0059486

DOE/RL-2003-30
Revision 0

Waste Control Plan for the 200-BP-5 Operable Unit

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Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management
Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

United States
Department of Energy
P.O. Box 550
Richland, Washington 99352

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DISCLM-5.CHP (11/99)

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DISCLM-5.CHP (11/99)

DOE/RL-2003-04
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Date Published
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WASTE CONTROL PLAN

Work Scope Description – This Waste Control Plan (WCP) applies to the management of investigation derived waste (IDW) generated from groundwater well sampling, aquifer sampling tube and seep sampling, aquifer testing, groundwater well or aquifer tube development, water level measurements (both manual and transducer), screening analysis liquids, and equipment decontamination for the 200-BP-5 groundwater operable unit investigations, as appropriate. The scope of work for the 200-BP-5 groundwater operable unit is further described in the Groundwater Sampling and Analysis Plan for the 200-BP-5 Operable Unit (SAP) as revised, DOE/RL-2001-49. Attachment 1of this WCP identifies specific IDW management.

List Constituents of Concern (COC) – The COC identified in the SAP include: anions (nitrate, cyanide), and radionuclides (technetium-99, cobalt-60, uranium, cesium-137, strontium-90, plutonium-239/240, tritium, iodine-129). In addition, other parameters may be measured in some wells to provide information necessary to monitor the 200-BP-5 operable unit and to support decisions for the 200-BP-5 operable unit.

Site Description – 200-BP-5 Operable Unit, United States Department of Energy, Hanford Site, Richland, WA, 99352

Reference - Groundwater Sampling and Analysis Plan for the 200-BP-5 Operable Unit, DOE/RL-2001-49.
Rev. 0 **Date Approved:** February 25, 2003

Preparer – S.P. Juracich (PNNL)

Sign Name **Date** 3/27/03

Project Task – E.C. Thornton (PNNL) ECT
Project Manager – S.P. Luttrell (PNNL) SPL

IDW Coordinator – M.W. Vermillion (FH)
G.B. Gould (FH)

Planned Drilling Start and Finish Dates – This operable unit has an extensive groundwater well network. If additional groundwater wells or aquifer sampling tubes are required, regulatory approval will be obtained prior to installation.

Waste Storage Facility ID Number – N/A

Field Screening Methods – Defined in the SAP as updated.

Method	Frequency	Reference	Detection Range	Analyst

Laboratory Methods (Constituents of Concern) - Defined in the SAP as updated.

Method	Frequency	Reference	Detection Range	Analyst

WASTE CONTROL PLAN

Drill Site Coordinate Location - This operable unit has an extensive groundwater well network. If additional groundwater wells or aquifer sampling tubes are required, regulatory approval will be obtained prior to installation.

Waste Container Storage Area(s) Coordinate Location (s) – Waste generated from those activities described on page 1, "Work Scope Descriptions," will be stored and managed in the 200E Area in the location shown in Attachment 2. Coordinates are approximately: 573390E and 137630N.

Requirements for Soil Pile Sampling (if any) – N/A. Sampling requirements for future activities that could generate soil piles will be defined in a sampling and analysis plan or other regulator approved document.

Non-regulated Material Disposal Location(s) – Waste generated from those activities described on page 1, "Work Scope Descriptions," that are not radiologically contaminated and not a hazardous waste may be disposed of to a Subtitle 'D' landfill contractually obligated to receive Hanford Site waste or an onsite demolition landfill as appropriate.

Sketch of Work Site – The waste will be stored in the storage area identified at the location shown in Attachment 2. The list of wells, for the scope or this WCP, are included in Attachment 3 and 3a and are identified on the map in Attachment 4.

APPROVALS (Print / Sign Name and Date)

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Regulatory Agency Representative

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ATTACHMENT 1
INVESTIGATION DERIVED WASTE (IDW) MANAGEMENT

The following sections describe how the waste generated from those activities described on Page 1, "Work Scope Description", will be managed.

1.0 WASTE STREAMS

Expected waste streams may include the following:

- Miscellaneous solid waste such as filters, wipes, gloves and other personal protective equipment, cloth, sampling and measuring equipment, pumps, pipe, wire, plastic sheeting, tools, materials generated from cleanup of unplanned releases, bentonite, sand, etc.
- Purgewater generated during groundwater well or aquifer sampling tube installation, development, testing, monitoring, maintenance, and decommissioning
- Purgewater generated during decanting of soils and slurries
- Decontamination fluids
- Liquids generated during screening analysis

2.0 DESIGNATION AND DISPOSAL

Waste will be designated in accordance with WAC 173-303 using a combination of process knowledge, historical analytical data, and analyses of samples required by the documents referenced on Page 1 of the Waste Control Plan, as appropriate. The 200-BP-5 Operable Unit has an extensive groundwater well network in place, and several years of characterization data have been obtained that can be utilized for designation of the waste.

Contaminated solid waste, soils and slurries that meet the Environmental Restoration Disposal Facility (ERDF) waste acceptance criteria will be disposed at the ERDF. Contaminated liquids may be sent to the Purgewater Storage and Treatment Facility (PSTF) or Effluent Treatment Facility (ETF). Small volumes of stabilized liquids may be disposed at the ERDF provided the waste acceptance criteria can be met. Waste that does not meet the acceptance criteria may be stored at the Central Waste Complex (mixed waste) or sent offsite for disposal (non-radiological waste) provided EPA has made an offsite determination per Title 40, Code of Federal Regulations (CFR) 300.440. Wastes may be treated in the operable unit or at the ERDF to meet disposal facility waste acceptance criteria. The regulatory agency shall approve any treatment of IDW necessary to meet the disposal facility waste acceptance criteria prior to conducting the treatment. Treatment options include, but are not limited to, stabilization and/or neutralization. Decanting of liquids from soil slurries and the elimination of free liquids from soil slurries by evaporation and/or the addition of absorbent material does not require pre-authorization.

Liquids below purgewater collection criteria as identified in the *Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington* (July 1990) may be discharged to the ground near the point of generation. Miscellaneous solid waste and demolition debris that is

non-hazardous and has been radiologically released may be disposed to an offsite solid waste landfill or onsite demolition landfill as appropriate. Uncontaminated soils and slurries may be placed on the ground near the point of generation. Waste handling and disposal options are further described in Section 3.0 below.

Facilities off the Hanford Site that receive IDW must be deemed acceptable by the Environmental Protection Agency in accordance with 40 CFR 300.440. The exception is miscellaneous solid waste that has not contacted contaminated media.

3.0 WASTE STREAM SPECIFIC MANAGEMENT

Miscellaneous Solid Waste and Decommissioning Debris

Miscellaneous solid waste and decommissioning debris that has contacted potentially contaminated materials will be segregated from other materials and will be disposed of based upon the waste designation. Contaminated materials or materials that have contacted contaminated media may be disposed to ERDF if the acceptance criteria can be met, or to another onsite or offsite approved facility if the criteria cannot be met. Contact solid waste that is non-hazardous and radiologically released or waste that has not contacted potentially contaminated materials may be disposed offsite to a solid waste landfill, may be disposed to an onsite demolition landfill, in the case of demolition debris such as concrete, or recycled as appropriate.

Purgewater

All purgewater will be managed in compliance with the *Strategy for Handling and Disposing of Purgewater at the Hanford Site,* Washington (July 1990). Purgewater that exceeds the collection criteria contained in the *Strategy for Handling and Disposing of Purgewater at the Hanford Site,* Washington (July 1990) will be collected, and contained at the well head if necessary, until transported to the PSTF or the ETF. Purgewater below the collection criteria may be discharged to the ground near the point of generation, avoiding known or suspected surface/vadose zone contamination.

Decontamination Fluids

Decontamination fluids (water and/or non-hazardous cleaning solutions) generated from cleaning equipment and tools in the operable unit may be discharged to the ground if it is below the purgewater collection criteria contained in the *Strategy for Handling and Disposing of Purgewater at the Hanford Site,* Washington (July 1990). Decontamination fluids above the collection criteria will be contained and transported to the PSTF, ETF (if the waste acceptance criteria can be met) or other facility as authorized by the regulatory agency. Small volumes of decontamination fluids may be stabilized to eliminate free liquids and then disposed to ERDF provided the waste acceptance criteria can be met.

Decontamination of some equipment may be conducted at either the 600 Area centralized location and/or the Waste Sampling and Characterization Facility (WSCF) because decontamination and containment systems are already established at these locations. The waste generated at these facilities is not considered IDW and will be managed in accordance with applicable regulations and the facilities' waste management procedures.

Analysis Screening Fluids

Unaltered liquid waste generated during screening analysis may be managed as purgewater as described above. Altered sample wastes will be disposed to ETF, ERDF, or other appropriate facility as authorized by the regulatory agency depending on the waste designation. Some liquids may be neutralized and/or stabilized to meet disposal facility waste acceptance criteria.

4.0 PACKAGING AND LABELING

Materials requiring collection will generally be placed in drums. However, packaging for large or irregular shaped IDW (e.g., well casing, etc.) may include containment other than drums. The packaging shall provide insurance against migration of contaminants and protection from environmental degradation. The packaging may include, but is not limited to, plastic wrap.

Low-volume miscellaneous materials associated with activities such as groundwater well sampling, water level measurements, and groundwater well maintenance may be bagged, taped and labeled with the well number at the wellhead. The bagged material will be transported in a protective manner (i.e., containment of the material is maintained) with the workers while proceeding from well to well in the operable unit. Upon arrival at the storage location, the materials will be placed in an accumulation container and managed as waste. The material may also be taken directly to ERDF for disposal, if appropriate, without storage.

Container packaging and labeling will be in accordance with Section 7.2 of the IDW Strategy.

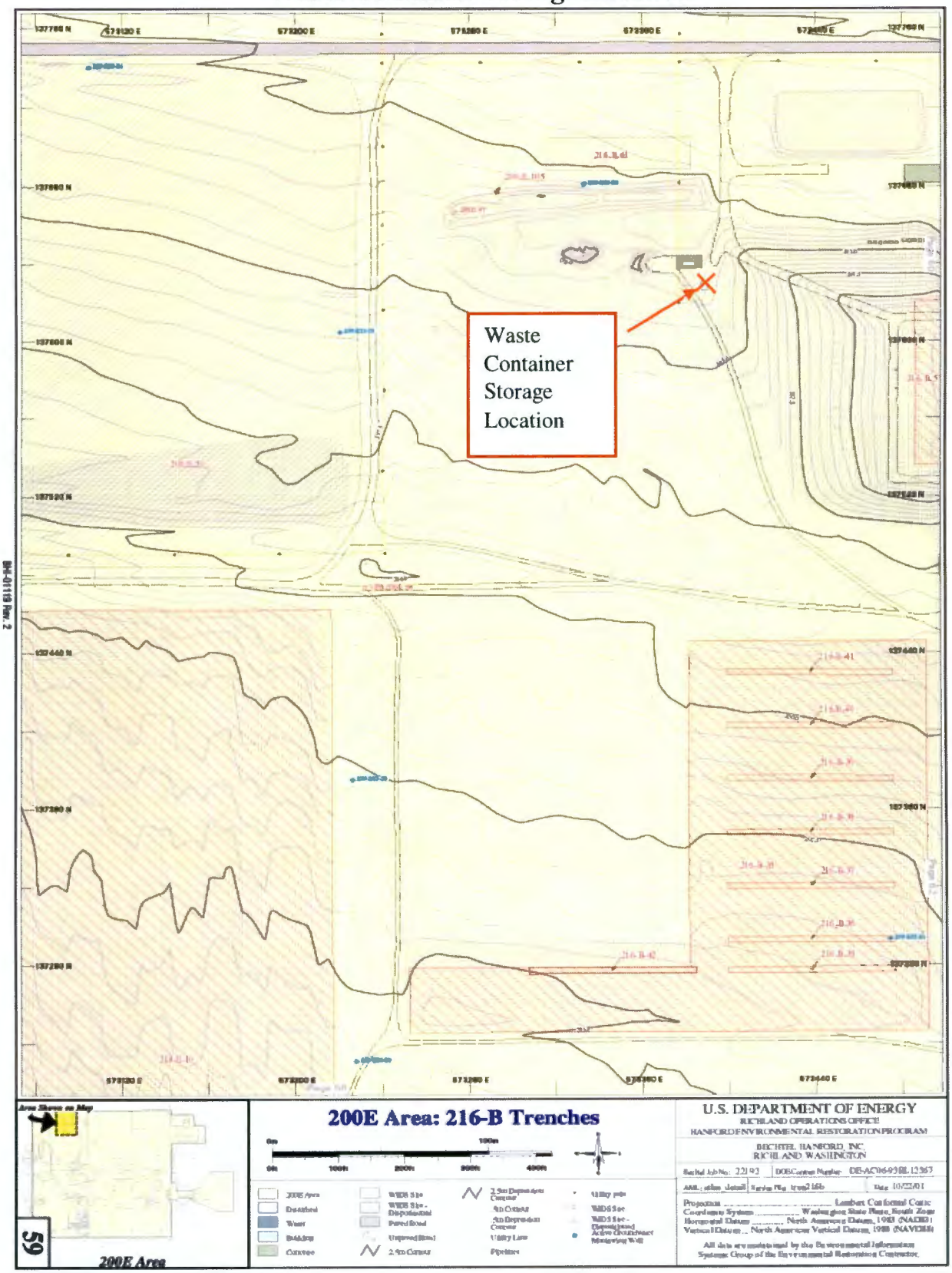
5.0 STORAGE/TRANSPORTATION

Waste will be stored in the 200-BP-5 Area at the location identified in Attachment 2 pending appropriate disposal and managed in accordance with Section 7.2 of the IDW Strategy. Some wastes (e.g., field decontamination fluids) may be temporarily (generally less than 2 weeks after generation) accumulated near the point of generation in the 200-BP-5 Area then staged at the centralized 200-BP-5 Area container storage location. Waste will be transported in accordance with WAC 173-303 and U. S. Department of Transportation requirements as appropriate.

ATTACHMENT 1 (cont.)

Much of the IDW is generated in small quantities on an ongoing basis. The IDW Strategy allows waste to be stored for up to six months. An extension is required for storage beyond 6 months. Section 9.0 of the IDW Strategy states that on a case-by-case basis, the project managers may negotiate exceptions to the requirements identified in the strategy. Because of the low volumes of waste generated, EPA has agreed that waste associated with the 200-BP-5 Operable Unit may be stored for up to 12 months.

Attachment 2
Waste Container Storage Location



Attachment 3
200-BP-5 Operable Unit Groundwater Well List

(from Revised Monitoring Network – SAP)

216-B-5 Reverse Well and B-Plant

299-E28-23
299-E28-24
299-E28-25
299-E28-5
299-E28-6
299-E28-2
299-E28-17
299-E28-27
299-E28-8

216-BY Cribs and WMA B-BX-BY

299-E28-26
299-E33-46
299-E33-7
299-E33-38
299-E33-26
299-E32-10
299-E33-13
299-E33-34
299-E33-16
299-E32-9
299-E33-35
299-E33-12
299-E33-41
299-E33-338
299-E32-4
299-E33-39
299-E32-6
299-E33-15
299-E33-28
299-E33-30
299-E33-18
299-E33-42
299-E33-43
299-E33-44

216-BY Cribs (cont.)

699-49-55A
699-53-55C
699-55-60A
699-49-57A
699-49-57B
699-50-53A
699-55-57
699-53-55A
699-53-55B
699-65-50
699-47-60
699-57-59
699-59-58
699-60-60
699-61-66
699-64-62
699-72-73
699-61-62
699-66-58
699-66-64
699-70-68
699-65-72
699-73-61

216-B-62 Crib

299-E28-18
299-E28-21

WMA C

299-E27-14
299-E27-15
299-E27-7

216-B-3 Pond

699-43-40
699-45-42

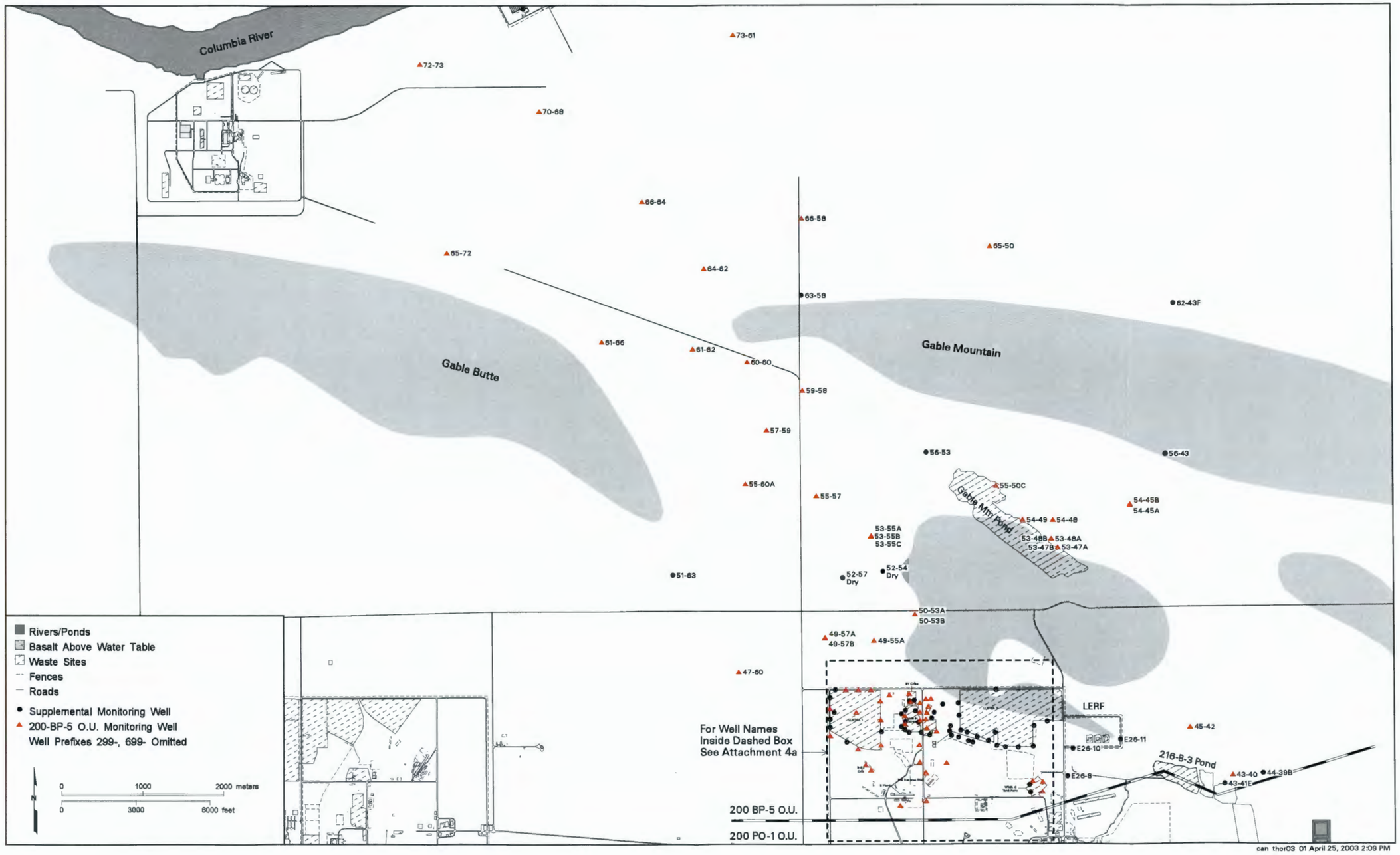
Gable Mountain Pond

699-53-47A
699-53-47B
699-53-48A
699-53-48B
699-54-45A
699-54-45B
699-54-48
699-54-49
699-55-50C

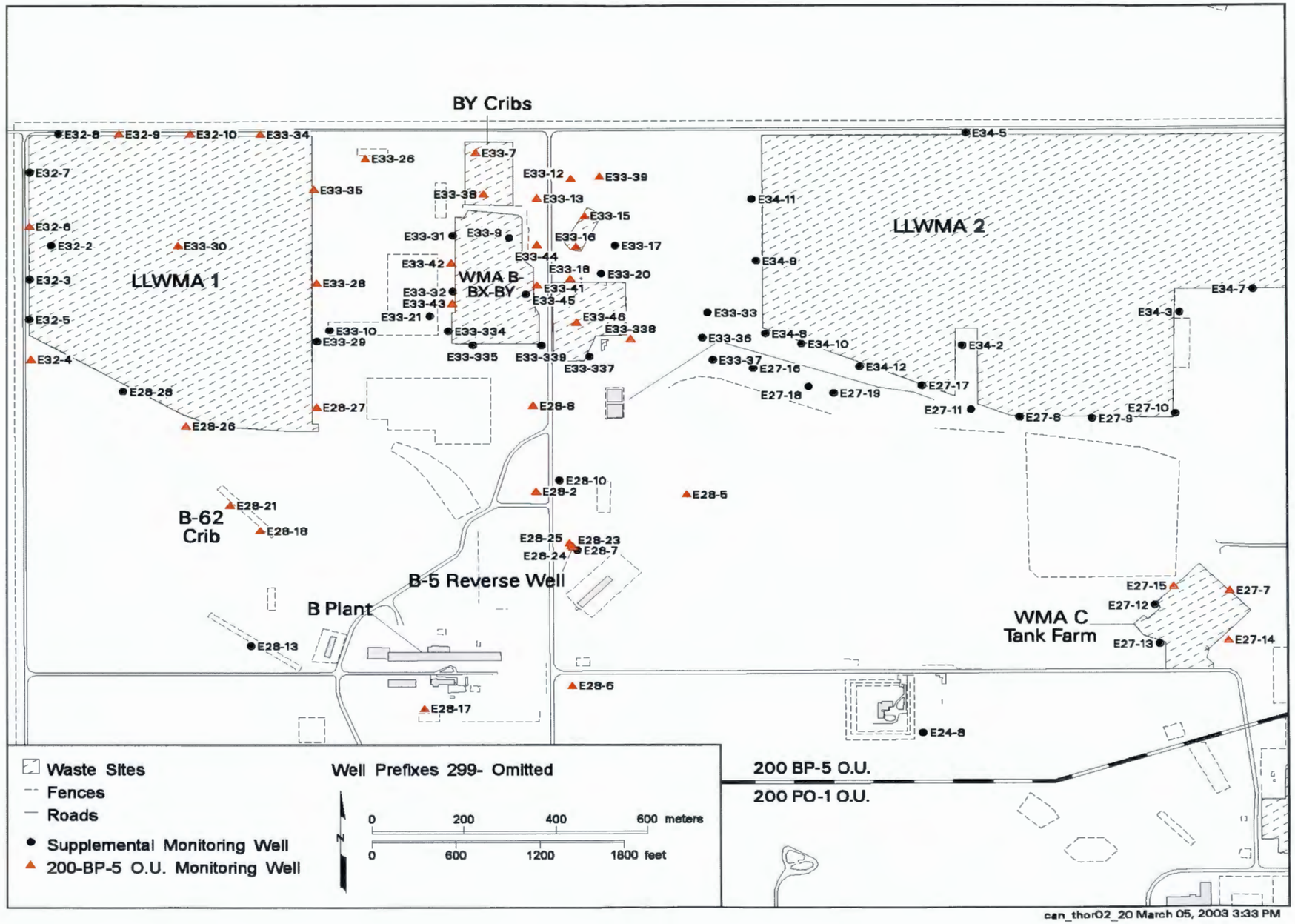
Attachment 3a
200-BP-5 Operable Unit Groundwater Well Supplemental List
(from Appendix B – SAP)

Well Numbers	Sampling Project
299-E18-1	Surveillance Central
299-E24-8	Surveillance Central
299-E26-10	LERF, Surveillance Central
299-E26-11	LERF, Surveillance Central
299-E26-8	Surveillance Basalt
299-E27-10	Surveillance Central, LLBG 2, LLBG 2-PA
299-E27-11	B-63, LLBG 2, LLBG 2-PA
299-E27-12	SST C
299-E27-13	SST C
299-E27-16	B-63
299-E27-17	B-63, LLBG 2, LLBG 2-PA, Surveillance Central
299-E27-18	B-63, Surveillance Central
299-E27-19	B-63
299-E27-8	B-63, LLBG 2, LLBG 2-PA
299-E27-9	B-63, LLBG 2, LLBG 2-PA
299-E28-10	Surveillance Central
299-E28-13	Surveillance Central
299-E28-28	LLBG 1, LLBG 1-PA, Surveillance Central
299-E28-7	Surveillance Central
299-E32-2	LLBG 1, LLBG 1-PA, Surveillance Central
299-E32-3	LLBG 1, LLBG 1-PA
299-E32-5	LLBG 1, LLBG 1-PA, Surveillance Central
299-E32-7	LLBG 1, LLBG 1-PA, Surveillance Central
299-E32-8	LLBG 1, LLBG 1-PA, Surveillance Central
299-E33-10	SST B
299-E33-17	SST B
299-E33-20	SST B
299-E33-21	SST B
299-E33-29	LLBG 1, LLBG 1-PA, SST B, Surveillance Central
299-E33-31	SST B
299-E33-32	SST B, Surveillance Central
299-E33-33	B-63, Surveillance Central
299-E33-334	SST B, Surveillance Central
299-E33-335	SST B, Surveillance Central
299-E33-337	SST B
299-E33-339	SST B
299-E33-36	B-63
299-E33-37	B-63, Surveillance Central
299-E33-9	SST B
299-E34-10	B-63, LLBG 2, LLBG 2-PA
299-E34-11	Surveillance Central
299-E34-12	LLBG 2, LLBG 2-PA
299-E34-2	LLBG 2, LLBG 2-PA, Surveillance Central
299-E34-3	LLBG 2, LLBG 2-PA
299-E34-5	LLBG 2, LLBG 2-PA, Surveillance Central
299-E34-7	LLBG 2, LLBG 2-PA, Surveillance Central
299-E34-8	B-63
299-E34-9	LLBG 2, LLBG 2-PA, Surveillance Central
699-43-41E	Surveillance Central
699-44-39B	Surveillance Central, B Pond
699-50-53B	Surveillance Basalt
699-52-19	Surveillance Central
699-52-46A	Surveillance Basalt
699-54-34	Surveillance Basalt
699-56-43	Surveillance Basalt
699-56-53	Surveillance Basalt
699-62-43F	Surveillance 100 FR3
699-63-58	Surveillance 100 BC5
C4124	Proposed new well NE of SST C
C4125	Proposed new well W/SW of SST C
C4126	Proposed new well SW of SST C
C4127	Proposed new well S of SST C

Attachment 4 - Well Locations



Attachment 4a - Well Locations



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