

ROCKY FLATS SITE REGULATORY CONTACT RECORD

Purpose: Replace sentinel well 33703.

Contact Record Approval Date: March 23, 2011

Site Contact(s)/Affiliation(s): Scott Surovchak, U.S. Department of Energy (DOE); John Boylan, S.M. Stoller Corporation (Stoller); Rick DiSalvo, Stoller

Regulatory Contact(s)/Affiliation(s): Carl Spreng, Colorado Department of Public Health and Environment (CDPHE); Vera Moritz, U.S. Environmental Protection Agency (EPA)

Discussion: The casing is kinked in sentinel well 33703, which monitors groundwater within the buried drainage south of former B371 and downgradient of former Oil Burn Pit #1. This drainage was filled and graded for construction of the parking lot for the former PACS-2. The kink has gradually worsened, and the well now requires replacement.

This Contact Record documents DOE's consultation with CDPHE and EPA on February 17, 2011, regarding the proposed well replacement.

This monitoring well was installed in 2003 using a Geoprobe. Similar equipment will be used to install its replacement, and the well design will be similar to that of the existing well. The table below provides construction information for well 33703; all depths are in feet below ground surface.

Top of screen	Bottom of screen	Total depth of well	Casing diameter	Screened materials
5.4	33.5	33.6	1 inch	Fill, colluvium/claystone

The replacement well will be assigned the identification number 33711. This well will be constructed of 1.5-inch PVC with a pre-packed well screen incorporating 20/40 silica sand filter pack. It will be installed approximately 3 feet south (upgradient within the buried valley) of the original well and will be assigned the same Rocky Flats Legacy Management Agreement (RFLMA) classification and objectives as the original well. Once the replacement well is confirmed operable, the original well will be abandoned in place per Colorado rules (2 CCR 402-2), with the casing backfilled and the above-grade components removed and disposed of.

This well replacement and, potentially, the abandonment of the original well will include subsurface disturbance that exceeds the 3-foot depth limit specified by RFLMA institutional control (IC) 2 (RFLMA, Attachment 2, Table 4, Control 2); thus, the procedures require preapproval. In addition, a small (approximately 3 feet × 3 feet) area centered on the replacement well will be excavated a few inches for the concrete well pad that forms part of the surface protection.

The objective of IC 2 regarding excavations with a depth exceeding 3 feet is to maintain the current depth to subsurface contamination or contaminated structures. These ICs also result in achieving compliance with the CDPHE risk management policy of ensuring that residual excess lifetime cancer risk to the site user is at or below 1×10^{-6} . As discussed below, the proposed work achieves the risk management policy goal.

Excavation will be reduced to the extent feasible, and soils will be returned to approximately the preexisting grade. The well will be installed using push technology, which creates a relatively small borehole (in this case, under 4 inches in diameter). Any excess soils will be used to backfill any depression resulting from abandonment of well 33703. Clean, native fill will be used to augment excess soils to backfill any depressions resulting from well installation and abandonment. No road will be created to support the well installation; instead, a track-mounted Geoprobe will be used, and crewmembers will either walk or travel by ATV from the nearest road to the well site. Best management practices in the *Erosion Control Plan for Rocky Flats Property Central Operable Unit, DOE-LM/1497-2007* (July 2007) will also be implemented as appropriate to provide erosion controls for the work area so that run-on and runoff will be minimized.

CDPHE has requested that the following information related to ICs be included in contact records for soil excavation:

1) Provide information about any remaining subsurface structures in the vicinity so that the minimum cover assumption will not be violated (or state that there are none if that is the case).

The work location for sentinel well 33703 and new sentinel well 33711 is near the north side of the former PACS-2 parking area south of former B371. There are no subsurface structures in the immediate vicinity.

2) Provide information about any former IHSSs/PACs [Individual Hazardous Substance Sites/Potential Areas of Concern] or other known soil or ground water contamination in the vicinity (or state that there is no known contamination).

Sentinel well 33703 is downgradient of the groundwater plume originating from the Oil Burn Pit #1 source area.

Well 33703 is sampled semiannually. The most recent results, from October 18, 2010, include the following validated detections:

Constituent	Concentration µg/L	Lab Qualifier	RFMLA Table 1 Standard/PQL µg/L	Above RFLMA Standard/PQL?
1,3-Dichlorobenzene	1.3		94	No
1,4-Dichlorobenzene	12		63	No
Benzene	0.59	J	2.2	No
Chlorobenzene	16		100	No
cis-1,2-Dichloroethene	0.69	J	70	No
trans-1,2-Dichloroethene	1.8		100	No
Vinyl chloride	2		0.2 (PQL)	Yes

PQL = practical quantitation limit; µg/L = micrograms per liter; J = estimated quantity

The exposure pathway to contaminants by incidental contact with groundwater is considered insignificant, in accordance with the evaluation in the *Final Comprehensive Risk Assessment Work Plan and Methodology*, Revision 1, September 2005.

Groundwater brought to the surface during development of new well 33711 will be collected as investigation derived material (IDM) and disposed of through the Mound Site Plume Treatment System in the same manner as IDM water from well 33703. The direct push method for installing new well 33711 will not generate any IDM soils.

The well locations are in the northwest corner of former IHSS 156.1, Building 371 Parking Lot, which has been identified as the historical location of a pile of radioactively contaminated soils. The area was investigated, and no contaminant source was indicated. The IHSS was dispositioned by a No Further Accelerated Action decision.

3) Resurvey any new surface established in subsurface soil, unless sufficient existing data is available to characterize the surface (or state that the excavated soil will be replaced and the original contours restored).

When installation of well 33711 and abandonment of well 33703 are complete, the grade of the surrounding soil will be generally consistent with the currently existing grade.

Closeout of Contact Record: This contact record will be closed when the work is completed and post-construction revegetation and any necessary erosion controls are in place.

Resolution: Carl Spreng, CDPHE, approved this contact record.

Contact Record Prepared By: John Boylan and Rick DiSalvo

Distribution:

Carl Spreng, CDPHE
Scott Surovchak, DOE
Linda Kaiser, Stoller
Rocky Flats Contact Record File