electric.
T974	A 320 square foot modified semi-truck trailer with aluminum sides and roof and a steel floor that housed the 0.7 m belt filter press used to dewater sludge prior to drying in the drying beds. Utilities: electric.
974	A 2,280 square-foot non-insulated metal building used to house 4 sludge drying beds (beds number 1, 2, 3, and 4). Anaerobically digested sludge was spread in the drying beds for dewatering and drying. Utilities: Electric.

Building	Description
977	A 2,280 square-foot non-insulated metal building used to house 3 sludge drying beds (beds number 5, 6, and 7). Anaerobically digested sludge was spread in the drying beds for dewatering and drying. Utilities: Electric.
988	Known as the Tertiary Pump House, it was a 1,224 square-foot building originally built in 1953 and expanded in 1990. The building was insulated concrete on a concrete floor. The building housed pumps and the three sand filters used to polish the effluent. After demolition, the building foundation was left at greater than 4 feet Below Final Grade. Utilities: electric.
988A	The Ultraviolet Disinfecting Facility was a 432 square-foot building constructed of insulated metal sections mounted on a steel frame and a concrete floor built in 1996. Ultraviolet light technology replaced the chlorination-dechlorination steps used previously. Utilities: electric.
990	A 222 square-foot building constructed in the early 1950s. B990 was a concrete cinder block building with a concrete foundation and a concrete roof slab and a built-up roofing system. This building was the pre-aeration building housing two air compressors used to aerate raw sewage in the equalization basins. Utilities: electric.
990A	A 200 square-foot building constructed in the 1970s. B990A was a concrete cinder block building with a concrete foundation and a concrete roof slab and a built-up roofing system. B990A housed a bar screen and radiological monitoring equipment. Utilities: electric.
990 Aeration Tanks and Manhole	Two concrete tanks, approximately 40 ft. X 12 ft and 18 ft. deep each, provided flow equalization and pre-aeration upstream of the wastewater treatment plant, B995. Each tank had an operating volume of 60,000 gallons. Flow was controlled by a pinch valve in a manhole downstream of the tanks. The manhole also housed instrumentation that measured pH, conductivity and L.E.L. on a real time basis. The function of B990 was replaced by the installation of new influent storage tanks (see 995-1C1, 2, and 3, below). Utilities: electric.
995	Administration and Process Control Building. Originally built in 1953, the concrete block and metal roof building had two additions which increased the floor space to 6000 square feet. 995 was the main structure supporting the wastewater treatment plant, with office space, laboratories, and system infrastructure for the anaerobic digesters. Upon demolition the north and a portion of the west edge of the foundation was left at greater than 4 feet Below Final Grade. Utilities: electric, natural gas, plant water, plant sewer.
995-AB-1	North Aeration Basin approximately 623 square-feet built in 1953. The basins were equipped with fine bubble diffusers that aerated the activated sludge treatment process. Utilities: electric.
995-AB-2	South Aeration Basin approximately 623 square-feet built in 1970. The basins were equipped with fine bubble diffusers that aerated the activated sludge treatment process. Utilities: electric.
995-C-1	Primary Clarifier Basin approximately 200 square-feet built of concrete in 1953. The clarifiers' purpose was to separate solids from liquids. Utilities: electric.
995-C-2	Primary Clarifier Basin approximately 300 square-feet built of concrete in 1970. The clarifiers' purpose was to separate solids from liquids. Utilities: electric.
995-C-3	Secondary Clarifier Basin approximately 600 square-feet built of concrete in 1953. The clarifiers' purpose was to separate solids from liquids. Utilities: electric.
995-C-4	Clarifier Basin approximately 650 square-feet built of concrete in 1953. The clarifiers' purpose was to separate solids from liquids. Utilities: electric.
995-C-5	Tertiary Clarifier Basin approximately 600 square-feet built of concrete in 1970. The clarifiers' purpose was to separate solids from liquids. Upon demolition, the clarifier bottom and a portion of the wall was left at greater than 4 feet Below Final Grade. Utilities: electric.
995-CCC-1	Chlorine Contact Basin was a 65 square-foot concrete basin, built in 1953, formerly used for disinfecting the effluent from the wastewater treatment process.

Building	Description
	Chlorination was replaced with UV disinfection in 1996. Upon demolition, the contact chamber bottom and a portion of the walls was left at greater than 4 feet Below Final Grade.
995-CCC-2	Chlorine Contact Basin was a 200 square-foot concrete basin, built in 1953, formerly used for disinfecting the effluent from the wastewater treatment process. Chlorination was replaced with UV disinfection in 1996.
995-D-1	Anaerobic Digester approximately 500 square-feet built in 1953. The digester provided further treatment of the biosolids prior to drying in the drying beds. Upon demolition, a portion of the north wall was left at greater than 4 feet Below Final Grade. Utilities: electric.
995-D-2	Anaerobic Digester approximately 500 square-feet built in 1953. The digester provided further treatment of the biosolids prior to drying in the drying beds. Utilities: electric.
995-EC-1	Effluent Storage Cell is an 1,836 square-foot concrete basin built in 1996. The effluent cells were designed to hold several days flow of effluent in the event there was an off-normal condition in the treatment plant. Utilities: electric.
995-EC-2	Effluent Storage Cell is an 1,836 square-foot concrete basin built in 1996. The effluent cells were designed to hold several days flow of effluent in the event there was an off-normal condition in the treatment plant. Utilities: electric.
995-EC-3	Effluent Storage Cell is an 1,836 square-foot concrete basin built in 1996. The effluent cells were designed to hold several days flow of effluent in the event there was an off-normal condition in the treatment plant. Upon demolition, the effluent cell bottom was left at greater than 4 feet Below Final Grade. Utilities: electric.
995-IC-1	Influent Storage Cell was a 1,271 square-foot concrete basin built in 1996. The influent cells were designed to hold up to a days flow of influent each in the event there was a spill on-site that threatened the wastewater treatment plant. Utilities: electric.
995-IC-2	Influent Storage Cell was a 1,271 square-foot concrete basin built in 1996. The influent cells were designed to hold up to a days flow of influent each in the event there was a spill on-site that threatened the wastewater treatment plant. Upon demolition, a portion of the north and west walls was left at greater than 4 feet Below Final Grade. Utilities: electric.
995-IC-3	Influent Storage Cell was a 1,271 square-foot concrete basin built in 1996. The influent cells were designed to hold up to a days flow of influent each in the event there was a spill on-site that threatened the wastewater treatment plant. Upon demolition, a portion of the north wall was left at greater than 4 feet Below Final Grade. Utilities: electric.

Facility Disposition

Upon initial review, some portions of the sanitary system were not clearly Type I facilities, either because of the nature of the facility and the potential for contamination or because portions of the system were still in operation and inaccessible when characterization began. For those parts of the system that had the potential to be Type 2, a Pre-Demolition Survey was performed and the results reported in a Reconnaissance Level Characterization Report/Pre-Demolition Survey Report (RLCR/PDSR). Two RLCR/PDSRs were submitted for the Sewage Treatment Plant Closure Project; both presented survey results that all facilities were uncontaminated and reported them as RFCA Type 1 facilities. CDPHE concurred with both reports.

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RFETS MASTE) RCRA UNITS

	A	B	C	D	E	F	G	H	I	J
1	Unit No.	Building	Unit Description	Regulatory Status	Closure Status	Closure Date	Closure Document Approval	SET	Closure document submittal	CDPHE approval
114	50	995	Sewage Treatment Plant	WITHDRAWN - Reclassified as a non-hazardous waste treatment unit	WITHDRAWN 12/15/87 (ref. Section A of the 12/15/87 Part B Application).	NA	NA	NA		NA