IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY

CONSENT ORDER ACTION PLAN

1. Purpose of the Action Plan

The purpose of this Action Plan is to document the actions to be taken and the milestones for covered matters under the Consent Order. Click here to view the Consent Order.

2. Covered Matters

Covered matters with detailed action plans are identified in Appendix A. Covered matters with tiered milestones are identified in Appendix B. Covered matters that are closed are identified in Appendix C. Examples of Permitting Closure and New Site Identification Form Review and Approval under the VCO as included in Appendix D.

Appendix A

Description of Covered Matters with Detailed Action Plans

Appendix A: Description of Covered Matters with Detailed Action Plans

VCO Number: **NEW-TRA-001**

Issue Title: Inadequate Hazardous Waste Determination of TRA Waste (see table "TRA Legacy Waste List")

Citation:

39-4408(1)	*"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*
40 CFR 262.11	*"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."*

Issue Description: A complete hazardous waste determination has not been performed on the contents of containers of waste and other items stored at several locations at TRA. Some of those items are known or believed to have hazardous characteristics and are being stored in excess of 90 days. The waste description and storage locations are included in the attached table.

Action Summary: A hazardous waste determination will be performed for all items identified on the attached table. Upon completion of the determination, any items determined to be hazardous will be moved to an interim status or RCRA permitted storage or disposal facility.

Interim Actions: See interim action section for each item on the attached table.

Action:

Action Description	Milestone
Complete hazardous waste determinations for 25% of the items and move items determined to be hazardous waste to an interim status or permitted hazardous waste storage or disposal facility.	06/30/01 (Complete and approved on 12/14/00. See NEW-TRA-001A in Appendix C.)
Complete hazardous waste determinations for 50% of the items and move items determined to be hazardous waste to an interim status or permitted hazardous waste storage or disposal facility.	06/30/02 (Complete and approved on 06/06/01. See NEW-TRA-001A in Appendix C.)
Complete hazardous waste determinations for 75% of the items and move items determined to be hazardous waste to an interim status or permitted hazardous waste storage or disposal facility.	06/30/03 (Complete and approved on 07/21/03)
Complete hazardous waste determinations for 100% of the items and move items determined to be hazardous waste to an interim status or permitted hazardous waste storage or disposal facility.	06/30/04

VCO Issue NEW-TRA-001: TRA Legacy Waste List

Line No.	Tracking No.	Facility: Building	Description	VCO Interim Actions
1	145	NA	NaOH PortableTank, East of TRA-644. There is a container marked NaOH with no freestanding liquid. Tank List: ETR/644, page 74, #98TRA00331.	None. Container was dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
2	147	NA	680 capsules stored in the ATR Canal for shielding purposes contain small amounts of NaK.	None. Items were dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
3	165	TRA-657-PLUG-A	Space Reactor Project Waste: Lithium Hydride (LiH) and Sodium Potassium (NaK) were used in tests related to the Space Reactor Project (SRP). The SRP terminated in 1990. The material is stored in two 30 gal drums and in two special containers designed to hold the test capsules. The material is lithium hydride sized to fit reactor experimental holders. Also, there are some Temperature Element Devices (TEDs) that contain NaK seal welded in small thimbles. PSA-051 (96SMT070187) - Irradiation Experiment, SP-100, Sodium Metals (NaK TEDs). Barcode 11029 (96SMT070129): LiH, may be unirradiated LiH, (see #246). Barcode #11668 (LiH/NaK). Barcode #11679 (LiH).	Requirements of 40 CFR 262.34 are met with the exception of the 90-day storage limit.

VCO Issue NEW-TRA-001: TRA Legacy Waste List

Line No.	Tracking No.	Facility: Building	Description	VCO Interim Actions
4	166	NA	Legacy lead bricks, shot, etc., which need to be characterized and recycled or shipped for disposal: PSA-30: contains lead shot. At TRA-657-PSA (see #237). PSA-33: 55-gallon drum with lead shot. At TRA-657-PSA, (see #239). 13209K: Lead shot in 55-gallon drum. At TRA-657-PSA, (see #273). 13210K: Lead shot in 55-gallon drum. At TRA-657-PSA, (see #274). 13211K: Lead shot in 30-gallon drum. At TRA-657-PSA, (see #275). 13213K: 1 lead sheet, 1 lead pig in 5-gallon drum. At TRA-657-PLUG-A, (see#276). 13214K: 5 lead bricks. At TRA-657-PSA, (see #277). 13212K: Lead shot, 30-gallon container. At TRA-657-PLUG-A. Barcodes 16638K, 16639K, 16640K, 16641K, and 16642K at TRA-657-PLUG-A.	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, “Description of Covered Matters that are Closed.”
5	172	TRA: 645	2-Wooden Boxes in Storage Yard 8, East of TRA-645. Labeled "unknown." Wooden boxes contain ETR reactor components.	A sign is posted stating that the waste is potentially hazardous and is part of VCO item # NEW-TRA-001. The sign includes a unique identifier. The contents of these boxes are not known to be hazardous, and are solid, stable waste. Inspections are performed and documented monthly.
6	173	NA	Cask in laydown area South-East of TRA-644. Labeled (painted) as "164." Out-of-service shipping cask probably has lead shielding inside. (RCRA Cradle to Grave - Picture 7).	None. Item was dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, “Description of Covered Matters that are Closed.”
7	174	NA	Large black rad. contaminated tank East of TRA-644 with a number "45" written on the West end of tank. Tank contains a small amount of kitty litter and used oil.	None. Item was dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, “Description of Covered Matters that are Closed.”

VCO Issue NEW-TRA-001: TRA Legacy Waste List

Line No.	Tracking No.	Facility: Building	Description	VCO Interim Actions
8	181	TRA-657-PLUG-A	Barcodes 16635, and 11034 : Tap Magic and High Pressure Lube.	Requirements of 40 CFR 262.34 are met with the exception of the 90-day storage limit.
9	196	TRA: 670	ATR canal trash: this consists of metal pneumatic rabbit terminals shield, containing radioactively contaminated lead, and two CIT plugs containing radioactively contaminated lead.	A notation is listed on the grid map indicating that the capsules are considered potentially hazardous waste. Access to the ATR Canal is closely controlled due to the personnel radiological hazards. A semi-annual inventory is conducted by plant operations. No additional inspections are conducted due to the stable environment of the storage and the increased risk to human health.
10	249	NA	PSA-036: PPE and contaminated spill-X, and Barcode 03314: from PSA-036.	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
11	251	NA	PSA-072: Filter, housing.	None. Item was dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
12	254	NA	PSA-038, 83-gallon drum 1/8-full of Co-60 contaminated soil.	None. Item was dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
13	255	NA	PSA-039: 55-gallon drum with poly liner inside it. Inside poly liner is 15-gallon poly drum with resin and a metal shaft inside the resin. Resin is radioactively contaminated.	None. Items were dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
14	258	NA	Barcode 11611: One gallon can from PSA-015. Two vials with TMI residue.	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
15	260	NA	Barcode 11629: Legacy waste from sample/waste roundup.	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
16	261	NA	Barcode 11630: Legacy waste from sample/waste roundup	None. Items were dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."

VCO Issue NEW-TRA-001: TRA Legacy Waste List

Line No.	Tracking No.	Facility: Building	Description	VCO Interim Actions
17	264	NA	Barcode 11038: 28 products in the original containers awaiting disposal.	None. Items were dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
18	267	NA	Barcode 11011: ATR HX cleanup. (2-one gallon cans of dried yellow paint, two unlabeled aerosol cans, one bag of PPE which appear to be soaked in an unknown solvent and a 500mL poly bottle with what appears to be oil from ARA-1).	None. Items were dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
19	307	TRA-657-PLUG-A Yellow box, Fissile Material Storage Area	PSA-029 (inside a hot box): SFD 1-4 Steamline and SFD 1-4 Deposition Rod Pieces. (Also includes two one inch met mounts). SFD 1-3 and 1-4 Deposition Rod pieces.	A sign is posted stating that the waste is potentially hazardous and is part of VCO item # NEW-TRA-001. The sign includes a unique identifier. These items are in a solid, stable form and pose no potential for release to the environment. They are stored in an area that has controlled access due to radiological concerns and/or controls established by Safeguards and Security. Inspections are performed and documented monthly by the Area Fissile Material Custodian.
20	308	NA	308(A): Met Mounts. Met mounts might contain fissile material (not waste). 308(B): Cask #XMTR-II (includes PCM-7, PR-1, and Optran Burnup fuel pieces).	None. Items were dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
21	310	TRA: 632 Hot Cell Facility	Fort St. Vrain Probe Parts, eleven items: S6A2, S3A1, S5A2, S2A2, S6A1, S5A1, S3A2, S4A2, S1A1, S2A1, S2A1.	A sign is posted stating that the waste is potentially hazardous and is part of VCO item # NEW-TRA-001. The sign includes a unique identifier. These items are in a solid, stable form and pose no potential for release to the environment. They are stored in the hot cell facility, which has controlled access due to radiological concerns. Inspections are performed and documented monthly by Hot Cell Facility Personnel.
22	329	NA	PSA-027 - Contains 3 empty (TMI) sample containers (potential lead). Sample Containers Empty - Considered Waste.	None. Containers were dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."

VCO Issue NEW-TRA-001: TRA Legacy Waste List

Line No.	Tracking No.	Facility: Building	Description	VCO Interim Actions
23	333	NA	PSA-034 - DOT 2R SN#1314 PSA-035 - DOT 2R SN#1311 Empty 2R containers. Lead lined. May be reuseable.	None. Containers were dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
24	335	TRA-657-PLUG-A	PSA-040 - Contaminated Leaching Equipment - Source Term Sampler.	Requirements of 40 CFR 262.34 are met with the exception of the 90-day storage limit.
25	340	TRA-657-PLUG-A	340 (A): PSA-025 - EIVTS (1 of 2) This appears to be barrel #1 (of 2), containing special sources stored in PSA. 340 (B): PSA-018 - 17C, #2 EIVTS contains special sources Cd-109. A,-241, & Cs-137. A total of 0.25 curies. 340 (C): PSA-049 - EIVTS Special RAD Sources, Co-60.	340(A): Sources have been placed in Hot Cell Facility waste box in preparation for disposal except for a calibrator with a Cs source and an empty Navy counting chamber. The calibrator with the Cs source is located in the TRA-657 Plug Storage Area. The empty Navy counting chamber was shipped to Duratek for recycle on 7/31/01 with other VCO lead items. The lead is to be returned to the INEEL for use at the Idaho State University. Requirements of 40 CFR 262.34 are met on the remaining calibrator except for the 90-day storage limit. 340(B): Sources have been disposed except for the Am-241. The Am-241 source is located in TRA-657 Plug Storage Area. The Am-241 source has been determined to be low-level waste only. 340(C): Sources have been placed in a Hot Cell Facility steel waste box in preparation for disposal. They were determined to be low-level waste only. All lead pigs that held sources that were removed for disposal have been sent to the MWSF. The hazardous waste determinations for all sources and source containers will be included in the 100% milestone documentation.
26	344	TRA-657-PLUG-A	PSA-060 (96SMT070194) - contains cement core bore and lead shot; Barcode 14346K.	Requirements of 40 CFR 262.34 are met with the exception of the 90-day storage limit.

VCO Issue NEW-TRA-001: TRA Legacy Waste List

Line No.	Tracking No.	Facility: Building	Description	VCO Interim Actions
27	345	NA	Empty lead cask (extremely heavy).	None. Item was dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
28	346	NA	PSA-062 - Tools. Appears to be old fuel handling tools (probably aluminum).	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
29	347	NA	PSA-063 - Eberline Model #Sa-2a SER#113. Item is believed to contain a radioactive source.	None. Item was dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
30	348	NA	PSA-065 - LP-FR-2 Piping Components (from LOFT Project).	None. Items were dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
31	349	NA	PSA-067 - TMI Rod Holder with Fixed Contamination on Legs.	None. Item was dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
32	350	NA	PSA-068 - TTAF Strongback 1 of 2. PSA-069 - TTAF Strongback 2 of 2.	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
33	351	NA	PSA-070 - Radioactive Low Specific Activity (RALSA), contains mechanical drive (2 long metal duct-like items and one long rod) all wrapped yellow poly (1986).	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
34	352	NA	PSA-071 - BXW, contains long metal duct-like items and one long rod wrapped yellow poly.	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
35	353	NA	PSA-073 - Metal Box: contains TMI metal spool.	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
36	354	NA	PSA-076 - RCT RAM Equipment W/Sr-90 Internal Sources.	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."

VCO Issue NEW-TRA-001: TRA Legacy Waste List

Line No.	Tracking No.	Facility: Building	Description	VCO Interim Actions
37	395	NA	Barcode TRA-657-PAW-01: Two 540-ml containers of radiologically contaminated mercury, originating from the TRA Hot Cells.	None. Items were dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
38	408	TRA-657-PLUG-A	PSA-023, 55-gallon drum contained 2-C-14/H-3 sampling instruments. PSA-041, 55-gallon drum contained TMI Sr-90 irradiator instrumentation.	Requirements of 40 CFR 262.34 are met with the exception of the 90-day storage limit.
39	416	TRA-657-PLUG-A	PSA-039D, 5-gallon can, contains 2 electrical devices (appear to be thermostats) and cobalt-contaminated sand, (PSA-038A, 60-ml, rad\Co-60).	Requirements of 40 CFR 262.34 are met with the exception of the 90-day storage limit.
40	417	TRA-657-PLUG-A	PSA-037, 110-gallon drum, empty PVC pipes (schedule 40) with lead wrapped around pipes for shielding.	Requirements of 40 CFR 262.34 are met with the exception of the 90-day storage limit.
41	425	NA	Radioactive elemental lead pieces, in 4x4x2 wooden box, barcode #11682.	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
42	426	NA	Radioactive elemental lead pieces, in 4x4x2 wooden box, barcode #11683.	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
43	428	NA	Two black casks in laydown area South-East of TRA-644. The casks are approximately 5 feet long and 2 feet in diameter (cylinder welding letters which state, "Radioactive Material B of E permit #362," further, shape) and appear to be carbon steel.	None. Casks were dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
44	429	NA	One blue cylinder enclosed in a wire cage, in laydown area South-East of TRA-644. The cylinder appears to be 7 ft long by 2 inches in diameter. The cage is 18 inches by 18 inches by 7 ft. No identifiable markings are on the outside of the cask.	None. Item was dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."

VCO Issue NEW-TRA-001: TRA Legacy Waste List

Line No.	Tracking No.	Facility: Building	Description	VCO Interim Actions
45	430	TRA: 617	Black tank located inside a cargo container. Cargo container is presently located on the TRA-617 segregated waste pad. Tank came from behind the ATR Reactor buildings and belongs to ATR.	A sign is posted stating that the waste is potentially hazardous and is part of VCO item # NEW-TRA-001. The sign includes a unique identifier. The contents are not known to be hazardous. Inspections are performed and documented monthly.
46	431	NA	North storage area boxes. These boxes were located inside TRA-664, which is located outside of the security fence. This is believed to be ETR components stored in boxes. There are 9 boxes of components. All boxes were moved to TRA-643 beginning on 8/3/00 and completed on 9/14/00.	None. Items were dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
47	433	NA	Abandoned control panels. There are 16 panels in TRA-643. The regulatory concern is that the panels could contain hazardous waste in the form of RCRA (heavy metals), TSCA (PCB), and NESHAPS (asbestos) that could not be recycled or reused.	None. Items were dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
48	434	NA	Barcode #16676K: 5-gallon can. Contains organics from Amersham Corp.	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
49	435	NA	Bar Codes #16577K and 16576K: 630/605 samples.	None. Samples were dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
50	436	NA	Barcodes 7752 and 14361K: potentially contaminated PPE.	None. Item was dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
51	439	NA	PSA-057 (96WMT070192) – empty Red 2R container;	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
52	440	TRA-657-PLUG-A	Cask 302 and 304: contain SFD deposition rod pieces.	Requirements of 40 CFR 262.34 are met with the exception of the 90-day storage limit.

VCO Issue NEW-TRA-001: TRA Legacy Waste List

Line No.	Tracking No.	Facility: Building	Description	VCO Interim Actions
53	441	NA	Abandoned control panels. There are 3 panels in TRA-604. The regulatory concern is that the panels could contain hazardous waste in the form of RCRA (heavy metals), TSCA (PCB), and NESHAPS (asbestos) that could not be recycled or reused.	None. Items were dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
54	442	NA	Lead stored in 55-gallon drum in back portion of hot cell in TRA-632: 3 lead bricks, 130 lead putty bricks, 1 lead blanket, 3 pigs, and loose lead (in tape).	None. Items were dispositioned under the first 25% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
55	443	TRA: 642	68-ft^3 lead brick previously used for shielding in the GEEL Tunnel. 30-ft^3 lead brick previously used for shielding in the Sodium Loop entrance. 6- lead bricks in J-10/L-10 cubical area.	Signs are posted stating that the waste is potentially hazardous and is part of VCO item # NEW-TRA-001. The signs include a unique identifier. Because these items are in a stable form and building access is controlled due to the increased risk to human health posed by radiological and asbestos hazards, inspections are performed and documented monthly to ensure that signs remain posted at the entrances to each item.
56	444	NA	Lead impregnated sheet by GEEL air compressors in TRA-643 (600 lbs).	None. Item was dispositioned under the 50% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
57	445A	NA	36-ft^3 shield blocks previously used for shielding at TRA and stored inside TRA-664. Shield blocks were relocated to the laydown area outside, east of TRA-605 on 6/19/00.	None. Items were dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
	445B	NA	23 lead pieces of various sizes previously used for shielding at TRA and stored inside TRA-664. The lead pieces were relocated to TRA-657-PLUG-A on 6/27/00.	
58	446	NA	Coffin Dolly Assembly, Property ID #340655.	None. Item was dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."

VCO Issue NEW-TRA-001: TRA Legacy Waste List

Line No.	Tracking No.	Facility: Building	Description	VCO Interim Actions
59	447	NA	Plug Beam Hole Assembly, Property ID #340657.	None. Item was dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."
60	448	NA	Pellets that may contain regulated concentrations of chrome in the bottom of the calcine pelletizer located at the West end of TRA-641.	None. Items were dispositioned under the 75% milestone. See NEW-TRA-001A in Appendix C, "Description of Covered Matters that are Closed."

Appendix B

Description of Covered Matters with Tiered Milestones

Appendix B: Description of Covered Matters With Tiered Milestones

VCO Number: **NEW-CPP-016**

Issue Title: Inadequate Hazardous Waste Determination on Tanks at CPP-603

Citation:

IDAPA 58.01.05.006 [40 CFR 262.11] states in relevant part:

"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."

Issue Description: The tanks addressed in this Action Plan consist of sand filters, filter wash water holding tank, clarifier, demineralizer resin beds and an acid regeneration tank at CPP-603. The tank system is part of a water treatment system for the underwater-spent nuclear fuel storage basin in CPP-603. The treatment system has not operated since May 1995 and will not be used in the future. Tank system components are identified as follows:

98CPP00610	F-SF-113	Multi-Media Sand Filter
98CPP00611	F-SF-114	Multi-Media Sand Filter
98CPP00612	F-SF-115	Multi-Media Sand Filter
98CPP00619	VES-SF-108	Filter Backwash Holding Tank
98CPP00620	VES-SF-109	Collection Tank, Clarifier Vessel
98CPP00631	VES-SF-130	Acid Regeneration Makeup Tank
98CPP00632	VES-SF-131	Duolite C-464 Resin Tank
98CPP00633	VES-SF-132	Zeolon 900 Resin Tank

Action Summary: DOE will perform a system identification and will mark each tank with a unique identifier number. The tanks will be sampled and a hazardous waste determination will be performed. If, due to radiological considerations, sampling cannot be performed, a hazardous waste determination may be performed based on process knowledge or the Milestone may need to be renegotiated. If the tank system is determined to contain hazardous waste, DOE will submit a proposed schedule of further milestones and a description of any proposed interim actions.

The Zeolon 900 Resin Tank (VES-SF-132, 98CPP00633) was characterized as nonhazardous (EDF-2621) and subsequently moved to Appendix C of the VCO Action Plan (see NEW-CPP-016A Action Plan in Appendix C).

Interim Actions: See attached matrix "NEW-CPP-016: Basin Water Treatment System Compliance with 40 CFR 265 Interim Status Requirements.

Action:

Action Description	Milestone
Perform a system identification and mark each tank with a unique identification number.	03/31/01 (Complete and approved on 04/10/01)
Complete hazardous waste determination on the tank system.	06/30/01 (Complete and approved on 06/15/01)
Submit proposed schedule of further Milestones and description of any interim actions.	09/19/01 (90 days following approval of previous milestone) (Complete and approved on 10/25/01)
Submit RCRA Closure Plan and Schedule for Department review and DOE revision.	06/30/03 (Complete and approved on 07/18/03)
Submit Final RCRA Closure Plan for Department review and approval.	09/30/04

VCO NEW-CPP-016: Basin Water Treatment System (BWTS) Compliance with 40 CFR 265 Interim Status Requirements

Number	Citation	Subject	In compliance?	Comments/Interim Actions
1	§265.13	Waste Analysis	Yes	A hazardous waste determination for the Basin Water Treatment System (BWTS) with sufficient data to declare individual tanks as hazardous or non-hazardous was submitted to the Idaho Department of Environmental Quality previously as a VCO milestone for Action Plan NEW-CPP-016. Additional sampling required to transport and dispose of wastes during closure may be required and will be done according to sampling and analysis plans developed for those activities. A waste analysis plan will not be developed since no additional waste will be received for storage.
2	§265.14 (except §265.14(c))	Security	Yes	INTEC is a secure facility with a perimeter fence surrounding the area. The fence is monitored by guards and video equipment. Entrance into INTEC requires training and a security background check or an escort who meets these requirements. Further, any individuals not normally assigned to the CPP-603 facility are required to obtain permission prior to entry into the facility.
3	§265.14 (c)		Yes	Signs on the Bldg CPP-603 doors read “Restricted Area - Persons not assigned to this area must obtain permission before entering”. 40 CFR 265.14(c) allows “existing signs with a legend other than ‘Danger-Unauthorized Personnel Keep Out’ may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.” Entrances to individual BWTS areas have tags indicating which VCO items are found in the area.
4	§265.15 and 265.195	Inspections	No	The sand filters, clarifier, washwater hold tank, and ion exchange vessels are located in high radiation, high contamination areas and cannot be inspected without unacceptable exposures to workers. In lieu of visual inspections, level indicators for sumps in the sand filter and ion exchange vaults will be repaired and calibrated where possible. If level indicators cannot be repaired, remote cameras will be installed. Monitoring will occur during daily rounds. Form INTEC-5413 will be modified to include level indicator and vault exterior monitoring. These actions will be completed by 31 March, 2002. The regenerant makeup tank is empty and is not currently inspected. No inspections are needed.

VCO NEW-CPP-016: Basin Water Treatment System (BWTS) Compliance with 40 CFR 265 Interim Status Requirements

Number	Citation	Subject	In compliance?	Comments/Interim Actions
5	§265.16	Training	Yes	All facility personnel currently receive training in order to manage Tank VES-SFE-106, an interim status storage tank. Specific training is listed in Interim Status Document # 3 (ISD-3). Training records are maintained in the INEEL training database.
6	§265.31	Maintenance and operation of facility	Yes	Workplace procedures are in place to preclude fire, explosion or releases of hazardous waste.
7	§265.32	Required Equipment	Yes	The INTEC voice paging system and emergency alarms are tested on a repetitive schedule and are verified audible in building CPP-603. Phones are available in the adjacent areas with emergency phone numbers posted.
8	§265.33	Testing and maintenance of equipment	Yes	Fire extinguishers, telephones, voice paging and emergency alarm systems are all on fixed inspection and maintenance schedules.
9	§265.34	Access to communications or alarms	Yes	A phone is available in the immediate area 24 hours a day. At least two workers are present at all times when work is being performed. No transfers of materials will take place until future milestones are established.
10	§265.37	Arrangements with local authorities	Yes	The contingency plan (PLN-114) includes CPP-603 and covers hazards posed by materials stored in the BWTS. The Hazards Assessment Document (HAD-4) includes a screening of the hazards.
11	§265.50 through §265.56	Contingency plan and emergency procedures	Yes	The contingency plan (PLN-114) includes CPP-603 (see comments for item 10).
12	§265.73	Operating Record	Yes	An operating record has been established and all applicable records will be maintained. The system identification package for the BWTS contains the locations and quantities of wastes stored. The system characterization and project file contain hazardous waste determination records.
13	§265.74	Availability, retention, and disposition of records	Yes	Records of inspections are kept per MCP-1076 and MCP-2974.

VCO NEW-CPP-016: Basin Water Treatment System (BWTS) Compliance with 40 CFR 265 Interim Status Requirements

Number	Citation	Subject	In compliance?	Comments/Interim Actions
14	§265.75 and §265.77	Biennial and additional Reporting	Yes	The BWTS wastes will be included in the next biennial report and any incidents will be reported as required.
15	§265.110 through §265.121	Closure and Post Closure	Yes - VCO	Closure and post-closure requirements will be identified and accomplished as future milestones under the VCO.
16	§265.191 and §265.192	Assessment of tank systems integrity	No	Inspection and certification of the BWTS tanks is not feasible because of radiation exposure. The tank construction materials and methods have been reviewed and the BWTS is of adequate design to support storage until closure activities occur. All tanks are inside Bldg CPP-603 and are located above concrete floors.
17	§265.193	Containment and detection of releases	No	All tanks are inside Bldg CPP-603 and are located above concrete floors. The sand filters, clarifier, washwater hold tank and ion exchange vessels are in vaults. The sand filter and ion exchange vaults meet structural requirements, but are not equipped with leak detection. Floor and sump drains in the sand filter vault and regenerant makeup tank area are plugged. The sand filter and ion exchange vault sump level indicators will be repaired and calibrated if possible. If level indicators cannot be repaired, remote cameras will be installed. These actions will be completed by 31 March, 2002. (See Item 4 above). The regenerant makeup tank is empty and does not need secondary containment. A short section of Line 2” PLA-105591 leading from the ion exchange vessels to its connection with the collection line 2” PLA-100313 has not been verified as having secondary containment. Inputs to the ion exchange systems and sand filter/clarifier systems have been inactive since at least December 1993. Transfers through the pipe will not occur until closure activities are accomplished as future VCO milestones.

VCO NEW-CPP-016: Basin Water Treatment System (BWTS) Compliance with 40 CFR 265 Interim Status Requirements

Number	Citation	Subject	In compliance?	Comments/Interim Actions
18	§265.194	General operating requirements	Yes	No additional wastes or treatment reagents will be added to the BWTS. Spill prevention practices are found in PLN-114-2. Since the BWTS is an inactive system, there is no chance for overfill. The clarifier is an open-top tank containing liquid. The clarifier level indicator will be activated and a non-pressure cover will be built and installed to prevent evaporation by 31 March, 2002.
19	§265.196	Response to leaks or spills and disposition of leaking or unfit-for-use tank systems	Yes	No leaks or spills are known to have occurred from any BWTS component since it was inactivated in 1995. PLN-114-2 contains provisions for cleanup of leaks/spills, including reporting procedures.
20	§265.197	Closure and post-closure care	Yes - VCO	Closure and post-closure requirements will be identified and accomplished as future milestones under the VCO.

VCO Number:	**NEW-PBF-001**
Issue Title:	Hazardous Waste Determination of Equipment and Components in the Power Burst Facility and Storage of Hazardous Waste for Greater than 90 days without a Permit or Interim Status
Citation:	IDAPA 58.01.05.006 [40 CFR 262.11] states in relevant part: *"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."* Idaho Code 39-4408(1) states: *"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specified activity involved or exempted the activity from permit requirements."*
Issue Description:	The equipment and tank systems and/or the contents of the equipment and tank systems listed in the attached table titled "Equipment List" have been determined by DOE to be a solid waste. DOE has not performed a hazardous waste determination on the equipment and components and/or the contents. If, after characterization, it is determined that the equipment and components and/or contents are subject to RCRA, these items are being stored in excess of 90 days without a RCRA Permit or interim status.
Action Summary:	Perform a hazardous waste determination on the equipment and tank systems, and/or the contents of the equipment and tank systems listed in the attached table ("Equipment List"). If any of the items or materials are determined to be useable, they will be moved to Appendix C – Covered Matters that are closed, with an explanation of how the item or equipment is useable. If any of the equipment and tanks systems, or contents of the equipment and tank systems are determined to be hazardous waste, DOE will submit a proposed schedule of further Milestones and a description of any proposed interim actions. Hazardous waste determinations for all forty-four (44) items originally listed in the "Equipment List" table attached to the NEW-PBF-001 Action Plan have been completed and approved by IDEQ. Thirty-eight (38) items were characterized as nonhazardous and moved to Appendix C of the Action Plan (see NEW-PBF-001A in Appendix C). Further actions under the VCO are required for six of the PBF items (see the "Equipment List" table attached).
Interim Actions:	Monthly inspections will be performed for the inactive equipment listed in the attached table ("Equipment List") while being stored within the PBF Building (PER-620). The exception is the lead cave stored in Cubicle 13 (PBF Tracking Number PBF003) since this area has been designated as a high-radiation, radioactive contamination area.

Action:

Action Description	Milestone
Remove any items from the list for which a hazardous waste determination has been performed and submit the revised list.	12/31/00 (Complete and approved on 04/04/01. See NEW-PBF-001A in Appendix C for 13 items removed)
Complete hazardous waste determinations.	03/31/04 (Complete and approved on 09/19/03. See NEW-PBF-001A in Appendix C for 25 items removed)
Submit proposed schedule of further Milestones and description of any interim actions.	12/18/03 (90 days following approval of previous milestone) (Complete and approved on 03/18/04)
Disposition items determined to be hazardous waste in accordance with RCRA regulations.	09/30/04

VCO Issue NEW-PBF-001: Equipment List

Tracking No.	Equipment Description	Location	Equipment ID Number	Action Summary
PBF001	Warm Waste Well Monitor (lead)	Relocated from PER-620 to CPP-1617 (a RCRA-permitted hazardous waste storage facility)		Disposition items determined to be hazardous waste in accordance with RCRA regulations by 09/30/04.
PBF002	Fission Product Detection System (old one w/ lead bricks)	PER 620, 2nd basement		
PBF003	Fission Product Detection System (Cubicle 13—900R)	PER 620, Cubicle 13		
PBF004	Panel Mounted Air Conditioners for Elec. Equip. (Freon)	Relocated from PER-620 to the Excess Warehouse (CF-674) for resale to public		
PBF008	Oil – In Pile Tube Acoustic Filter Pump (~1 gal. Oil)	Relocated from PER-620 to a TAA located at the Central Facilities Area (CFA)		
PBF026	Contents of Sump – Transient Rods Hydraulic Oil (98PBF00174)	Removed from PER-620 and dispositioned as off-specification used oil		

VCO Number: **NEW-TAN-008**

Issue Title: Inadequate Hazardous Waste Determination and Unpermitted Storage at TAN-616 Low-Level Radioactive Waste System

Citation:

39-4408(1)	*"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*
40 CFR 262.11	*"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste...*

Issue Description: The TAN 616 liquid waste treatment system building contains liquid low-level radioactive waste treatment systems that were in operation until 1970. The liquid waste in the tank systems has been determined to have contained F001 (Trichloroethene) and may also exhibit the toxicity characteristic for some volatile organic compounds and heavy metals. Samples and sample waste from previous characterization efforts in 1993 and 1994 have been retained in containers within a TAA in TAN-607 in excess of 90 days. A complete hazardous waste determination has not been performed on the tank systems and the samples.

Action Summary: The list below contains the TAN-616 systems and samples that are addressed by this action. A list is also provided, for clarification purposes, of those components that are being addressed under the FFA/CO. A system identification will be performed for the TAN-616 tanks. A hazardous waste determination will be performed for the identified tank systems and the samples. If DOE determines further action is required, within 90 days of the Department's approval of the final hazardous waste determination, DOE will submit a Milestone deliverable which includes a description of interim actions, if necessary, along with a proposed schedule of further tiered Milestones and associated actions.

TAN 616 systems, vessels, ancillary equipment, and samples addressed under this action plan are:

a) TAN-616 systems, vessels, and ancillary equipment:

Inventory #	Tank #	Description	Comments
98TAN00420	E-1	Condenser	
98TAN00427	V-5	Head Tank	
98TAN00428	V-6	Cyclone Separator	
98TAN00429	V-7	Evaporator	
98TAN00430	V-8	Receiver	
98TAN00421	V-11	Water Tank	The V-11 Tank was characterized as required by the 12/31/02 Milestone and has been moved to Appendix C. See NEW-TAN-008A Action Plan in Appendix C.
98TAN00417	NA	Hold Tank (15 gal)	Located in operating pump room and includes small vacuum pump.

98TAN00414	TAN-1704	Valve Pit #1	
01TAN00001	NA	TAN-607 Decontamination Room Sump	
98TAN00409	NA	TAN-615 East Sump	
98TAN00320	NA	TAN-615 West Sump	The TAN-615 West Sump was characterized as required by the 12/31/02 Milestone and has been moved to Appendix C. See NEW-TAN-008A Action Plan in Appendix C.
		Piping and ancillary equipment from TAN-616 to the PM2A tanks and injection well that are not being managed by CERCLA	
		Ancillary components associated with the liquid waste evaporator system including sumps, piping, and lead shielding	

b) TAN-616 Samples:

Drum 1

WINCO Log#	B&W #	# of Samples	Notes
93-121414	93L-101470	2 sample bottles	Samples were characterized and dispositioned as required by the March 31, 2001 Milestone. See NEW-TAN-008A Action Plan in Appendix C.
93-121414	93L-101476	1 sample bottle	Samples were characterized and dispositioned as required by the March 31, 2001 Milestone. See NEW-TAN-008A Action Plan in Appendix C.
93-121414	93L-101468	1 sample bottle	Samples were characterized and dispositioned as required by the March 31, 2001 Milestone. See NEW-TAN-008A Action Plan in Appendix C.
93-121414	93L-101468 93L-101470 93L-101472 93L-101474 93L-101476	5 sample bottles	Samples were characterized and dispositioned as required by the March 31, 2001 Milestone. See NEW-TAN-008A Action Plan in Appendix C.
93-121414	93L-101468 93L-101470 93L-101472 93L-101474 93L-101476	5 VOA bottles	Samples were characterized and dispositioned as required by the March 31, 2001 Milestone. See NEW-TAN-008A Action Plan in Appendix C.
93-121414	93L-101474	1 sample bottle	Samples were characterized and dispositioned as required by the March 31, 2001 Milestone. See NEW-TAN-008A Action Plan in Appendix C.

Drum 2

WINCO Log#	B&W #	# of Samples	Notes
94-031714	94L-100477	1 sample	Samples were characterized and dispositioned as required by the March 31, 2001 Milestone. See NEW-TAN-008A Action Plan in Appendix C.
94-031714	94L-100478	1 sample	Samples were characterized and dispositioned as required by the March 31, 2001 Milestone. See NEW-TAN-008A Action Plan in Appendix C.
94-031714	94L-100479	1 sample	Samples were characterized and dispositioned as required by the March 31, 2001 Milestone. See NEW-TAN-008A Action Plan in Appendix C.

c) TAN-616 components being managed by CERCLA (and are not part of this action) include:

Inventory #	Tank #	Description	Comments
98TAN00416	1703-1	V-1, Liquid Waste Collection Tank (UST)	WAG 1, TSF-09/18
98TAN00423	1703-2	V-2, Liquid Waste Collection Tank (UST)	WAG 1, TSF-09/18
98TAN00424	1703-3	V-3, Liquid Waste Collection Tank (UST)	WAG 1, TSF-09/18
98TAN00431	1710	V-9, Sand Filter	WAG 1, TSF-09/18
		Ancillary components, including interconnecting piping, from where the lines are cut and capped at valve box 1704 to just outside TAN-616, and surrounding soils on the east side of TAN-616.	WAG 1, TSF-09/18
		Valve Pit # 2 - Removed	WAG 1, TSF-21
98TAN00425	1709	V-4, Liquid Waste Caustic Storage (UST)	WAG 1, TSF-19
	V-13, V-14	PM-2A tanks and contaminated soils in the proximity	WAG 1, TSF-26
		TAN Injection Well	WAG 1, TSF-05
		Contaminated soils surrounding the TAN-616 Building (with the exception of the soils on the east side of the building that are covered by TSF-09/18	New Site Identification Form

Interim Actions:

The process waste piping, pumps, tanks and equipment from TAN-616 pump room, operating pump room and the caustic pump room and the sediments from the pump room sump were removed and managed as RCRA waste prior to implementation of the HWMA/RCRA Closure Plan. The exception to this is small amounts of piping interconnected to the FFA/CO TSF-09/-18 tanks (V-1, V-2, V-3, and V-9) that remain intact in the pump room, which still may be removed ahead of the Closure Plan and will be managed as RCRA waste. In addition, the pump room floor was decontaminated so that the concrete surface was visibly free of waste-related staining and managed as RCRA waste prior to implementation of the RCRA Closure Plan. Verification samples were collected following the decontamination activities. The pump room sump may be decontaminated and the decontamination waste (e.g., scabbled concrete) would be managed as RCRA waste prior to implementation of the RCRA Closure Plan.

An access doorway was cut into the TAN-616 evaporator pit north wall before implementation of the HWMA/RCRA Closure Plan. The removed concrete slabs were stored adjacent to TAN-616 and moved to TAN-653 as closure-generated waste. Provisions of a less than 90-day storage area apply except the following: The 90-day timeframe stipulated in IDAPA 58.01.05.006 [40 CFR 262.34 (a)(1)] will not apply to this waste staged within the demarcated area. Waste will be dispositioned in accordance with the plan for closure-generated waste and final closure certification. As an alternative, the removed concrete slabs may be removed and managed as RCRA waste before implementation of the HWMA/RCRA Closure Plan.

The liquid/sludge waste in the TAN-607 decontamination shop sump (01TAN00001) may be removed and managed as RCRA waste before implementation of the HWMA/RCRA Closure Plan. Removal of the sump pump, associated piping in the sump, and decontamination of the sump and piping inside of the TAN-607 decontamination shop may occur before implementation of the HWMA/RCRA Closure Plan. Removed items will be managed in accordance with the approved hazardous waste determination documentation.

Preliminary decontamination activities in the TAN-616 evaporator pit may be performed and waste managed as RCRA waste before implementation of the HWMA/RCRA Closure Plan. These activities may include: (1) removal of sediment from the evaporator pit floor, (2) removal of sediment from the evaporator pit sump (98TAN00419), (3) removal of sediment from the head tank (V-5, 98TAN00427), (4) removal of lead sheet shielding, and (5) overall decontamination necessary to control and/or lockdown loose radiological contamination in support of performing further closure activities.

Removal of process waste piping, equipment, and tanks in the TAN-616 evaporator pit may be performed before implementation of the HWMA/RCRA Closure Plan. Removed items will be managed in accordance with the approved hazardous waste determination documentation.

Hazardous waste may be stored at the project site as closure-generated waste. Provisions of less than 90-day storage areas will apply except the following: The 90-day timeframe stipulated in IDAPA 58.01.05.006 [40 CFR 262.34 (a)(1)] will not apply to this waste staged within the demarcated area. Waste will be dispositioned in accordance with the plan for closure generated waste and final closure certification. Waste may be managed as RCRA waste before implementation of the HWMA/RCRA Closure Plan.

Action:

Action Description	Milestone
Complete a hazardous waste determination and disposition the samples identified above as item b).	03/31/01 (Complete and approved on 02/13/01)
Complete a system identification for the portions of TAN-616 not managed under the FFA/CO and uniquely identify components addressed under this action plan.	03/31/01 (Complete and approved on 07/30/01)
Complete a hazardous waste determination for the systems identified above as item a).	12/31/02 (Complete and approved on 12/23/02)
Submit proposed schedule for further Milestones and description of any interim actions.	03/23/03 (90 days following approval of previous Milestone) (Complete and approved on 03/05/03)
Submit RCRA Closure Plan and schedule for Department review and DOE revision.	03/31/03 (Complete and approved on 04/21/03)
Submit Final RCRA Closure Plan for Department review and approval.	09/30/03 (Complete and approved on 03/08/04)
Evaluate buried piping outside of TAN Building footprints as identified in the approved characterization documentation and submit a report documenting findings.	03/31/06
Submit proposed schedule for further Milestones and description of any interim actions if necessary for buried piping.	90 days following approval of previous Milestone

VCO Number: **SITE-TANK-005**

Issue Title: Tanks and/or Components That Require a Hazardous Waste Determination or Verification of Empty and Storage of Hazardous Waste for Greater than 90 days Without a Permit or Interim Status

Citation:

IDAPA 58.01.05.006 [40 CFR 262.11] states in relevant part:

"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."

Idaho Code 39-4408 (1) states:

"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements.

Issue Description: Table "SITE-TANK-005: Tanks Requiring Hazardous Waste Determinations or Verification of Empty" includes a list of active waste tanks, inactive waste tanks and inactive process/product tanks. The tanks may be empty, but DOE has not verified the tanks are empty. If the tanks contain waste, DOE has not determined if the waste is hazardous or non-hazardous.

If, after characterization, it is determined that a tank or tank system contains or contained hazardous waste subject to RCRA requirements, those tanks or tank system have stored hazardous waste for greater than 90 days without a RCRA Permit or interim status.

Action Summary: To effectively manage the activities required under this action plan, DOE shall organize the tanks into systems. The proposed systems shall be submitted to the Department for review and approval. DOE shall complete hazardous waste determinations for the tank systems or verify the tanks are empty within specific systems. DOE shall prioritize these actions based on the following top three priorities for completion of the waste determination and/or verification of empty:

1. Tank systems containing residue that would pose a potential high risk to human health or the environment. As these tank systems are identified, actions shall be taken to minimize the risk to human health and the environment;
2. Active hazardous waste tank systems that will be permitted; and
3. Identification of Solid Waste Management Units that may need to be addressed in the Federal Facility Agreement/Consent Order.

DOE shall submit the hazardous waste determinations or verification of empty for the tank systems to the Department for review and approval in accordance with the Milestones listed in this action plan. If the tank system is not empty and is determined to contain non-hazardous waste, DOE shall evaluate whether the tank system has a potential for release to the environment and shall include this evaluation with the hazardous waste determination.

Following the approval of the hazardous waste determination:

1. If the tank system is determined to contain non-hazardous waste and:
   - A. If the potential for release is low, no further action will be required pursuant to this Consent Order and the tank system will be moved to Appendix C – Covered Matters that are Closed, or
   - B. If the tank system does have a potential for release to the environment, DOE shall evaluate the results from the hazardous waste determination performed above to determine if the tank system contains hazardous waste constituents as listed in Part 261 Appendix VIII and should be recommended for inclusion in the Federal Facility Agreement/Consent Order, or;
2. If a tank system is determined to contain hazardous waste, DOE shall:
   - A. Submit a description of proposed interim actions; and
   - B. Submit a proposed schedule of further milestones.

Following the approval of a verification of empty determination:

1. For inactive process/product tanks systems, no further action will be required pursuant to this Consent Order and the tank system will be moved to Appendix C – Covered Matters that are Closed.
2. For inactive hazardous waste tank systems, DOE shall submit a proposed schedule for further Milestones and a list of proposed interim actions to the Department for review and approval. The proposed interim actions should address preventing the entrance of waste, product, precipitation or material into the tank; or
3. For inactive non-hazardous waste tank systems, no further action will be required pursuant to this Consent Order and the tank system will be moved to Appendix C – Covered Matters that are Closed.

Interim Actions: See Appendix E

Action:

Action Description	Milestone
Complete system identification for all tanks and/or components on the attached table. Mark each tank or component with the unique identifier listed in SITE-TANK-005, except where worker safety issues prevent such action. Submit this information to the Department for review and approval pursuant to Section 9.5 of the Consent Order.	03/31/01 (Complete and approved on 03/25/02)
Perform hazardous waste/empty determinations on 5% of the tanks. For tanks determined to be empty, state whether the tanks were process/product tanks, non-hazardous waste tank or a hazardous waste tank.	09/30/01 (Complete and approved on 03/25/02)
For hazardous waste tank systems identified in the previous milestone, submit a proposed schedule for further milestones and a description of proposed interim actions. (See Table "SITE-TANK-005 Further Milestones.")	90 days following approval of previous milestone (N/A – No further VCO actions were identified)
Perform hazardous waste/empty determinations on 15% of the tanks. For tanks determined to be empty, state whether the tanks were process/product tanks, non-hazardous waste tanks or hazardous waste tanks.	09/30/02 (Complete and approved on 03/25/02)
For hazardous waste tank systems identified in the previous Milestone, submit a proposed schedule for further Milestones and a description of proposed interim actions. (See Table "SITE-TANK-005 Further Milestones.")	90 days following approval of previous milestone (N/A – No further VCO actions were identified)
Perform hazardous waste/empty determinations on 30% of the tanks. For tanks determined to be empty, state whether the tanks were process/product tanks, non-hazardous waste tanks or hazardous waste tanks.	09/30/03 (Complete and approved on 09/23/02)
For hazardous waste tank systems identified in the previous milestone, submit a proposed schedule for further milestones and a description of proposed interim actions. (See Table "SITE-TANK-005 Further Milestones:")	12/22/02 (90 days following approval of previous milestone) (Complete and approved on 01/27/03)

Perform hazardous waste/empty determinations on 50% of the tanks. For tanks determined to be empty, state whether the tanks were process/product tanks, non-hazardous waste tanks or hazardous waste tanks.	09/30/04 (Complete and approved on 05/19/03)
For hazardous waste tank systems identified in the previous milestone, submit a proposed schedule for further milestones and a description of proposed interim actions. (See Table "SITE-TANK-005 Further Milestones:")	08/17/03 (90 days following approval of previous milestone) (Complete and approved on 11/24/03)
Perform hazardous waste/empty determinations on 75% of the tanks. For tanks determined to be empty, state whether the tanks were process/product tanks, non-hazardous waste tanks or hazardous waste tanks.	09/30/05 (Complete)
For hazardous waste tank systems identified in the previous milestone, submit a proposed schedule for further milestones and a description of proposed interim actions. (See Table "SITE-TANK-005 Further Milestones.")	90 days following approval of previous milestone
Perform hazardous waste/empty determinations on 100% of the tanks. For tanks determined to be empty, state whether the tanks were process/product tanks, non-hazardous waste tanks or hazardous waste tanks.	09/30/06
For hazardous waste tank systems identified in the previous milestone, submit a proposed schedule for further milestones and a description of proposed interim actions. (See Table "SITE-TANK-005 Further Milestones.")	90 days following approval of previous milestone

Method for calculating tank completion percentages.

The number of tanks included on the SITE-TANK-005 list was 714 when the Consent Order was signed on June 14, 2000. The original tank quantity of 714 will be used as a basis to calculate the completion percentages. The last milestone of 100% will be met with all remaining tanks. With 714 original tanks as a baseline, the following quantities will be submitted:

Milestone %	Tanks Submitted to Meet Milestone	Running Total of Tanks
5%	36	36
15%	71	107
30%	107	214
50%	143	357
75%	178	535
100%	All Remaining Tanks	Total Tanks on SITE-TANK-005 List

VCO Issue SITE-TANK-005: Further Milestones

System ID #	System Title	Action Summary	Action Description	Milestone
INTEC-049	INTEC Process Equipment Waste Evaporator Condensate System	The characterization information for the tanks in this system was transmitted to IDEQ in an INEEL letter dated January 23, 2003. The IDEQ approved the characterization document (EDF-1614, Revision 0) on February 28, 2003. The INEEL discovered an error in the characterization document and transmitted a new revision (EDF-1614, Revision 1) to IDEQ in an INEEL letter dated April 28, 2003. The IDEQ provided comments on the revised characterization document. INEEL and IDEQ concurred on the comment resolution for the characterization EDF and the INEEL again resubmitted a new revision (EDF-1614, Revision 2) to IDEQ in an INEEL letter dated June 23, 2003. All five of the tanks/units (VES-WL-123, VES-WL-124, SU-WL-145, SU-WL-146, and HE-WL-302), including associated piping, were designated as RCRA hazardous waste units. However, it was determined that three of the tanks/units (SU-WL-145, SU-WL-146, and HE-WL-302) are operated in compliance with the interim statues requirements for tank systems (40 CFR 265 Subpart J) and will be permitted as part of the INTEC Liquid Waste Management System (HWMA/RCRA Part B Permit Application Volume 14). Therefore, these three tanks/units (SU-WL-145, SU-WL-146, and HE-WL-302) were moved to Appendix C of the VCO Action Plan (see SITE-TANK-005A). Tanks VES-WL-123, VES-WL-124, and associated ancillary piping will be RCRA closed. The next VCO action is the submittal of a RCRA Closure Plan and schedule for IDEQ review and DOE revision.	Submit a RCRA Closure Plan and schedule for IDEQ review and DOE revision. Submit Final RCRA Closure Plan for Department review and approval.	12/31/03 (Complete and approved on 11/21/03) 03/31/04 (Complete)
INTEC-055	INTEC Rare Gas Plant North Gas Cell System	The characterization information for the tanks in this system was transmitted to IDEQ in an INEEL letter dated November 22, 2002. The IDEQ provided comments on the characterization document and the INEEL revised the document and resubmitted it on April 15, 2003. The IDEQ approved the revised document (EDF-2624, Revision 1) on April 24, 2003. VCO SITE-TANK-005 tank system INTEC-055 is comprised of twelve tanks/units. Three of the INTEC-055 tanks/units were verified empty (HE-WN-322, VES-WN-168, and VES-WN-169). Six of the INTEC-055 tanks/units were determined to be nonhazardous per RCRA regulations (VES-WN-100, VES-WN-101, VES-WN-107, VES-WN-108, VES-WN-109, and VES-WN-110). All nine of these tanks/units were moved to Appendix C of the VCO Action Plan (see SITE-TANK-005A). Tanks VES-WN-102, VES-WN-103, and VES-WN-125, and associated ancillary piping will be RCRA closed. The next VCO action is the submittal of a RCRA Closure Plan and schedule for IDEQ review and DOE revision.	Submit a RCRA Closure Plan and schedule for IDEQ review and DOE revision.	12/31/08

VCO Issue SITE-TANK-005: Further Milestones

System ID #	System Title	Action Summary	Action Description	Milestone
INTEC-077	INTEC CPP-603 Old Ion Exchange System	The characterization information for the tanks in this system was transmitted to IDEQ in an INEEL letter dated June 20, 2002. The IDEQ provided comments on the characterization document and the INEEL revised the document and resubmitted it on August 26, 2002. The IDEQ approved the revised document (EDF-2619, Revision 1) on September 13, 2002. The ion exchange vessels (VES-SF-101 and VES-SF-102) were designated as RCRA hazardous waste units. The ion exchange vessels were used in conjunction with the CPP-603 Basin Water Treatment System (BWTS) that is covered under the VCO Action Plan NEW-CPP-016. The next enforceable milestone under NEW-CPP-016 is to submit the RCRA Closure Plan for the CPP-603 BWTS (due June 30, 2003). The plan is to close the INTEC-077 tanks at the same time as the CPP-603 BWTS. Therefore, a separate closure plan for the INTEC CPP-603 Old Ion Exchange System will not be submitted and closure will be addressed as part of the CPP-603 BWTS.	Closure of VES-SF-101 and VES-SF-102 will be included in the CPP-603 BWTS RCRA Closure Plan.	A separate milestone will not be developed. RCRA closure of this system to be included with the NEW-CPP-016 milestone date for submittal of the RCRA Closure Plan on 06/30/03.
INTEC-078	INTEC CPP-603 Reverse Osmosis and Acid Regenerant System	The characterization information for the tanks in this system was transmitted to IDEQ in an INEEL letter dated June 20, 2002. The IDEQ approved the characterization document (EDF-2620, Revision 0) on July 24, 2002. The reverse osmosis acid feed tank (VES-SF-140) and the portable acid tank (VES-SF-133) were designated as RCRA hazardous waste units. On January 23, 2002, the contents of the two tanks were removed and managed as hazardous waste. The contents were shipped March 12, 2002, to ONYX Environmental Services, L.L.C. in Henderson, Colorado, for treatment and disposal. These acid tanks were used in conjunction with the CPP-603 Basin Water Treatment System (BWTS) that is covered under the VCO Action Plan NEW-CPP-016. The next enforceable milestone under NEW-CPP-016 is to submit the RCRA Closure Plan for the CPP-603 BWTS (due June 30, 2003). The plan is to close the INTEC-078 tanks at the same time as the CPP-603 BWTS. Therefore, a separate closure plan for the INTEC CPP-603 Reverse Osmosis and Acid Regenerant System will not be submitted and closure will be addressed as part of the CPP-603 BWTS.	Closure of VES-SF-140 and VES-SF-133 will be included in the CPP-603 BWTS RCRA Closure Plan.	A separate milestone will not be developed. RCRA closure of this system to be included with the NEW-CPP-016 milestone date for submittal of the RCRA Closure Plan on 06/30/03.

VCO Issue SITE-TANK-005: Further Milestones

System ID #	System Title	Action Summary	Action Description	Milestone
INTEC-080	INTEC Tank Farm Auxiliary High-Level Waste Tank System	The characterization information for the tanks in this system was transmitted to IDEQ in an INEEL letter dated June 20, 2002. The IDEQ provided comments on the characterization document and the INEEL revised the document and resubmitted it on September 5, 2002. The IDEQ approved the revised document (EDF-2614, Revision 1) on September 18, 2002. Three of the four 30,000-gallon tanks (VES-WM-103, VES-WM-104, and VES-WM-105), which include associated outlet piping and ancillary equipment (HE-WM-303, HE-WM-304, HE-WM-305), were designated as RCRA hazardous waste units. The fourth tank (VES-WM-106) did not receive any RCRA waste and has been determined to be nonhazardous per RCRA regulations and has been moved to Appendix C of the VCO. Following approval of the characterization document by IDEQ, each of the 30,000-gallon tanks was emptied to the maximum extent possible using existing transfer equipment. Tanks VES-WM-103, VES-WM-104, and VES-WM-105 and ancillary piping will be RCRA closed as part of the Tank Farm Facility closure. The next VCO action is the submittal of a RCRA Closure Plan and schedule for IDEQ review and DOE revision.	Submit a RCRA Closure Plan and schedule for IDEQ review and DOE revision.	09/30/07
INTEC-601	Units with Verification of Empty or Hazardous Waste Determination Completed March 26, 2001	The characterization information for the tanks in this system was transmitted to IDEQ in the document titled *Combined System Identification and Characterization for the Uranium Dissolution and Extraction Process at the Idaho Nuclear Technology and Engineering Center (*INEEL/EXT-01-00225). The IDEQ provided comments on the document and the INEEL revised the document and resubmitted it on February 7, 2002. The IDEQ approved the revised document on March 21, 2002. The *Combined System Identification and Characterization for the Uranium Dissolution and Extraction Process at the Idaho Nuclear Technology and Engineering Center* specifically identifies 22 units from which raffinate or decontamination/flushing solutions were transferred to the Tank Farm Facility (TFF). Although the 22 units were verified as empty process tanks and moved to Appendix C of the VCO, the piping, valves, and pumps used to collect or transfer solution to the TFF from these 22 units managed hazardous waste and require further actions. The decision on how to complete the HWMA/RCRA closure of piping, valves, and pumps used to collect or transfer solution to the TFF from the fuel dissolution and extraction process has not been finalized. Therefore, a detailed Engineering Design File (EDF) will be developed that documents and describes the lines that transferred raffinate or decontamination/flushing solutions to the TFF. Ninety days following IDEQ approval of the detailed EDF, the INEEL will submit a proposed schedule for further milestones.	Submit a detailed EDF that documents and describes the lines that transferred raffinate or decontamination and flushing solutions to the TFF. Submit a proposed schedule for further milestones.	09/30/03 (Complete and approved on 12/01/03) 02/29/04 (90 days following approval of previous milestone) (Complete and approved on 03/22/04)

VCO Issue SITE-TANK-005: Further Milestones

System ID #	System Title	Action Summary	Action Description	Milestone
INTEC-601 (continued)		A detailed EDF was developed that documents and describes the lines that transferred raffinate or decontamination/flushing solutions to the TFF. EDF-4046, "Voluntary Consent Order SITE-TANK-005 Tank System INTEC-601 – Waste Transfer Lines From CPP-601 to the Tank Farm Facility," was submitted to IDEQ for review and approval. The IDEQ approved the detailed EDF in a letter dated November 26, 2003.		
		As indicated above, 90 days following IDEQ approval of the detailed EDF, the DOE must submit a schedule for further milestones for VCO Tank System INTEC-601. The further milestone is to submit a HWMA/RCRA closure plan for waste discharge piping from CPP-601 to the TFF, and a schedule for Department review and DOE revision by March 31, 2008.	Submit a RCRA Closure Plan and schedule for IDEQ review and DOE revision.	03/31/08
TAN-020	HTRE Mercury Contamination Sump System at LOFT	The Tanks in this system were characterized under the May 6, 1999 Notice of Violation Consent Order. The characterization information was transmitted to IDEQ in an INEEL letter dated September 27, 2001. The September 27, 2001 letter contained a schematic that identified the tank system that requires RCRA closure. The IDEQ approved the hazardous waste determination in a letter dated January 29, 2002 and required that further actions for this system be addressed under the VCO. In the January 31, 2002 VCO conference call, the DOE and the IDEQ agreed to address further action for this system under the VCO. The next VCO actions are the submittal of a description of proposed interim actions and then the submittal of a RCRA Closure Plan and schedule for IDEQ review and DOE revision for the HTRE Mercury Contamination Sump System at LOFT.	Submit a description of proposed interim actions Submit closure plan and schedule for Department review and DOE revision	04/29/02 (Complete and approved 06/12/02) 03/31/05 (Complete and approved on 01/12/04)
		INEEL notified IDEQ of its intent to extend the timeframe for responding to IDEQ comments on the HWMA/RCRA closure documents by 30 days. Per Section 9.6 of the VCO Action Plan, this 30-day extension automatically resulted in an equivalent extension of the associated milestone. In the notification letter (D. L. Wessman letter to D. M. Gregory, April 6, 2004), INEEL also requested the milestone date be established at the end of the next quarter (September 30, 2004).	Submit Final RCRA Closure Plan for Department review and approval	07/30/04

VCO Issue SITE-TANK-005: Further Milestones

System ID #	System Title	Action Summary	Action Description	Milestone
TAN-030	TAN/TSF Fire Station Wastewater System	The characterization information for the tanks in this system was transmitted to IDEQ in an INEEL letter dated October 1, 2002. The IDEQ provided comments on the characterization document and the INEEL revised the document and resubmitted it on January 28, 2003. The IDEQ approved the revised document (EDF-1496, Revision 1) on February 27, 2003. The TAN/TSF Fire Station Wastewater System (TAN-030) is designed to release wastewater to the environment. A review of the analytical data associated with this tank system revealed that 40 CFR 261 Appendix VIII constituents are present. Per the VCO Action Plan, this tank system should be addressed under the Federal Facility Agreement/Consent Order (FFA/CO). The next VCO action is the submittal of the New Site Identification Form (NSIF). IINEEL submitted the NSIF to the EPA and the IDEQ for review and approval. Upon approval of the NSIF by the agencies, this tank system will be moved to Appendix C.	Submit a New Site Identification Form (NSIF)	09/30/03 (Complete and approved on 12/15/03)
TAN-031	TAN/TSF Demineralized Water System	The characterization information for the tanks in this system was transmitted to IDEQ in an INEEL letter dated October 1, 2002. The IDEQ approved the characterization document (EDF-2140, Revision 0) on November 26, 2002. VCO SITE-TANK-005 Tank System TAN-031 is comprised of seven tanks/units. Five of the TAN-031 tanks/units (elementary neutralization tank, U-5, U-10, U-9, and U-6) were determined to be nonhazardous per RCRA regulations and subsequently moved to Appendix C of the VCO Action Plan (see SITE-TANK-005A). The caustic bed deionizer (98TAN00354), the acid bed deionizer (98TAN00355), and associated ancillary piping will be RCRA closed. The next VCO action is the submittal of a RCRA Closure Plan and schedule for IDEQ review and DOE revision.	Submit a RCRA Closure Plan and schedule for IDEQ review and DOE revision. Submit Final RCRA Closure Plan for Department review and approval.	09/30/03 (Complete and approved on 11/06/03) 03/30/04 (Complete and approved on 12/18/03)

Click here to view SITE-TANK-005 List of tanks.

VCO Number:	**VCO-5.8.d**
Issue Title:	Storage of Hazardous Waste for Greater than 90 days Without a Permit or Interim Status and Inadequate Waste Determination on Contents of Tanks at TRA 630
Citation:	IDAPA 58.01.05.006 [40 CFR 262.11] states in relevant part: *"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."* Idaho Code 39-4408 (1) states: *"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*
Issue Description:	The TRA-730 Catch Tank System (CTS) includes: incoming drain lines from TRA laboratories and other operational facilities; discharge lines; a pump vault; a tank vault; and four (4) tanks identified as TRA-730-1, 730-2, 730-3, and 730-4 (tank inventory numbers 98TRA00468, 00470, 00472, and 00474). Tanks TRA-730-1 and 730-2 received liquid waste from the TRA-632 hot cells. Tank systems 730-3 and 730-4 received waste from the labs and other facilities. Analytical work was first completed in 1996 and additional analytical work was completed in 1999. The 1999 effort determined that there were multiple phases of waste in tanks 730-1, 730-2 and 730-3. Each of these tanks contains a liquid phase, a flocculent solids phase, and a hard packed solid heel. TRA-730-4 was found to only contain liquid phase waste. No current analytical data is available for the heels in 730-1, 730-2 and 730-3. However, based on available characterization information, the tanks have been determined to contain regulated concentrations as follows: TRA-730-1 Lead; TRA-730-2 Chromium and Lead; TRA-730-3 Chromium, Lead, and Mercury; and TRA-730-4 Cadmium and Mercury. The TRA-730 tank system has not received interim status, a RCRA permit, variance or exemption for storing hazardous waste.
Action Summary:	Submit a closure plan and schedule for DEQ review and DOE revision for the TRA-730 tank system. The development of the closure plan is contingent on the ability to sample the solid heels in 730-1, 730-2 and 730-3. If, due to radiological considerations sampling of the heels is impacted, the Milestone for submittal of the closure plan may need to be renegotiated. The INEEL notified IDEQ that unexpected events during the TRA-730 closure activities will delay the achievement of the May 29, 2005, final milestone (D. L. Wessman letter to D. M. Gregory, February 4, 2004). A meeting was held on February 12, 2004, between the INEEL and IDEQ, at which it was agreed that a revised closure plan would be submitted on May 7, 2004. At this time a revised Action Plan will also be submitted that identifies a further milestone for portions of the TRA-730 tank system that will not be included in the revised closure boundaries.
Interim Actions:	See attached matrix “TRA-730 Catch Tank System Compliance with 40 CFR 265 Interim Status Requirements”. The liquids and solids in TRA-730-1, TRA-730-2, TRA-730-3 and TRA-730-4 may be removed and managed as RCRA waste prior to implementation of the RCRA Closure Plan.

Action:

Action Description	Milestone
Submit closure plan and schedule for Department review and DOE revision.	12/31/00 (Complete and approved on 01/04/01)
Submit RCRA Closure Plan for Department review and approval	09/30/01 (Complete and approved on 01/03/02)
Complete RCRA Closure and Certification	05/29/05

VCO-5.8.d: TRA-730 Catch Tank System (CTS) Compliance with 40 CFR 265 Interim Status Requirements

The following acronym is used throughout this table and is referenced here for clarity.

VCO Voluntary Consent Order is used to identify a requirement that is applicable to the CTS, but which TRA is unable to comply with because of the age or configuration of the CTS. Where DOE is seeking regulatory relief from a cited requirement through the VCO, this position will be noted by the use of the VCO acronym.

Number	Citation	Subject	In Compliance?	Comments/Interim Actions
1	265.13	Waste Analysis	Yes	Liquid phase wastes in the CTS tanks were sampled in 1-99, SAP # WGS-086-98. Tank heels and all other unique waste streams from the CTS will be analytically characterized and a hazardous waste determination completed prior to removal and treatment.
2	265.14	Security	Yes	INEEL security personnel control access to the TRA through the gate house, TRA-658. No unauthorized personnel are allowed to enter the facility area bounded by the TRA fence. The door to the TRA-630 building is locked and posted. The structure covering the manhole to the CTS tank vault is properly posted.
3	265.14(c)	Security postings	Yes	Access control signs are posted on the door to the barn located over the manhole access to the TRA-730 CTS tank vault and on the door to TRA-630, access to the TRA-730 CTS pump vault. Signs read, “Danger - Unauthorized Personnel Keep Out", and are legible from 25 feet.
4	265.15	Inspections	Yes	Qualified personnel perform daily inspections of the tank vault and tanks. The results of those daily inspections are recorded on log sheets. Tank level readings are taken along with a visual inspection of the tank vault using a remote video camera and monitor in the TRA-630 building.
5	265.16	Training.	Yes	INEEL and TRA specific training requirements have been identified for facility personnel and are formalized in the current revision of the “Catch Tank Training Requirements Matrix”.
6	265.30 265.31	Owners/operators of hazardous waste facilities must maintain and operate them to minimize the possibility of releases.	Yes	The waste managed in the TRA-730 CTS is radioactive wastewater, with RCRA metals in excess of regulatory limits. The tanks are isolated, contained in a tank vault & pumps are shut down & administratively controlled.
7	265.32	Facility communications or alarm systems & emergency response equipment	Yes	TRA procedures for emergency notification and communication are explained in the “INEEL Emergency Plan / RCRA Contingency Plan”.

VCO-5.8.d: TRA-730 Catch Tank System (CTS) Compliance with 40 CFR 265 Interim Status Requirements

Number	Citation	Subject	In Compliance?	Comments/Interim Actions
8	265.33	Facility communications / alarm systems, fire protection equipment, & spill control equipment	Yes	Emergency equipment specified for this facility is properly maintained and tested.
9	265.34	Access to communications or alarm system	Yes	Qualified personnel carry a two-way radio during the normal round of inspections. This allows continuous communication with the Shift Supervisor (SS).
10	265.35	Emergency access and aisle space	NO – VCO	This requirement cannot be met. Because of the age of the system and its configuration, both the tank vault and pump vault are confined spaces with severe restrictions to and obstruction of access for emergency response. Along with the physical limitations, high radiation fields prevent a typical emergency response to an incident or event. Planning for all activities in either of the vaults will take into consideration the fact that the vaults are confined space without normal emergency access.
11	265.37	Arrangements with local authorities.	Yes	This requirement is satisfied by the "INEEL Emergency Plan / RCRA Contingency Plan".
12	265.50	Contingency plan & emergency procedures	Yes	These requirements are satisfied by the "INEEL Emergency Plan / RCRA Contingency Plan".
13	265.70 265.73	Operating record.	Yes	An "Operating Record" has been established for the TRA-730 CTS.
14	265.190 265.191	Requirements for hazardous waste tank systems and evaluation of components.	Yes	An Engineering Design File (EDF), serial # TRA-ATR-1269 was completed to verify condition of the TRA-730 CTS.
15	265.193	Requirements for secondary containment of HW tank systems.	Tanks, Yes Ancillary Equipment, NO – VCO	VCO – Secondary containment is not provided for all of the ancillary equipment. Improvements to the secondary containment system will not be implemented or otherwise addressed for the CTS as DOE has agreed to stop the operation of the system and close it according to an approved closure plan.
16	265.194	General operating requirements for compatibility of waste with system, prevention of spills and response to leaks or spills.	Yes	All drain lines have been removed from service so that the only addition of wastewater to the tanks is from pumping of the vault sump to the CTS tanks. Tank level information is recorded daily and the tank vault is inspected daily to confirm there is no leakage from the CTS. Overfilling of the tanks is not possible under the present conditions that are administratively controlled.

VCO-5.8.d: TRA-730 Catch Tank System (CTS) Compliance with 40 CFR 265 Interim Status Requirements

Number	Citation	Subject	In Compliance?	Comments/Interim Actions
17	265.195	Owner operator requirements for tank system daily inspections.	Yes	Qualified personnel perform daily inspections of the tank vault and tanks. The results of those daily inspections are recorded on log sheets. Tank level readings are taken along with a visual inspection of the tank vault using a remote video camera and monitor in the TRA-630 building.
18	Subpart G and 265.197	Closure and post-closure care requirements.	Yes – VCO	VCO – The CTS is being managed under a VCO negotiated between the DEQ and DOE. A requirement of this enforceable agreement is to submit a formal Closure Plan for the CTS with the clear implication that DOE will then implement the closure plan as approved by DEQ.
19	265.1080	Air emission standards for tanks, surface impoundments and containers	NO – VCO	VCO – An air emissions control system will not be installed or otherwise addressed for the CTS as DOE has agreed to stop the operation of the system and close it according to an approved closure plan. DOE has stopped adding waste to the tank, the tanks are properly vented through the MTR stack, and they exclusively hold mixed hazardous wastes.

Appendix C

Description of Covered Matters that are Closed

Appendix C: Description of Covered Matters that are Closed

VCO Number:	**CPP-666-F-3**
Issue Title:	Visual Inspection Through Window at INTEC FDP Cell
Citation:	40 CFR 265.174 *"Inspections – The owner or operator must inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion or other factors."*
Issue Description:	The high-efficiency particulate air (HEPA) filters currently stored in the mixed waste cell do not meet the inspection requirements found in 40 CFR 265.174. This is due to the fact that the containers emit an extremely high radiation field and can only be inspected from a cell window. When looking through the cell window, the condition of the container cannot fully be determined because only the tops of the drums can be seen.
Closure Date:	The effective date of this Consent Order.
Closure:	The documentation to conduct visual inspections from the FDP cell shielded windows (or other means) is contained in two documents: (1) the RCRA Interim Status Document for CPP-666 FDP Cell Container Storage and (2) the RCRA Part B Permit Application for the Idaho National Engineering and Environmental Laboratory, Volume 18, Idaho Nuclear Technology and Engineering Center. This issue was discussed in meetings on August 4 and 5, 1998. DEQ agreed with INEEL's request that inspection in this area can occur by looking through the cell shielded windows.

Appendix C: Description of Covered Matters that are Closed

VCO Number: **NEW-CPP-016A**

Issue Title: Inadequate Hazardous Waste Determination on Tanks at CPP-603

Citation:

IDAPA 58.01.05.006 [40 CFR 262.11] states in relevant part:

"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."

Issue Description: The tanks addressed in this Action Plan consist of sand filters, filter wash water holding tank, clarifier, demineralizer resin beds and an acid regeneration tank at CPP-603. The tank system is part of a water treatment system for the underwater-spent nuclear fuel storage basin in CPP-603. The treatment system has not operated since May 1995 and will not be used in the future. Tank system components are identified as follows:

98CPP00610	F-SF-113	Multi-Media Sand Filter
98CPP00611	F-SF-114	Multi-Media Sand Filter
98CPP00612	F-SF-115	Multi-Media Sand Filter
98CPP00619	VES-SF-108	Filter Backwash Holding Tank
98CPP00620	VES-SF-109	Collection Tank, Clarifier Vessel
98CPP00631	VES-SF-130	Acid Regeneration Makeup Tank
98CPP00632	VES-SF-131	Duolite C-464 Resin Tank
98CPP00633	VES-SF-132	Zeolon 900 Resin Tank

Action Summary: DOE will perform a system identification and will mark each tank with a unique identifier number. The tanks will be sampled and a hazardous waste determination will be performed. If, due to radiological considerations, sampling cannot be performed, a hazardous waste determination may be performed based on process knowledge or the Milestone may need to be renegotiated. If the tank system is determined to contain hazardous waste, DOE will submit a proposed schedule of further milestones and a description of any proposed interim actions.

In 2001 the DOE transmitted the hazardous waste determination milestone for the system components that comprise the NEW-CPP-016 Action Plan. The Department approved the characterization milestone in a letter dated June 15, 2001. Per the hazardous waste determination milestone, the Zeolon 900 Resin Tank (VES-SF-132; 98CPP00633) was approved for movement to Appendix C of the VCO Action Plan since this unit was characterized as nonhazardous. The other seven components (F-SF-113, 98CPP00610; F-SF-114, 98CPP00611; F-SF-115, 98CPP00612; VES-SF-108, 98CPP00619; VES-SF-109, 98CPP00620; VES-SF-130, 98CPP00631; VES-SF-131, 98CPP00632) were determined to be subject to RCRA regulations and further VCO milestones will be established to address these units.

Closure Date: June 15, 2001 (for the Zeolon 900 Resin Tank – 98CPP00633)

Closure: DOE completed a hazardous waste determination for the Zeolon 900 Resin Tank (VES-SF-132; 98CPP00633) and submitted the milestone deliverable documentation (EDF-2621) in a letter dated June 11, 2001. The Department reviewed the documentation and approved the milestone deliverable in a letter dated June 15, 2001.

Appendix C: Description of Covered Matters that are Closed

VCO Number: **NEW-CPP-020A**

Issue Title: Unpermitted Storage of Calcine and Calcine Handling Tools at NWCF

Citation: 39-4408(1) *"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*

Issue Description: There is approximately 6 kg of calcine stored in a shielded box in CPP-659 Decon Cubicle #2 and five casks and one waste box containing tools or sampling tubes and residual calcine stored on top of the hatch covers in the decon area of CPP-659. The calcine has been in Decon Cubicle #2 since 1993 and the waste box and casks have been on top of the hatch covers since 1989. The calcine and tools are mixed waste and the top of the hatch covers and the Decon Cubicle #2 are not RCRA permitted or interim status mixed waste storage facilities.

Action Summary: DOE shall submit a list of proposed interim actions to the Department.

The calcine samples currently stored in Decon Cubicle #2 will be transferred to CPP-601 D-Cell, an interim status storage facility.

Within 18 months of receiving a permit to operate debris treatment, the material in the waste box and the five casks at CPP-659 will be dispositioned as appropriate. Items will be processed through debris treatment if feasible. Items that cannot feasibly be debris treated will be transferred to an interim status or RCRA permitted mixed waste storage facility. After the tools or samples have been removed, casks that do not have an identified current or future use will be disposed of as empty containers (low level waste) or transferred to an interim status or RCRA permitted mixed waste storage facility. Any recoverable calcine from the casks will be dissolved and sent to the tank farm or transferred to an interim status or RCRA permitted storage facility.

During 2001, the casks were open and inspected. Sampling tubes found in the casks were removed and placed in a portable decon sink in the decontamination cell in CPP-659. The calcine in the shielded box was placed in one of the casks and the cask and the calcine were moved to CPP-601 D-Cell. During inspection of the casks it was discovered that one contained calcine. The additional calcine was placed in one of the empty casks and moved to CPP-601 D-Cell. The other three casks were declared empty containers and will be managed as low-level waste or reused.

The waste box believed to contain calcine tools or sampling tubes actually contained a coupling wrench used for the retrieval of calcine samples. Since the coupling wrench could not be successfully debris-treated, it was repackaged and scheduled for shipment to Envirocare of Utah for macroencapsulation and disposal. The Department of Energy issued a standing order to terminate all off-Site shipment of radioactive waste as part of the security measures for the war in Iraq. Until off-Site shipments can be resumed, the coupling wrench will be stored in RCRA permitted storage. The sampling tubes are being stored in CPP-1617, a RCRA permitted storage facility, while treatment options are being evaluated.

Closure Date: May 16, 2003

Closure Description:

This first milestone in the NEW-CPP-020 action plan was to submit to the Department for review and approval a list of proposed interim actions for items specified in the action plan. This milestone was approved by the Department on June 30, 2000.

The 6 kg of calcine stored inside the shielded box were samples stored in seven canisters. The VCO milestone was to transfer the calcine samples from CPP-659 Decon Cubicle #2 to CPP-601 D-cell, an interim status mixed waste storage facility. The seven canisters were removed from the shielded box and placed into a cask. The cask containing the calcine samples was transported to CPP-601 D-cell and the milestone completion documentation was approved by the Department on February 16, 2001.

The remaining casks were opened and remotely inspected. The inspections revealed that one of the casks contained two paint cans partially filled with calcine. The partially filled paint cans were placed into a cask and also transferred into interim status storage (September 6, 2001 Conference Call Meeting Minutes). The remaining three casks contained five calcine sampling tubes. The sampling tubes were removed and placed in a portable decon sink in the decontamination cell in CPP-659. The casks were classified as empty in accordance with 40 CFR 261.7 requirements for empty containers and appropriately dispositioned as low-level waste (November 1, 2001 Conference Call Meeting Minutes).

The final milestone identified in the NEW-CPP-020 Action Plan was to disposition the calcine handling tools. The one waste box believed to contain calcine tools or sampling tubes was inspected and determined to contain a coupling wrench. The coupling wrench is comprised of a gear mechanism, a rotating table, and a shielding enclosure. The five sampling tubes removed from the casks and the gear mechanism were debris-treated but did not meet the clean debris surface criteria. The five sampling tubes were moved to CPP-1617, a RCRA permitted storage facility. The coupling wrench was placed in storage at a permitted storage facility. The milestone completion documentation was approved by the Department on May 19, 2003. This approval was the final action required under the VCO Action Plan for NEW-CPP-020.

NOTE: *Subsequent to the Department's approval of the milestone completion documentation, the coupling wrench was shipped from the INEEL to Envirocare of Utah (received on April 4, 2003) for macroencapsulation and disposal.*

VCO Number:	**NEW-PBF-001A**
Issue Title:	Hazardous Waste Determination of Equipment and Components in the Power Burst Facility and Storage of Hazardous Waste for Greater than 90 days without a Permit or Interim Status
Citation:	IDAPA 58.01.05.006 [40 CFR 262.11] states in relevant part: *"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."* Idaho Code 39-4408(1) states: *"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specified activity involved or exempted the activity from permit requirements."*
Issue Description:	The equipment and tank systems and/or the contents of the equipment and tank systems listed in the attached table titled "Equipment List" have been determined by DOE to be a solid waste. DOE has not performed a hazardous waste determination on the equipment and components and/or the contents.
Action Summary:	Perform a hazardous waste determination on the equipment and tank systems, and/or the contents of the equipment and tank systems listed in the attached table ["Equipment List"]. If any of the items or materials are determined to be useable, they will be moved to Appendix C – Covered Matters that are closed, with an explanation of how the item or equipment is useable. If any of the equipment and tanks systems, or contents of the equipment and tank systems are determined to be hazardous waste, DOE will submit a proposed schedule of further Milestones and a description of any proposed interim actions.
Closure Date:	**See NEW-PBF-001A table**
Closure:	The DOE has submitted documentation and the Department has approved the documentation demonstrating that characterization and all VCO actions have been completed for those units identified in the NEW-PBF-001A table.

VCO Issue NEW-PBF-001A: PBF Equipment Moved to Appendix C

Tracking No.	Equipment Description		Location	Equipment ID Number	Closure Date	Closure Date Reference
PBF005	In Pile Tube, IPT (inconel > Class C)		PER 620, Canal		6/2/2003	Letter, D. M. Gregory to D. L. Wessman, 6/2/2003
PBF006	Oil in Loop Makeup Pump used w/ IPT (~1 gal. Oil)		PER 620		4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF007	Oil in Quench Pump used w/ IPT (~1 gal. Oil)		PER 620		4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF009	Oil – Breech Lock Hydraulics	PER 620			9/15/2003	Letter, D. M. Gregory to D. L. Wessman, 9/15/2003
PBF010	LOCA Blowdown (oil in dilution pumps)		PER 620		4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF011	Core Filler Pieces in T-1 (aluminum & stainless steel)		PER 604		7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF012	Contents of Blowdown Tank	(98PBF00202)	PER 620, Cubicle 13	11-M-201-01	7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF013	Oil in the Air Compressor Sump	(98PBF00201)	PER 620, 1st basement	620-M-36	4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF014	Contents of MG Set Sump	(98PBF00178)	PER 625		7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF015	Contents of PER 621 Plan Generator Sump		PER 621	621-M-1	4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF016	Contents of Septic Tank by Bldg. PER 619	(97PBF00054)	PER 619	PER 724	4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF017	Contents of Septic Tank and drainfield by PER 620	(97PBF00093)	PER 620	PER 728	6/2/2003	Letter, D. M. Gregory to D. L. Wessman, 6/2/2003
PBF018	Contents of Evaporation Tank	(98PBF00173)	PER 620	PER 706	6/2/2003	Letter, D. M. Gregory to D. L. Wessman, 6/2/2003
PBF019	Contents of Warm Waste Sump in PER 620	(98PBF00070)	PER 620, 1st basement		7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF020	Contents of Hot Waste Tank 1000 gal. – AST	(98PBF00087)	PER 620	620-M-9	7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF021	Contents of Hot Waste Storage – UST	(98PBF00172)	PER 620	620-M-85	7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003

VCO Issue NEW-PBF-001A: PBF Equipment Moved to Appendix C

Tracking No.	Equipment Description		Location	Equipment ID Number	Closure Date	Closure Date Reference
PBF022	Contents of Sump, Diesel Lubricating Oil	(98PBF00177)	PER 625		4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF023	Contents of Resin Tank for Rx and Canal Cleanup Sys.	(98PBF00185)	PER 620	620-M-6	9/15/2003	Letter, D. M. Gregory to D. L. Wessman, 9/15/2003
PBF024	Contents of Sumps, Primary Coolant Pump Oil	(98PBF00179)	PER 620	620-M-6	4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF025	Contents of Sump – Control Rods Hydraulic Oil	(98PBF00175)	PER 620		6/2/2003	Letter, D. M. Gregory to D. L. Wessman, 6/2/2003
PBF027	Contents of Sump – Primary Coolant Pump	(98PBF00180)	PER 620	620-M-3	4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF028	Contents of Loop Makeup Water Tank	(98PBF00163)	PER 620		4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF029	Contents of HDW Surge Tank (molybdated water)	(97PBF00066)	PER 620, 1st basement	10-M-15	7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF030	Contents of Knock Out Drum Tank	(98PBF00072)	PER 620, 2nd basement	10-M-21	7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF031	Contents of Loop Makeup Deoxygenator	(97PBF00064)	PER 620, 1st basement	620-10-M-14	7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF032	Contents of Ion Exchanger, Loop Cubicle 10, Resin	(98PBF00073)	PER 620, 1st basement	10-M-10	6/2/2003	Letter, D. M. Gregory to D. L. Wessman, 6/2/2003
PBF033	Contents of Ion Exchanger, Loop Cubicle 10, Resin	(98PBF00074)	PER 620, 1st basement	10-M-11	6/2/2003	Letter, D. M. Gregory to D. L. Wessman, 6/2/2003
PBF034	Contents of Rad Liquid Waste Strg Tank at PER 612	(97PBF00016)	PER 612	PER 751	7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF035	Contents of Fuel Oil Day Tank in PER 625	(97PBF00092)	PER 625		6/2/2003	Letter, D. M. Gregory to D. L. Wessman, 6/2/2003
PBF036	Contents of Air Reservoir 1 of 3	(97PBF00089)	PER 625	625-M-10	4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF037	Contents of Air Reservoir 2 of 3	(97PBF00090)	PER 625	625-M-11	4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001
PBF038	Contents of Air Reservoir 3 of 3	(97PBF00088)	PER 625	625-M-9	4/4/2001	Letter, D. M. Gregory to D. L. Wessman, 4/4/2001

VCO Issue NEW-PBF-001A: PBF Equipment Moved to Appendix C

Tracking No.	Equipment Description		Location	Equipment ID Number	Closure Date	Closure Date Reference
PBF039	Contents of LOCA Hot Water Tank	(97PBF00068)	PER 620, 1st basement		7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF040	Contents of Loop Makeup Demineralizer, Resin	(97PBF00063)	PER 620, 1st basement	10-M-13	7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF041	Contents of Super Heated Pressurizer	(98PBF00076)	PER 620, 1st basement	10-M-4	7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF042	Contents of LOCA Quench Tank	(97PBF00070)	PER 620	11-M-3	7/31/2003	Letter, D. M. Gregory to D. L. Wessman, 7/31/2003
PBF043	Contents of CRCA Air Compressor Oil, 200 gal Contents of CRCA Air Compressor Sump	(97PBF00065) (98PBF00176)	PER 620, 1st basement	620-M-37	9/15/2003	Letter, D. M. Gregory to D. L. Wessman, 9/15/2003
PBF044	Contents of Primary Rx Coolant Water (AST) – 14k	(98PBF00098)	PER 620, outside	PER 730	9/15/2003	Letter, D. M. Gregory to D. L. Wessman, 9/15/2003

Appendix C: Description of Covered Matters that are Closed

VCO Number:	**NEW-RWMC-002**
Issue Title:	Disposal of Cadmium (Cd) Plated Filters in the RWMC SDA
Citation:	39-4408(1) *"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."* 40 CFR 262.11 *"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."*
Issue Description:	Cadmium plated filters have been disposed of in the SDA (Environmental Issues Log, item number 96 RCRA 19).
Closure Date:	The effective date of this Consent Order.
Closure Description:	A risk assessment addressing the disposal of the cadmium-plated HEPA filters generated at the NRF and disposed of at the RWMC was submitted by DOE on January 28, 1997. The State of Idaho responded to the DOE risk assessment on June 2, 1997. Based on the DEQ review and the June 2, 1997 response, this issue is considered closed. Furthermore, eleven (11) boxes that were believed to contain cadmium plated HEPA filters were removed from the SDA and returned to WERF for uncompaction in late 1998. Any suspect cadmium HEPA filters found were returned to the NRF for appropriate disposition.

VCO Number:	**NEW-TAN-003**
Issue Title:	Potential Treatment Without a Permit at TAN (TSF) Water System
Citation:	39-4408(1) *"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*
Issue Description:	The drinking water system at TAN uses an air sparger to eliminate organics in the raw water. Because the ground water has been designated as containing a listed waste (F001), the air sparging could be considered a RCRA treatment.
Closure Date:	The effective date of this Consent Order.
Closure Description:	A "no longer contained in" determination for the TAN groundwater used for the TAN drinking water was received from the State of Idaho on March 9, 1998. Based on receipt of the "no longer contained in" determination, this issue is considered closed.

VCO Number:	**NEW-TAN-003A**
Issue Title:	Unpermitted Storage and Treatment Without a Permit at WRRTF Potable Water System
Citation:	39-4408(1) *"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*
Issue Description:	Potable water containing F001 hazardous waste is presently being pumped, stored, distributed and disposed at WRRTF without meeting RCRA management requirements, and without having received a "no-longer contained in" determination from the Department.
Closure Date:	August 29, 2001
Closure Description:	The INEEL has performed sampling of water contained within various components associated with the WRRTF production water system in support of obtaining a "no-longer contained in" (NLCI) determination for the water that was drained from the System. The WRRTF production water was shut down in September 2000 and the WRRTF facility was placed in stand by. The INEEL submitted analytical data and requests for NLCI determinations to DEQ in letters dated October 16, 2000, October 25, 2000, and May 16, 2001. The NLCI determinations were approved by DEQ for water drained from the distribution piping, the storage tanks, and the water in the line from the well head to the storage tanks on October 27, 2000, November 2, 2000, and June 11, 2001, respectively. Because the WRRTF production water system has been shut down, and based on the INEEL submittals and the DEQ approvals of the NLCI determinations, the F001 hazardous waste number is no longer applicable to the WRRTF production water distribution and disposal system.

Appendix C: Description of Covered Matters that are Closed

VCO Number: **NEW-TAN-004**

Issue Title: Inadequate Hazardous Waste Determination on Rags at TAN-607/629/645/679

Citation:

39-4408(1)	*"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*
40 CFR 262.11	*"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."*

Issue Description: In 1998, DOE identified several locations at TAN where solvents on rags/wipes may have been inappropriately characterized and subsequently dispositioned as non-hazardous, or non-LDR restricted wastes. Based on a review of solvents used at the locations, it was determined that two solvents, acetone and Freon TF (trichlorotrifluoroethane), had routinely been used in the past with rags/wipes, but had either been disposed as non-hazardous or non-LDR waste without characterization.

Closure Date: The effective date of this Consent Order.

Closure Description: DOE conducted facility walkthroughs at TAN to locate materials containing listed solvents, and either discontinued use, or ensured waste rags/Q-tips that continue to be generated are appropriately characterized by knowledge or testing for hazardous waste and LDR characterization/ management. A risk assessment to determine potential human health impacts of past acetone and trichlorofluoroethane disposal to the CFA landfill was complete.

The risk assessment determined that the disposal did not pose a significant risk to human health or the environment based on the small volumes disposed. A summary assessment report was submitted to DEQ on December 23, 1998. The State of Idaho reviewed the DOE summary assessment report. Based on the DEQ review, this issue is considered closed.

VCO Number: **NEW-TAN-008A**

Issue Title: Inadequate Hazardous Waste Determination and Unpermitted Storage at TAN-616 Low-Level Radioactive Waste System

Citation:

39-4408(1)	*"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*
40 CFR 262.11	*"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste...*

Issue Description: The TAN 616 liquid waste treatment system building contains liquid low level radioactive waste treatment systems that were in operation until 1970. The liquid waste in the tank systems has been determined to have contained F001 (Trichloroethene) and may also exhibit the toxicity characteristic for some volatile organic compounds and heavy metals. Samples and sample waste from previous characterization efforts in 1993 and 1994 have been retained in containers within a TAA in TAN-607 in excess of 90 days. A complete hazardous waste determination has not been performed on the tank systems and the samples.

Closure Date: February 13, 2001 (for samples)

Closure: DOE completed a hazardous waste determination and appropriately dispositioned the samples that were stored within the TAA in TAN-607. DOE submitted the milestone deliverable completion documentation for the hazardous waste determination and disposition of the samples to the Department in a letter dated February 5, 2001. The Department reviewed the documentation and approved the milestone deliverable in a letter dated February 13, 2001. The samples covered under this action plan were:

Drum 1

WINCO Log#	B&W #	# of Samples
93-121414	93L-101470	2 sample bottle
93-121414	93L-101476	1 sample bottle
93-121414	93L-101468	1 sample bottle
93-121414	93L-101468 93L-101470 93L-101472 93L-101474 93L-101476	5 sample bottles
93-121414	93L-101468 93L-101470 93L-101472 93L-101474 93L-101476	5 VOA bottles
93-121414	93L-101474	1 sample bottle

Drum 2

WINCO Log#	B&W #	# of Samples
94-031714	94L-100477	1 sample
94-031714	94L-100478	1 sample
94-031714	94L-100479	1 sample

Closure Date: December 6, 2001 (for V-11 water tank – 98TAN00421)

Closure: DOE completed a hazardous waste determination for the V-11water tank (98TAN00421) and submitted the milestone deliverable documentation (characterization EDF-2793) in a letter dated September 13, 2001. Department comments were addressed as part of the November 1, 2001, monthly conference call. DOE submitted the revised documentation (as attachments to the November 1, 2001, meeting minutes) to the Department on November 16, 2001. The Department subsequently approved the VCO meeting minutes on December 6, 2001.

Closure Date: June 27, 2002 (for TAN-615 West Sump – 98TAN00320)

Closure: DOE completed a hazardous waste determination for the TAN-615 West Sump (98TAN00320) and submitted the milestone deliverable documentation (characterization EDF-2167) in a letter dated May 23, 2002. The Department reviewed the documentation and approved the milestone deliverable in a letter dated June 27, 2002.

VCO Number: **NEW-TRA-001A**

Issue Title: Inadequate Hazardous Waste Determination of TRA Waste (see table "TRA Legacy Waste List")

Citation:

39-4408(1)	*"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*
40 CFR 262.11	*"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."*

Issue Description: A complete hazardous waste determination has not been performed on the contents of containers of waste and other items stored at several locations at TRA. Some of those items are known or believed to have hazardous characteristics and are being stored in excess of 90 days. The waste description and storage locations are included in the attached table

Closure Date: 12/11/00 for fifteen items dispositioned under the first 25% milestone

5/31/01 for fifteen items dispositioned under the 50% milestone

7/18/03 for fifteen items dispositioned under the 75% milestone

Closure Description: Fifteen of the items (constituting the first 25% of the items) on the "TRA Legacy Waste List" were characterized. Those items determined to be hazardous were shipped to RCRA interim status or permitted facilities. DOE submitted the milestone deliverable completion documentation for the first 25% of the items to the Department in a letter dated November 20, 2000. The Department reviewed the documentation and approved the milestone deliverable in a letter dated December 11, 2000. The fifteen items covered under the first 25% milestone were:

Line Number 4 (Tracking Number 166)
Line Number 10 (Tracking Number 249)
Line Number 14 (Tracking Number 258)
Line Number 15 (Tracking Number 260)
Line Number 28 (Tracking Number 346)
Line Number 32 (Tracking Number 350)
Line Number 33 (Tracking Number 351)
Line Number 34 (Tracking Number 352)
Line Number 35 (Tracking Number 353)
Line Number 36 (Tracking Number 354)
Line Number 41 (Tracking Number 425)
Line Number 42 (Tracking Number 426)
Line Number 48 (Tracking Number 434)
Line Number 51 (Tracking Number 439)
Line Number 54 (Tracking Number 442)

Fifteen additional items (constituting the next 25% of the items, bringing the total to 50%) on the "TRA Legacy Waste List" were characterized. Those items determined to be hazardous were shipped to RCRA interim status or permitted facilities. DOE submitted the milestone deliverable completion documentation for the 50% milestone to the Department in a letter dated April 27, 2001. The Department reviewed the documentation and approved the milestone deliverable in a letter dated May 31, 2001. The fifteen items covered under the 50% milestone were:

Line Number 1 (Tracking Number 145)
Line Number 6 (Tracking Number 173)
Line Number 7 (Tracking Number 174)
Line Number 16 (Tracking Number 261)
Line Number 17 (Tracking Number 264)
Line Number 22 (Tracking Number 329)
Line Number 23 (Tracking Number 333)
Line Number 29 (Tracking Number 347)
Line Number 30 (Tracking Number 348)
Line Number 31 (Tracking Number 349)
Line Number 43 (Tracking Number 428)
Line Number 44 (Tracking Number 429)
Line Number 49 (Tracking Number 435)
Line Number 50 (Tracking Number 436)
Line Number 56 (Tracking Number 444)

Fifteen additional items (constituting the next 25% of the items, bringing the total to

75%) on the "TRA Legacy Waste List" were characterized. Those items determined to be hazardous were shipped to RCRA interim status or permitted facilities. DOE submitted the milestone deliverable completion documentation for the 75% milestone to the Department in a letter dated June 17, 2003. The Department reviewed the documentation and approved the milestone deliverable in a letter dated July 18, 2003. The fifteen items covered under the 75% milestone were:

Line Number 2 (Tracking Number 147)
Line Number 11 (Tracking Number 251)
Line Number 12 (Tracking Number 254)
Line Number 13 (Tracking Number 255)
Line Number 18 (Tracking Number 267)
Line Number 20 (Tracking Number 308)
Line Number 27 (Tracking Number 345)
Line Number 37 (Tracking Number 395)
Line Number 46 (Tracking Number 431)
Line Number 47 (Tracking Number 433)
Line Number 53 (Tracking Number 441)
Line Number 57 (Tracking Number 445)
Line Number 58 (Tracking Number 446)
Line Number 59 (Tracking Number 447)
Line Number 60 (Tracking Number 448)

VCO Number: **NEW-TRA-004A**

Issue Title: Fill, Store, & Remelt (FS&R) Facility in the ETR Building (sodium loop at the ETR)

Citation:

39-4408(1)	*"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*

Issue Description: Components within the Fill, Storage, & Remelt (FS&R) Charging Facility (located in the ETR Building/ TRA-642) include a number of small tanks and ancillary piping that were partially drained upon deactivation. However, approximately 21 gallons of sodium exists in solid form that could not be drained. Two pressure instruments still in use at the facility contain 22 grams of sodium-potassium alloy (NaK) each. The sodium is a hazardous waste, and the NaK will become a hazardous waste when it is no longer needed to measure pressure. Both sodium and NaK exhibit the characteristic of reactivity. The sodium has been stored in excess of 90 days in a unit that does not have interim status or a hazardous waste permit, variance or exemption issued by the Department.

The tank system in the facility includes the following tanks and their ancillary equipment: tank inventory numbers 98TRA00279, 98TRA00280, 98TRA00281, 98TRA00282, 98TRA00283, and 98TRA00284.

Closure Date: May 24, 2002

Closure Description: The INEEL submitted the final Hazardous Waste Management Act/Resource Conservation and Recovery Act Closure Plan for the Filling, Storage, and Remelt Facility to the Department on February 26, 2001 (DOE/ID-10818). The Department made the Closure Plan available for public comment and, following the public comment period, approved the Closure Plan in a letter dated May 21, 2001.

The INEEL completed the closure activities as outlined in the closure plan and provided the independent Professional Engineer and owner/operator certification of closure to the Department in a letter dated May 13, 2002. The Department reviewed the INEEL's closure certification. In a letter dated May 24, 2002, the Department acknowledged completion of the activities as specified in the Closure Plan and concurred that all VCO actions identified for the FS&R facility have been completed.

VCO Number:	**NEW-TRA-006**
Issue Title:	Inactive Piping and Ancillary Equipment at TRA-631 Brine Pit Pump House Adjacent Areas
Citation:	40 CFR 262.11 *"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."*
Issue Description:	In the 53 foot North-South trench adjacent to the TRA-631 pump house, there are a number of inactive lines that have not been characterized. The lines are: (a) inactive raw water line with asbestos contaminated material and inactive sulfuric acid transfer lines, (b) 3-inactive 1-inch carbon steel lines, possibly plant air or water lines to previous safety shower, (c) inactive hot water recirculation line with asbestos contaminated material, (d) inactive caustic line with steam coil, with asbestos contaminated material. Also, in the bottom of the trench itself, there is acid spill residue and loose caustic (white chunks).
Closure Date:	December 11, 2000
Closure Description:	All of the items in the trench were characterized and have been appropriately dispositioned. DOE submitted the milestone deliverable completion documentation to the Department in a letter dated November 20, 2000. The Department reviewed the documentation and approved the milestone deliverable in a letter dated December 11, 2000.

VCO Number: **NEW-TRA-007**

Issue Title: Abandoned Buried Piping at TRA (four sets of lines).

Citation:

39-4408(1)	*"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*
40 CFR 262.11	*"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."*

Issue Description: There are a number of abandoned, inactive, buried product lines at TRA:

Abandoned buried acid line from TRA-631 to TRA-645, ETR secondary pump house (1,600 feet of 3-inch pipe) used to transfer acid from the bulk acid tanks to use in the ETR secondary coolant systems. Abandoned about 1981.

Abandoned buried acid line TRA-631 to TRA-671, ATR secondary pump house (1,000 feet of 2-inch pipe) used to transfer acid from the bulk acid tanks to use in the ATR secondary coolant systems. Abandoned about 1992.

Abandoned buried fuel oil lines from bunker fuel tanks TRA-727 A&B to TRA-609 (500 feet of 3-inch pipe). Used to transfer #5 fuel to the old steam plant boilers. Abandoned in the late 1980's.

Abandoned buried diesel fuel line from TRA-727C & D and TRA-775 fuel tanks to ETR (1,900 feet of 2-inch pipe) used to transfer diesel fuel to three diesel engines at ETR. Abandoned in early 1980's (ETR was inactivated in 1981).

Closure Date: The effective date of this Consent Order.

Closure Description: New site identification forms were submitted for this abandoned buried piping. The sites met the requirements for inactive waste sites requiring further investigation under the INEEL FFA/CO. INEEL FFA/CO Responsible Program Managers approved the forms in March 1999. The four sites were designated as control areas TRA-56, TRA-57, TRA-58, and TRA-59.

During FFA/CO Track 1 investigations on the line from TRA-631 to the TRA-671 ATR secondary pump house, documentation was compiled that demonstrated that the line was emptied using common industrial practices within 90 days of its last use. In a letter dated December 4, 2001, the INEEL submitted this documentation to the Department for review. Based on the information submitted by the INEEL, the Department agreed that the line was emptied using common industrial practices per 40 CFR 261.4(c) and requires no further action under RCRA. This determination was documented in the January 31, 2002 VCO meeting minutes.

VCO Number: **SITE-TANK-004A**

Issue Title: Active Hazardous Waste Tank Systems that have not been Closed or Included on the Part A or Part B Permit Application

Citation:

IDAPA 58.01.05.006 [40 CFR § 262.34 (b)] states:

"A generator who accumulates hazardous waste for more than 90 days is an operator of a storage facility and is subject to the requirements of 40 CFR parts 264 and 265 and the permit requirements of 40 CFR part 270 unless he has been granted an extension to the 90-day period. Such extension may be granted by EPA if hazardous wastes must remain on-site for longer than 90 days due to unforseen, temporary, and uncontrollable circumstances. An extension of up to 30 days may be granted at the discretion of the Regional Administrator on a case-by-case basis."

IDAPA 58.01.05.012 [40 CFR § 270.10 (e)(1)(I & ii)] state:

"Existing HWM facilities and interim status qualifications. (1) Owners and operators of existing hazardous waste management facilities or of hazardous waste management facilities in existence on the effective date of statutory or regulatory amendments under the act that render the facility subject to the requirements to have a RCRA permit must submit part A of their permit application no later than: (i) Six months after the date of publication of regulations which first require them to comply with the standards set forth in 40 CFR part 265 or 266, or (ii) Thirty days after the date they first become subject to the standards set forth in 40 CFR part 265 or 266, whichever first occurs."

Idaho Code 39-4408 (1) states:

"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste, or any constituent thereof, may enter the environment, unless the department has issued said person a permit or a variance as required for the specific activity involved or exempted the activity from permit requirements."

Issue Description: The tanks and/or components listed in table "SITE-TANK-004" are hazardous waste tanks and/or ancillary equipment. The tanks and/or ancillary equipment are not included in a Part A or B permit application, and DOE has not received interim status, a permit, variance or been exempted from the permit requirements.

Closure Date: October 3, 2002

Closure Description: Forty-four active hazardous waste tanks or ancillary equipment at the Idaho Nuclear Technology and Engineering Center were identified as having potential regulatory issues. The INEEL evaluated each of the 44 units and submitted a report to the Idaho Department of Environmental Quality (IDEQ) in September 2000. That report included a determination for each unit as to whether it was a tank, ancillary equipment, ancillary off-gas equipment, or was not part of a tank system. It was concluded that two units are not tanks, ancillary equipment, or ancillary off-gas units. Of the 42 remaining units, 17 are tanks, eight are ancillary equipment, and 17 are ancillary off-gas equipment. The IDEQ approved the determination report in a letter dated August 7, 2001.

The next milestone identified in the SITE-TANK-004 Action Plan was to evaluate each tank, ancillary equipment, or ancillary off-gas unit for compliance with all applicable interim status requirements cited in 40 CFR 265. The INEEL completed the evaluation of the 42 units and submitted the report to IDEQ for review and approval. The IDEQ approved the report on October 7, 2002 and agreed that no further actions for the 42 tanks, ancillary equipment or ancillary off-gas units are required under the VCO.

Appendix C: Description of Covered Matters that are Closed

VCO Number:	**SITE-TANK-005A**
Issue Title:	Tanks and/or Components That Require a Hazardous Waste Determination or Verification of Empty and Storage of Hazardous Waste for Greater than 90 days Without a Permit or Interim Status
Citation:	IDAPA 58.01.05.006 [40 CFR 262.11] states in relevant part: *"[A] Person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."* Idaho Code 39-4408 (1) states: *"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*
Issue Description:	Table "SITE-TANK-005: Tanks Requiring Hazardous Waste Determinations or Verification of Empty" includes a list of active waste tanks, inactive waste tanks and inactive process/product tanks. The tanks may be empty, but DOE has not verified the tanks are empty. If the tanks contain waste, DOE has not determined if the waste is hazardous or non-hazardous. If, after characterization, it is determined that a tank or tank system contains or contained hazardous waste subject to RCRA requirements, those tanks or tank system have stored hazardous waste for greater than 90 days without a RCRA Permit or interim status.
Closure Date:	See SITE-TANK-005A table.
Closure Description:	The DOE has submitted documentation, and the Department has approved the documentation demonstrating that characterization and all VCO actions have been completed for those tanks identified in SITE-TANK-005A.

Appendix C: Description of Covered Matters that are Closed

VCO Number:	**SITE-TANK-006**
Issue Title:	INTEC Tank Farm Tanks to be Closed Under the NON Consent Order (see list).
Citation:	40 CFR 262.11 — *"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."* 40 CFR 265.113(a) — *"Within 90 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator complies with all applicable requirements in paragraphs (d) and (e) of this section, at a hazardous waste management unit or facility, or within 90 days after approval of the closure plan, whichever is later, the owner or operator must treat, remove from the unit or facility, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan."*
Issue Description:	Several INTEC Tank Farm Tanks were identified in the INEEL tank inventory project as requiring some regulatory action. The Notice of Noncompliance (NON) Consent Order addresses the cease use or upgrade and closure of the INTEC Tank Farm Tanks. In order to ensure coordination of activities, the INTEC Tank Farm tanks identified under the INEEL tank inventory project as requiring regulatory actions will be addressed under the actions to be taken under the NON Consent Order.
Closure Date:	The effective date of this Consent Order.
Closure Description:	In a meeting on August 25, 1998, DOE and DEQ agreed that the VCO INTEC tanks associated with the INEEL Tank Farm tanks should be removed from the VCO and any necessary actions for these tanks should be addressed as ancillary equipment to the INTEC Tank Farm tanks and will be covered under the NON Consent Order, Sections III and IV.

Click here to view SITE-TANK-006 List of tanks.

VCO Number:	**VCO-5.1.a**
Issue Title:	Inadequate Hazardous Waste Determinations on Legacy Samples Sitewide.
Citation:	39-4408(1) *"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."* 40 CFR 261.2(a)(1) *"[A] solid waste is any discarded material that is not excluded by § 261.4(a) or that is not excluded by variance granted under §§ 260.30 and 260.31."* 40 CFR 262.11 *"[A] person who generates a solid waste, as defined in 40 CFR 261.2 must determine if that waste is a hazardous waste..."*
Issue Description:	TL 037RCRA96 Sitewide—Approximately 23,196 legacy samples have been collected from around the INEEL. ECI and TL issues #43 (RWMC Landfill Stabilization Project) and #46 (TL 050RCRA96) TAN IET Box of 30-40 samples will be handled under the Legacy Sample management. [ECI #43 and ECI #46 are closed].
Closure Date:	The effective date of this Consent Order.
Closure Description:	All of the legacy samples were inventoried, characterized, and dispositioned as documented in the report, INEEL/EXT-98-00157, "LMITCO Legacy Sample Disposition Project (LSDP) Final Plan." The Final Plan was transmitted to DEQ on March 16, 1998. DEQ conducted a review of selected samples and related disposition documentation on April 15 - 17, 1998. Based on their review, DEQ agrees with the INEEL approach for legacy sample disposition.

VCO Number: **VCO-5.1.ii(a)A**

Issue Title: Inadequate hazardous waste determination on items in the MTR Canal at TRA

Citation:

40 CFR 262.11	*"A Person who generates a solid waste, as defined in 40 CFR 261.2, must determine if that waste is a hazardous waste…."*

Issue Description: ECI 381 (TL 008RCRA96 and TL 005RCRA96) MTR and Canal.

A hazardous waste determination has not been performed on several items stored in the MTR Canal. The items include:

Item	Canal Location	Description
Trash cask liner (box)	55,N	60 cubic foot metal box composed of steel plates containing miscellaneous components
Trash can/bucket	38,S	Open Top, 18" D x 60" H with miscellaneous components
Bucket	39,S	Contains test train scrap components
Metal bucket	76,S	2 ½ gallon contains test train used parts
Plastic bucket	64,S	Contains test train flow meters and cloth
Metal bucket	79,S	Contains small test train components

Action Summary: Perform a hazardous waste determination on the items identified above. If any of the items or materials are determined to be hazardous waste, a schedule of Milestones for waste disposition, and a description of any proposed interim actions shall be submitted.

As part of the characterization process, the containers located in the TRA MTR canal that were specified in the VCO-5.1.ii(a) Action Plan had to be inventoried. A total of 37 items were inventoried and characterized per the milestone deliverable. Of the 37 items, 19 were determined to be RCRA-hazardous waste and 18 of the items were determined to be nonhazardous waste.

The DOE segregated the 19 items that were determined to be RCRA-hazardous waste and inspected them monthly as part of the interim actions. The final milestone was to move the 19 items from the MTR canal to an interim status or permitted hazardous waste storage or disposal facility by December 31, 2003.

On December 17, 2003, the 19 items determined to be RCRA-hazardous waste were moved from TRA and placed into storage at CPP-1617, a RCRA-permitted hazardous waste storage facility. This action satisfied the final milestone associated with the VCO-5.1.ii(a) Action Plan.

Closure Date: January 29, 2004

Closure Description

The first milestone in the VCO-5.1.ii(a) Action Plan was to submit to the Department for review and approval a hazardous waste determination for the items identified above. In order to perform a hazardous waste determination, the containers located in the MTR canal that were specified in the VCO-5.1.ii(a) Action Plan had to be inventoried. A total of 37 items were inventoried and characterized per the milestone deliverable. Of the 37 items, 19 were determined to be hazardous waste and 18 of the items were determined to be nonhazardous waste. The Department approved the hazardous waste determination milestone in a letter from D. M. Gregory to D. L. Wessman dated October 22, 2002.

Within 90 days of receipt of the October 22, 2002, approval letter, the DOE was required to submit a proposed schedule for disposition of the items determined to be hazardous waste and a description of any interim action. The DOE proposed to segregate the 19 items that were determined to be RCRA-hazardous waste, inspect them monthly, and move the items to an interim status or permitted hazardous waste storage or disposal facility by December 31, 2003. The Department approved this milestone deliverable in a letter from D. M. Gregory to D. L. Wessman dated February 5, 2003.

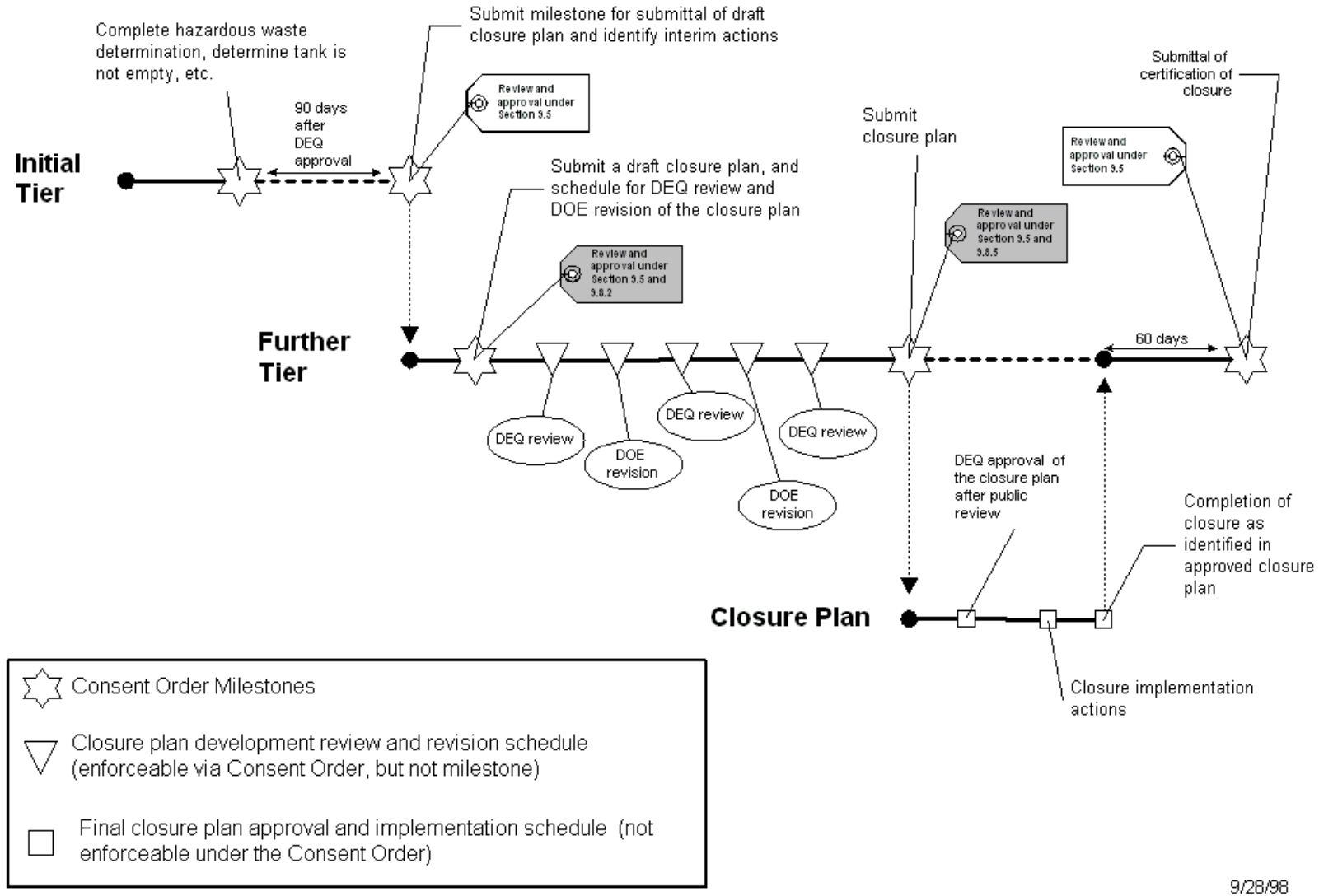
The final milestone identified in the VCO-5.1.ii(a) Action Plan was to disposition the 19 items determined to be hazardous waste. The 19 items were removed from the MTR canal and placed into four 55-gal waste drums (Container IDs TRA030117, TRA030118, TRA030119, and TRA030130) and a ST-90 waste box (Container ID TRA030095). The debris in the four 55-gal waste drums was subsequently repackaged into a ST-90 waste box (Container ID TRA030097) in order to satisfy the Envirocare radiological waste acceptance criteria. On December 17, 2003, the two ST-90 waste boxes (Container IDs TRA030095 and TRA030097) were moved from TRA and placed into storage at CPP-1617, a RCRA-permitted hazardous waste storage facility, until such time that they can be shipped to Envirocare for treatment and disposal. The Department approved the disposition documentation submitted as the final milestone in a letter from D. M. Gregory to D. L. Wessman dated January 29, 2004.

VCO Number:	**VCO-5.1.r**
Issue Title:	INTEC Tank Farm Soil stored in North Portion of INTEC
Citation:	39-4408(1) *"No person shall treat or store hazardous waste, nor shall any person discharge, incinerate, release, spill, place, or dispose any hazardous waste in such a manner that the waste or any constituent thereof, may enter the environment, unless the Department has issued said person a permit or variance as required for the specific activity involved or exempted the activity from permit requirements."*
Issue Description:	ECI 198 CPP—Excavated Tank Farm soil, inside the north fence, in the Soil Pile N Fence area. CPP Soil Pile N Fence—A large pile of excavated soil is located inside the North INTEC fence. The soil came from excavations at the tank farm. Many CERCLA sites at the INTEC are contaminated with leaks from pipes or tanks that contain RCRA listed and characteristic waste. Soil contaminated by such leaks may contain RCRA listed waste and must be managed and disposed according to RCRA. It has been determined that these soils contain listed waste.
Closure Date:	The effective date of this Consent Order.
Closure Description:	The soil piles from the Tank Farm Project consist of two piles. The piles are 1430 and 70 cubic yards respectively. The piles met the requirements for inactive waste sites requiring further investigation under the INEEL FFA/CO. INEEL FFA/CO Responsible Program Managers approved the forms in October 1998. The site was designated as control area "CPP-97". The Final Record of Decision Idaho Nuclear Technology and Engineering Center (DOE/ID-10660, September 1999) addressed these soil piles including ultimate disposition in the INEEL CERCLA Disposal Facility (ICDF). Until removed for ultimate disposition, the soil piles will be inspected weekly, covered and have a liner, and barriers and signs will be maintained.

Appendix D

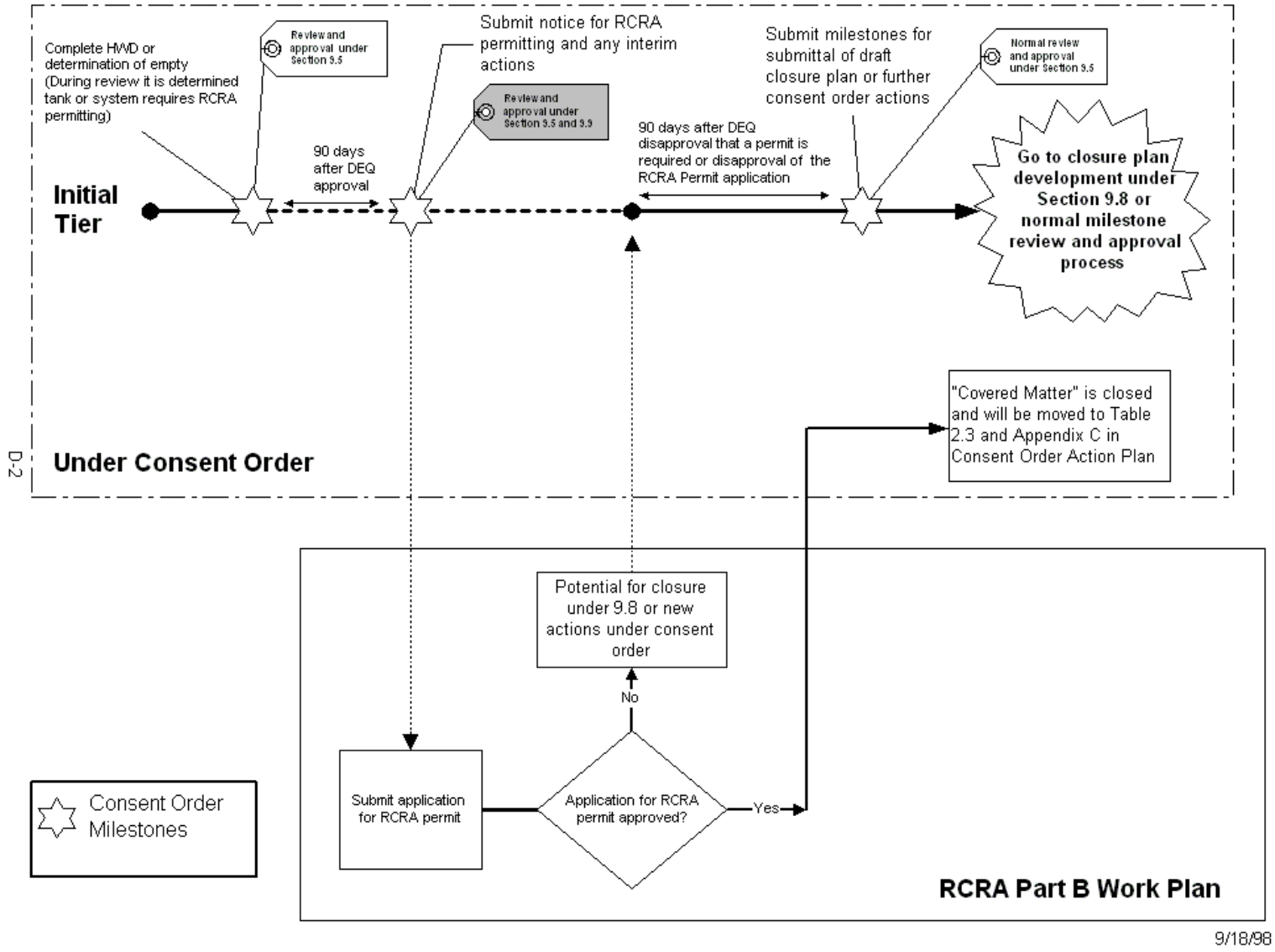
Examples of Permitting, Closure, and New Site Identification Form Review and Approval under the VCO

Example of Closure Plan Development and Implementation



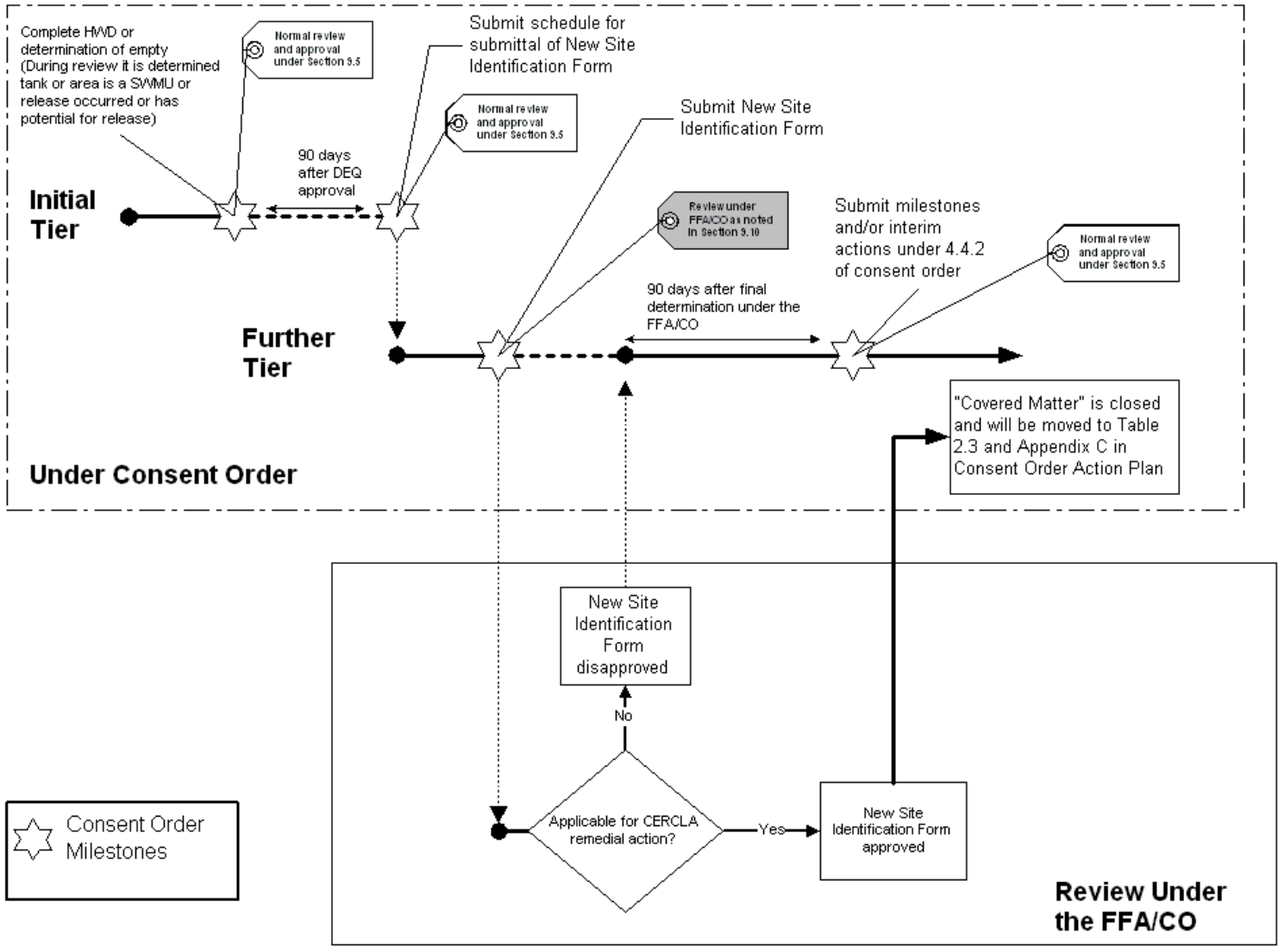
9/28/98

Example of Consent Order and RCRA Permit Interface



9/18/98

Example of New Site Identification Form Submittal



9/18/98

Appendix E

VCO SITE-TANK-005 Interim Actions

SECTION I

Appendix E contains the approved Interim Actions for the SITE-TANK-005 Voluntary Consent Order (VCO) tank systems. This documentation addresses any interim actions associated with the tank systems identified in the two SITE-TANK-005 system identification documents: INEEL/EXT-2000-00037 (Book 1-INTEC; Book 2-TAN; Book 3-TRA; Book 4-CFA) and INEEL/EXT-01-00225 (INTEC uranium dissolution and extraction process). Interim actions are implemented in order to minimize any potential risks associated with the tank systems to human health and the environment prior to completing the "further milestones" as required under the VCO Action Plan. The "further milestones" will be designed to bring the VCO tank systems into Resource Conservation and Recovery Act (RCRA) compliance.

The interim action documentation may range from a simple narrative to a full Interim Action Compliance Matrix. The Interim Action Compliance Matrices identify the RCRA regulatory requirements against which the SITE-TANK-005 VCO tank systems were evaluated. Interim action documentation, including the compliance matrices, can be added, modified, or removed from this appendix upon mutual agreement of the project managers, as described in Sections 7.6 and 7.8 of the VCO.

The following table lists the active interim actions for SITE-TANK-005 VCO tank systems that are currently included in Appendix E.

Table E-1. SITE-TANK-005 VCO tank systems included in Appendix E.

System Identification Number	Tanks	Revision Number
INTEC-049 (INTEC Process Equipment Waste Evaporator Condensate System)	VES-WL-123 (98CPP00689), VES-WL-124 (98CPP00690), and ancillary equipment	0
INTEC-055 (INTEC Rare Gas Plant North Gas Cell System)	VES-WN-102 (98CPP00728), VES-WN-103 (98CPP00729), VES-WN-125 (98CPP00740), and ancillary equipment	0
INTEC-077 (INTEC CPP-603 Old Ion Exchange System)	VES-SF-101 (98CPP00614), VES-SF-102 (98CPP00615), and ancillary equipment	2
INTEC-078 (INTEC CPP-603 Reverse Osmosis and Acid Regenerant System)	VES-SF-140 (98CPP00636), VES-SFE-133 (98CPP00638), and ancillary equipment	0
INTEC-080 (INTEC Tank Farm Auxiliary High-Level Waste Tank System)	VES-WM-103 (98CPP01397), VES-WM-104 (98CPP01398), VES-WM-105 (98CPP01399), and ancillary equipment	2

Table E-1. (continued).

System Identification Number	Tanks	Revision Number
INTEC-601 (Combined System Identification and Characterization for the Uranium Dissolution and Extraction Process at the Idaho Nuclear Technology and Engineering Center: Tank Farm Facility Waste Discharge Piping)	Ancillary Equipment	1
TAN-020 (Heat Transfer Reactor Experiment Mercury Contamination Sump System)	Sump B-232 (98TAN00086), Sump B-236A (98TAN00082), and ancillary equipment	0
TAN-031 (TAN/TSF Demineralized Water System)	Caustic bed deionizer (98TAN00354), acid bed deionizer (98TAN00355), and ancillary equipment	1

VCO SITE-TANK-005 Tank System INTEC-049 (INTEC Process Equipment Waste Evaporator Condensate System) Interim Action Compliance Matrix

VCO SITE-TANK-005 Tank System INTEC-049
(INTEC Process Equipment Waste Evaporator Condensate System)
Interim Action Compliance Matrix

INTRODUCTION

Voluntary Consent Order (VCO) Tank System Idaho Nuclear Technology and Engineering Center (INTEC)-049 (INTEC Process Equipment Waste Evaporator (PEWE) Condensate System) includes two ion exchange columns (VES-WL-123, 98CPP00689; VES-WL-124, 98CPP00690), one condenser (HE-WL-302, 98CPP00715), and two sumps (SU-WL-145, 98CPP00670; SU-WL-146, 98CPP00671). Piping ancillary to ion exchange columns VES-WL-123 and VES-WL-124 is also included in this VCO tank system. VCO Tank System INTEC-049 is located in the stainless steel-lined separation and condensation (S&C) cell of the Waste Treatment Building (CPP-604) at INTEC.

Ion exchange columns VES-WL-123 and VES-WL-124 were installed in the early 1970s and were used to reduce the radionuclide concentration of process condensate from the PEWE system before it was transferred to the INTEC Service Waste System (VCO Tank System INTEC-095). The ion exchange columns were bypassed in the mid-1970s due to process changes and the tank outlets were later cut and capped. Inlet piping to the ion exchange columns was also double valved in the closed position. Although out of service for over 20 years, these columns currently contain polystyrene bead ion exchange media (Amberlite 200). The exchange media has been characterized as Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) hazardous (listed hazardous waste numbers F001, F002, F005, and U134) because the ion exchange columns received process condensate from the PEWE surge tank (VES-WL-131). Based upon process knowledge, the characteristic D002 hazardous waste number would also apply to any liquids that may remain in the columns. The ion exchange columns and associated ancillary piping will be HWMA/RCRA closed as part of further milestones under the VCO Action Plan.

VCO Tank System INTEC-049 also includes two sumps (SU-WL-145 and SU-WL-146) and a condenser (HE-WL-302). The sumps are part of an active secondary containment system (S&C cell) for units included in the HWMA/RCRA Volume 14 Part B permit application for the INTEC Liquid Waste Management System (ILWMS). The condenser is an integral component of the PEWE off-gas system. The condenser was originally used to condense liquids from the off-gas stream; however, the cooling water supply to the condenser has been isolated and the condenser currently functions only as a flow-through device. The sumps and condenser are active components that are operated in accordance with interim status requirements (see Section 4) and are undergoing a HWMA/RCRA Part B permit application (Volume 14 – ILWMS).

Two compliance issues (i.e., general waste analysis and daily visual inspection requirements) are identified in the compliance matrix in Section 4 (see Items 1 and 21). Compliance with the general waste analysis requirements of 40 CFR 265.13 is an issue for the active components (see Section 2) and is being addressed by the November 4, 2002, Consent Order (Section 5.11) for resolution of the November 19, 2001, Notice of Violation (NOV). Daily visual inspection requirements of 40 CFR 265.195 are not conducted for this tank system because it is located in a high

radiation/contamination area. However, remote liquid-level monitoring of the secondary containment meets the intent of this requirement and the S&C cell provides adequate secondary containment (see Item 19). Therefore, no interim actions are proposed.

VCO UNITS COVERED BY THE INTERIM ACTION COMPLIANCE MATRIX (SECTION 4)

VCO Tank System INTEC-049 has been characterized as HWMA/RCRA hazardous (EDF-1614). The units and ancillary piping included in VCO Tank System INTEC-049 have been separated into two categories: (1) active units and (2) inactive units and ancillary equipment. The compliance matrix in Section 4 addresses both the active and inactive portions of VCO Tank System INTEC-049, as defined below:

Units that are active components of the ILWMS (HWMA/RCRA Volume 14 Part B permit application submittal):

- SU-WL-145 (sump)
- SU-WL-146 (sump)
- HE-WL-302 (condenser that is active as an off-gas line only, not as a condenser).

Inactive units and ancillary equipment that will be HWMA/RCRA closed as part of further milestones under the VCO Action Plan:

- VES-WL-123 (ion exchange column)
- VES-WL-124 (ion exchange column)
- 1” PSA-101190 (line) from valve RCV-WL-123/124
- 1” PLA-100061 (line)
- 1” PLA-100034 (line)
- 1” PLA-100036 (line) to valve IEV-WLC-2.

OTHER VCO UNITS (NOT COVERED BY THE INTERIM ACTION COMPLIANCE MATRIX IN SECTION 4)

The Interim Action Compliance Matrix in Section 4 covers all of the units and ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-049.

INTERIM ACTIONS

Table INTEC-049-1. Interim Action Compliance Matrix documenting the requirements of 40 CFR 265 applicable to VCO SITE-TANK-005 Tank System INTEC-049. (Note that entries in the "compliant" and "comments…" columns in the following Interim Action Compliance Matrix apply to both active and inactive units, and ancillary equipment, unless specified otherwise.)

Item	Citation/Brief Description of Requirements	Compliant	Comments/Recommendations for Compliance or Proposed Actions
1	265.13 General waste analysis.	Active – See Comment Inactive – Yes	Sumps SU-WL-145 and SU-WL-146 are part of the ILWMS; compliance with the waste analysis requirements of 40 CFR 265.13 for units that are part of the ILWMS, is being addressed by the November 4, 2002, Consent Order (Section 5.11) for resolution of the November 19, 2001, NOV. Condenser HE-WL-302 is only a flow-through device for the PEWE off-gas system. The contents of vessels VES-WL-123 and VES-WL-124 have been sufficiently characterized for proper storage. Analysis will not need to be repeated because the vessels do not actively receive waste. The contents of these vessels will be further characterized, if necessary, prior to treatment and/or disposal.
2	265.14 Security.	Yes	Facility security is maintained via a combination of television monitors, surveillance by guards, fencing, appropriate signs, and administrative procedures. INTEC is a secure facility with a perimeter fence surrounding the area. Entrance to INTEC requires training and a security background check or an escort who meets these requirements. The fence is monitored 24 hours a day by guards and video equipment. Security guards control entry to INTEC at the Entry Control Facility. A sign on the entrance to CPP-604 reads, "Restricted Area – Persons not assigned to this area must obtain permission before entering."
3	265.15 General inspection requirements.	See Comment	The units and ancillary equipment included in VCO Tank System INTEC-049 are located in the S&C cell, inside Building CPP-604. The S&C cell is a high radiation/contamination area and frequent inspections of VCO Tank System INTEC-049 cannot be performed without unacceptable radiological exposures to workers. However, any release would be contained by the S&C cell secondary containment system and would drain to sump(s) SU-WL-145 and/or SU-WL-146, which have leak detection. Any accumulated liquid is removed upon high alarm, which is set just below the lip of the sump.
4	265.16 Personnel training.	Yes	Idaho National Engineering and Environmental Laboratory (INEEL) and INTEC-specific training requirements have been identified for facility personnel and are met through a combination of classroom, computer-based, and on-the-job training. The required records are maintained at the facility.
5	265.17 General requirements for ignitable, reactive, or incompatible wastes.	N/A	The waste potentially managed in sumps SU-WL-145 and SU-WL-146 is not ignitable, reactive, or incompatible. These sumps are a component of the process waste liquid (PWL) collection system. No waste incompatible with the material of construction is added to the system and no mixing or commingling of waste incompatible with one another is performed. Ignitable, reactive, or incompatible wastes are not managed in ion exchange columns VES-WL-123 and VES-WL-124, or condenser HE-WL-302. Since the ion exchange columns are inactive, no ignitable, reactive, or incompatible wastes will be added to them in the future.

Table INTEC-049-1. (continued).

Item	Citation/Brief Description of Requirements	Compliant	Comments/Recommendations for Compliance or Proposed Actions
6	265.31 Preparedness and Prevention.	Yes	The facility is maintained and operated to minimize the possibility of fire, explosion, or sudden release of hazardous waste to air, soil, or surface water that could threaten human health or the environment. Procedures are in place to identify the source of any release and to minimize the threat to human health and the environment.
7	265.32 and 265.33 Required equipment and testing and maintenance.	Yes	The requirements of this section are met through the INEEL Emergency Plan/RCRA Contingency Plan and Addendum 2 (INTEC). All required equipment is tested and maintained on a routine schedule.
8	265.34 Access to communications or alarms.	Yes	Phones are available in various areas throughout Building CPP-604 and there is always more than one person on the premises when work is being performed in the S&C cell (a radiological controlled area).
9	265.35 Aisle space.	N/A	This requirement does not apply because the S&C cell is not used for container storage. However, there is adequate space to allow access of emergency equipment and personnel.
10	265.37 Arrangements with local authorities for emergency response services.	Yes	Arrangements with local authorities are documented in Appendix C of the INEEL Emergency Plan/RCRA Contingency Plan.
11	265.50 through 265.56 Contingency Plan and Emergency Response.	Yes	The INEEL Emergency Plan/RCRA Contingency Plan and Addendum 2 (INTEC) meet the requirements of this subpart.
12	265.71, 265.72, and 265.76 Manifest System, manifest discrepancies, and unmanifested waste report.	N/A	The inactive portion of VCO SITE-TANK-005 Tank System INTEC-049 does not receive waste and the active units do not receive waste directly from offsite facilities.
13	265.73 Operating record.	Yes	A written operating record of information is maintained, as required, at the facility.
14	265.74 Availability, retention, and disposition of records.	Yes	All records are available for inspection upon request. The records retention period as outlined in 40 CFR 265.73 would be extended under the circumstances described in this requirement.
15	265.75 Biennial report.	Yes	This requirement is addressed by a Site-wide, biennial reporting effort that encompasses relevant waste management activities.
16	265.110 through 265.121 Closure and Post-Closure.	Active – Yes Inactive – See Comment	Sumps SU-WL-145 and SU-WL-146 are an integral component of the PWL collection system. The PWL collection system and condenser HE-WL-302 are ancillary equipment to the PEWE. The INEEL maintains a closure plan for the PEWE system. Vessels VES-WL-123 and VES-WL-124, and ancillary lines (see Section 2), will be HWMA/RCRA closed as part of further milestones under the VCO Action Plan.

Table INTEC-049-1. (continued).

Item	Citation/Brief Description of Requirements	Compliant	Comments/Recommendations for Compliance or Proposed Actions
17	265.191 Assessment of existing tank system's integrity.	N/A	Sumps SU-WL-145 and SU-WL-146 were installed in 1990; therefore, the new tank system requirements of 40 CFR 265.192 apply (see Item 18) because these sumps do not meet the definition of an existing tank system. Condenser HE-WL-302 does not function as a tank; it is a flow-through device for the PEWE off-gas system. Ion exchange columns VES-WL-123 and VES-WL-124 were installed in the early 1970s and were taken out of service in the mid-1970s. A certified written assessment of the integrity of the ion exchange columns is not required because these columns have secondary containment (located in the S&C cell) that meets the requirements of 40 CFR 265.193. The vessels are made of stainless steel, which is compatible with the waste stored.
18	265.192 Design and installation of new tank systems or components.	Active – Yes Inactive – N/A	Sumps SU-WL-145 and SU-WL-146 were installed in the early 1990s and are an integral part of the PWL collection system. An independent, qualified, registered professional engineer certified that the PWL collection system, including sumps SU-WL-145 and SU-WL-146, meets the requirements of this section. The integrity of the sumps was confirmed in the early 1990s using a liquid penetrant examination. The ion exchange columns were installed prior to 1986 (in the early 1970s) and are not new tank systems.
19	265.193 Containment and detection of releases.	Active – N/A Inactive – Yes	Sumps SU-WL-145 and SU-WL-146 are exempt from the 40 CFR 265.193(a) requirement to install secondary containment per 40 CFR 265.190(b) because they are part of an active secondary containment system. Condenser HE-WL-302 does not require secondary containment because it functions only as a flow-through device for the PEWE off-gas system. Vessels VES-WL-123 and VES-WL-124 and ancillary lines (listed in Section 2) have secondary containment that meets the requirements of this section. The S&C cell is interior to Building CPP-604. The S&C cell (including sumps SU-WL-145 and SU-WL-146) is lined with stainless steel on the floor and the lower 1 ft of the walls and the entry way has a stainless steel-lined curb that is 6 in. high. The floor of the S&C cell is sloped to sumps SU-WL-145 and SU-WL-146. These sumps have level instrumentation that is connected to the distributed control system (DCS) that provides continuous electronic monitoring to detect a release of liquids within the S&C cell. The stainless steel-lined containment system (the S&C cell, EVAP-WL-129 cell and feed pump cell are connected via a common access area) has sufficient capacity to contain 100 % of the largest tank (5,000 gal). The lines that are ancillary to vessels VES-WL-123 and VES-WL-124 are all contained within the S&C cell. The discharge lines (1” PLA-100061 and 1” PLA-100034) are cut and capped. The inlet lines are double valved in the closed position, which precludes any manipulation of these valves.
20	265.194 General Operating Requirements.	Yes	Sumps SU-WL-145 and SU-WL-146 are lined with stainless steel and equipped with level indicators. Liquids are jetted from the sumps upon high alarm to prevent overspilling. Ion exchange columns VES-WL-123 and VES-WL-124 are inactive and no waste is being added to these vessels. The inlet piping is double valved in the closed position and discharge lines (1” PLA-100061 and 1” PLA-100034) are cut and capped. No leaks or spills are known, suspected, or documented to have occurred from the units or ancillary equipment included in this tank system.

Table INTEC-049-1. (continued).

Item	Citation/Brief Description of Requirements	Compliant	Comments/Recommendations for Compliance or Proposed Actions
21	265.195 Inspections.	See Comment	Daily visual inspections of the accessible portions of this tank system are not conducted because frequent inspections of these units, which are located in a high radiation/contamination area, cannot be performed without unacceptable radiological exposures to workers. Although not performed daily, visual inspections are conducted upon initial cell entry in association with other in-cell activities (e.g., repairs, maintenance). Furthermore, daily secondary containment monitoring meets the intent of the daily inspection requirement.
22	265.196 Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.	N/A	No leaks or spills are known, suspected or documented to have occurred from the units or ancillary equipment included in VCO Tank System INTEC-049. Any historical leaks or spills that are identified in the future will be addressed during HWMA/RCRA closure of the PEWE facility. If a leak or spill occurs, procedures are in place to satisfy this requirement.
23	265.197 Closure and post-closure care.	Active – Yes Inactive – See Comment	Sumps SU-WL-145 and SU-WL-146 are integral components of the PWL collection system. The PWL collection system and condenser HE-WL-302 are ancillary equipment to the PEWE. The INEEL maintains a closure plan for the PEWE system. Ion exchange columns VES-WL-123 and VES-WL-124, and ancillary lines (see Section 2), will be HWMA/RCRA closed as part of further milestones under the VCO Action Plan.
24	265.198 Special requirements for ignitable or reactive wastes.	N/A	No ignitable or reactive wastes are stored in the units and ancillary equipment included in VCO Tank System INTEC-049.
25	265.199 Special requirements for incompatible waste.	N/A	No incompatible wastes have been stored in the units and ancillary equipment included in VCO Tank System INTEC-049.
26	265.200 Waste analysis and trial test.	N/A	The units and ancillary equipment included in VCO Tank System INTEC-049 were not used to treat chemically or store hazardous waste that is substantially different or from a substantially different process than originally intended. The units and ancillary equipment included in VCO Tank System INTEC-049 will not be used in the future to store or treat chemically a hazardous waste that is substantially different from that which is potentially managed (active components) or currently stored (inactive components).
27	265.1030 Air Emission Standards for Process Vents.	N/A	The units and ancillary equipment included in VCO Tank System INTEC-049 do not include process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air-steam stripping operations.
28	265.1050 Air Emission Standards for Equipment Leaks.	N/A	The units and ancillary equipment included in VCO Tank System INTEC-049 do not contain hazardous wastes with organic concentrations of at least 10 % by weight.
29	265.1080 – Air Emission Standards for Tanks, Surface Impoundments, and Containers.	N/A	The units and ancillary equipment included in VCO Tank System INTEC-049 manage only radioactive mixed waste. Mixed waste is exempt from this subpart.

VCO SITE-TANK-005 Tank System INTEC-055
(INTEC Rare Gas Plant North Gas Cell System)
Interim Action Compliance Matrix

VCO SITE-TANK-005 Tank System INTEC-055
(INTEC Rare Gas Plant North Gas Cell System)
Interim Action Compliance Matrix

INTRODUCTION

The Voluntary Consent Order (VCO) SITE-TANK-005 Tank System Idaho Nuclear Technology and Engineering Center (INTEC)-055 (INTEC Rare Gas Plant North Gas Cell System) is comprised of a variety of equipment that was used in conjunction with operation of the Rare Gas Plant (RGP) located in the Waste Treatment Building (CPP-604) at INTEC. The RGP consists of three large cells (north, middle, and south) that housed equipment that was used to receive and process dissolver off-gas (DOG) generated during the dissolution of spent fuel elements. The DOG was generated from the fuel reprocessing activities performed at either the Fuel Process Building (CPP-601) or the fluorinel dissolution process (FDP) located at the Fluorinel Dissolution Process and Fuel Storage (FAST) Facility (CPP-666). The last fuel processing campaign was completed in 1988 and the RGP equipment was subsequently removed from service in 1992.

The VCO SITE-TANK-005 Tank System INTEC-055 components are located in the RGP north gas cell and were process/product units that removed impurities from DOG to prevent fouling of charcoal adsorption beds downstream. The shell tank stored silver nitrate solution for use as the scrubbing solution in the iodine adsorption towers. The components included in VCO SITE-TANK-005 Tank System INTEC-055 are inactive from the standpoint of routine RGP operations. None of the units included in this VCO tank system were designed or intended to serve as waste management units. This compliance matrix addresses the equipment that has been characterized as Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) hazardous (see Section 2).

The components addressed in this compliance matrix are the two iodine adsorption towers (VES-WN-102, 98CPP00728; VES-WN-103, 98CPP00729), shell tank (VES-WN-125; 98CPP00740), and ancillary equipment. The three units were removed from service and isolated in 1958 (when the charcoal adsorption beds were replaced with the cryogenic unit in the south cell) but have not been emptied; consequently, these units are subject to HWMA/RCRA regulations because the material in the tanks exhibits the toxicity characteristic for silver (U.S. Environmental Protection Agency hazardous waste number [HWN] D011). The DOG input and output lines have been cut and capped.

Lines 1½" PSS-AR-130951 and 1½" PSS-AR-130957 that are ancillary to DOG hold tanks VES-WN-100 and VES-WN-101 are also included in the compliance matrix in Section 4. These lines were used to transfer spent scrubbing solution from the DOG hold tanks to the INTEC liquid waste management system and, therefore, managed RCRA corrosive waste (HWN D002). The tanks and lines were emptied, flushed, and sampled after the RGP was shut down, and determined to be HWMA/RCRA nonhazardous.

The requirement for daily visual inspections (40 CFR 265.195) is identified as a compliance issue in Section 4 (see Item 20). Daily visual inspections are not conducted for this tank system because it is located in a radiation/contamination area. However, remote liquid-level monitoring of

the secondary containment meets the intent of this requirement and the north gas cell provides adequate secondary containment (see Item 18). The units and ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-055 that are listed in Section 2 will undergo further milestones as required in the VCO Action Plan. Since these units are located in the north gas cell, and the cell is equipped with RCRA-compliant secondary containment, no interim actions are proposed.

VCO UNITS COVERED BY THE INTERIM ACTION COMPLIANCE MATRIX (SECTION 4)

The VCO SITE-TANK-005 Tank System INTEC-055 components listed below have been characterized as RCRA hazardous per EDF-2624 and are covered by the compliance matrix provided in Section 4.

- VES-WN-102 (iodine adsorption tower) and ancillary equipment
- VES-WN-103 (iodine adsorption tower) and ancillary equipment
- VES-WN-125 (shell tank) and ancillary equipment
- 1½" PSS-AR-130951 (line ancillary to DOG hold tank VES-WN-100)
- 1½" PSS-AR-130957 (line ancillary to DOG hold tank VES-WN-101).

OTHER VCO UNITS (NOT COVERED BY THE INTERIM ACTION COMPLIANCE MATRIX IN SECTION 4)

The following units and ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-055 are not covered by the compliance matrix in Section 4 because they were determined to be not subject to HWMA/RCRA regulations (i.e., nonhazardous).

- HE-WN-322 (heat exchanger)
- VES-WN-100 (DOG hold tank)
- VES-WN-101 (DOG hold tank)
- VES-WN-107 (rare gas rhodium converter)
- VES-WN-108 (rare gas rhodium converter)
- 1½" PSS-AR-130950 (line)
- 1½" PSS-AR-130953 (line)
- 1½" PSS-AR-130954 (line)
- 1½" PSS-AR-130955 (line)
- 1½" PSS-AR-130956 (line)
- 1½" PSS-AR-130958 (line)
- 1½" PSS-NA-130959 (line)
- VES-WN-109 (rare gas rhodium converter)
- VES-WN-110 (shell tank)
- ½" PWN-110438 (drain line from shell tank VES-WN-110)
- VES-WN-168 (mist eliminator to VES-WN-100)
- VES-WN-169 (mist eliminator to VES-WN-101)
- 1½" TW-AR-131161 (line)
- P-WN-204 (pump)
- P-WN-205 (pump)
- Line (unlabeled) from where it is cut and capped (in the north gas cell) to line 1½" TW-AR-131161
- Line (unlabeled) from mist eliminator VES-WN-100
- Line (unlabeled) from mist eliminator VES-WN-101
- Line (unlabeled) input to shell tank VES-WN-110.

INTERIM ACTIONS

Table INTEC-055-1. Interim Action Compliance Matrix documenting the requirements of 40 CFR 265 applicable to the VCO SITE-TANK-005 Tank System INTEC-055.

Item	Citation/Brief Description of Requirements	Compliant	Comments/Recommendations for Compliance or Proposed Actions
1	265.13 General waste analysis.	Yes	The contents of vessels VES-WN-102, VES-WN-103, and VES-WN-125, and lines 1½" PSS-AR-130951 and 1½" PSS-AR-130957, have been sufficiently characterized for proper storage. Analysis will not need to be repeated because these vessels and lines are inactive, isolated, and do not receive waste. The contents of these vessels and lines will be further characterized, if necessary, prior to treatment and/or disposal.
2	265.14 Security.	Yes	Facility security is maintained via a combination of television monitors, surveillance by guards, fencing, appropriate signs, and administrative procedures. INTEC is a secure facility with a perimeter fence surrounding the area. Entrance to INTEC requires training and a security background check, or an escort who meets these requirements. The fence is monitored 24 hours a day by guards and video equipment. Security guards control entry to INTEC at the Entry Control Facility. A sign on the entrance to CPP-604 reads, "Restricted Area – Persons not assigned to this area must obtain permission before entering."
3	265.15 General inspection requirements.	See Comment	The units and ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-055 are located in the north gas cell, inside Building CPP-604. The north gas cell is a radiation/contamination area and frequent inspections of VCO SITE-TANK-005 Tank System INTEC-055 cannot be performed without unacceptable radiological exposures to workers. However, any release would be contained by the north gas cell secondary containment system and would drain to sump SU-WL-144, which has leak detection. Any accumulated liquid is removed upon high alarm, which is set just below the lip of the sump.
4	265.16 Personnel training.	Yes	Idaho National Engineering and Environmental Laboratory (INEEL) and INTEC-specific training requirements have been identified for facility personnel and are met through a combination of classroom, computer-based, and on-the-job training. The required records are maintained at the facility.
5	265.17 General requirements for ignitable, reactive, or incompatible wastes.	N/A	Ignitable, reactive, or incompatible wastes are not stored in iodine adsorption towers VES-WN-102 and VES-WN-103, shell tank VES-WN-125, or the ancillary equipment. Since these vessels and lines are inactive, no ignitable, reactive, or incompatible wastes will be added to them in the future.
6	265.31 Preparedness and Prevention.	Yes	The facility is maintained and operated to minimize the possibility of fire, explosion, or sudden release of hazardous waste to air, soil, or surface water that could threaten human health or the environment. Procedures are in place to identify the source of any release to the secondary containment and to minimize the threat to human health and the environment.
7	265.32 and 265.33 Required equipment and testing and maintenance.	Yes	The requirements of this section are met through the INEEL Emergency Plan/RCRA Contingency Plan and Addendum 2 (INTEC). All required equipment is tested and maintained on a routine schedule.
8	265.34 Access to communications or alarms.	Yes	Phones are available in various areas throughout Building CPP-604 and there is always more than one employee on the premises when work is being performed in the north gas cell (a radiological controlled area).
9	265.35 Aisle space.	N/A	This requirement does not apply because the north gas cell in Building CPP-604 is not used for container storage. However, there is adequate space to allow access of emergency equipment and personnel.

Table INTEC-055-1. (continued).

Item	Citation/Brief Description of Requirements	Compliant	Comments/Recommendations for Compliance or Proposed Actions
10	265.37 Arrangements with local authorities for emergency response services.	Yes	Arrangements with local authorities are documented in Appendix C of the INEEL Emergency Plan/RCRA Contingency Plan.
11	265.50 through 265.56 Contingency Plan and Emergency Response.	Yes	The INEEL Emergency Plan/RCRA Contingency Plan and Addendum 2 (INTEC) meet the requirements of this subpart.
12	265.71, 265.72, and 265.76 Manifest System, manifest discrepancies, and unmanifested waste report.	N/A	VCO SITE-TANK-005 Tank System INTEC-055 does not receive waste, and is inactive and isolated.
13	265.73 Operating record.	Yes	A written operating record is maintained, as required, at the facility.
14	265.74 Availability, retention, and disposition of records.	Yes	All records are available for inspection upon request. The records retention period as outlined in 40 CFR 265.73 would be extended under the circumstances described in this requirement.
15	265.75 Biennial report.	Yes	This requirement is addressed by a Site-wide biennial reporting effort that encompasses relevant waste management activities.
16	265.110 through 265.121 Closure and Post-Closure.	See Comment	Closure of iodine adsorption towers VES-WN-102 and VES-WN-103, shell tank VES-WN-125, and ancillary equipment covered by this matrix (see Section 2) will be addressed as part of further milestones under the VCO Action Plan.
17	265.191 Assessment of existing tank system's integrity.	N/A	Iodine adsorption towers VES-WN-102 and VES-WN-103, shell tank VES-WN-125, and ancillary equipment were removed from service and isolated in 1958. A certified written assessment of the integrity of the ion exchange columns is not required because these units and ancillary equipment have secondary containment that meets the requirements of 40 CFR 265.193.
18	265.193 Containment and detection of releases.	Yes	Iodine adsorption towers VES-WN-102 and VES-WN-103, shell tank VES-WN-125, and ancillary equipment (see Section 2) have secondary containment that meets the requirements of this section. The north gas cell is interior to Building CPP-604. The north gas cell has an epoxy-lined floor and wainscot. The floor of the north gas cell is sloped to stainless steel-lined sump SU-WL-144. This sump has level instrumentation that is connected to the distributed control system to detect any release of liquids within the north gas cell. The north gas cell secondary containment system has sufficient capacity to contain 100% of the largest waste tank (43 gal). The lines that are ancillary to iodine adsorption towers VES-WN-102 and VES-WN-103, and shell tank VES-WN-125, are all contained within the north gas cell. The input and output DOG lines for this tank system are cut and capped.
19	265.194 General Operating Requirements.	Yes	Iodine adsorption towers VES-WN-102 and VES-WN-103, shell tank VES-WN-125, and ancillary equipment are inactive and no waste is being added to these vessels. The input and output DOG lines for this tank system are cut and capped. No leaks or spills are known, suspected, or documented to have occurred from the units or ancillary equipment included in this tank system.
20	265.195 Inspections.	See Comment	Daily visual inspections of this tank system are not conducted because frequent inspections of these units, which are located in a radiation/contamination area, cannot be performed without unacceptable radiological exposures to workers. Although not performed daily, visual inspections of the cell are conducted upon initial cell entry in association with other in-cell activities (e.g., repairs, maintenance, etc.). Furthermore, daily secondary containment monitoring meets the intent of the daily inspection requirement.

Table INTEC-055-1. (continued).

Item	Citation/Brief Description of Requirements	Compliant	Comments/Recommendations for Compliance or Proposed Actions
21	265.196 Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.	N/A	No leaks or spills are known, suspected, or documented to have occurred from the units or ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-055. This system is inactive and any historical leaks or spills that are identified in the future will be addressed as part of further milestones under the VCO.
22	265.197 Closure and post-closure care.	See Comment	Iodine adsorption towers VES-WN-102 and VES-WN-103, shell tank VES-WN-125, and ancillary equipment (see Section 2) are inactive. The input and output DOG lines for this tank system are cut and capped. Closure of this tank system will be addressed as part of further milestones under the VCO Action Plan.
23	265.198 Special requirements for ignitable or reactive wastes.	N/A	No ignitable or reactive wastes are stored in the units and ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-055.
24	265.199 Special requirements for incompatible waste.	N/A	No incompatible wastes have been stored in the units and ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-055.
25	265.200 Waste analysis and trial test.	N/A	The units and ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-055 are not used to treat chemically or store hazardous waste that is substantially different or from a substantially different process than originally intended. These units and ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-055 will not be used in the future to store or treat chemically a hazardous waste that is substantially different from that which is currently stored.
26	265.1030 Air Emission Standards for Process Vents.	N/A	The units and ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-055 do not include process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air-steam stripping operations.
27	265.1050 Air Emission Standards for Equipment Leaks.	N/A	The units and ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-055 do not contain hazardous wastes with organic concentrations of at least 10% by weight.
28	265.1080 Air Emission Standards for Tanks, Surface Impoundments, and Containers.	N/A	The units and ancillary equipment included in VCO SITE-TANK-005 Tank System INTEC-055 manage radioactive mixed material. Mixed waste is exempt from this subpart.

VCO SITE-TANK-005 Tank System INTEC-077
(INTEC CPP-603 Old Ion Exchange System)
Interim Action Compliance Matrix

VCO SITE-TANK-005 Tank System INTEC-077 (INTEC CPP-603 Old Ion Exchange System) Interim Action Compliance Matrix

INTRODUCTION

Voluntary Consent Order (VCO) SITE-TANK-005 Tank System Idaho Nuclear Technology and Engineering Center (INTEC)-077 (INTEC CPP-603 Old Ion Exchange System) includes two ion exchange vessels (VES-SF-101, 98CPP00614; VES-SF-102, 98CPP00615) and ancillary piping and equipment. Each vessel is constructed of Type 304 stainless steel with a capacity of approximately 423 gal. The vessels are situated in Building CPP-603, in the Old Ion Exchange Room (Room 116), which is a high-radiation, radioactive contamination area. The process vessels were installed in 1973 as part of the fuel storage basin water treatment system. This treatment process was used to remove radionuclides from the basin water that provided radiation shielding for underwater storage of spent nuclear fuel located in the Fuel Storage Facility (CPP-603). During the time of operation, spent resin from the ion exchange vessels was flushed and gravity-drained to vessel VES-SFE-106 (not in the VCO), a Resource Conservation and Recovery Act (RCRA) interim status radioactive solid and liquid storage tank. The INTEC CPP-603 Old Ion Exchange System is currently inactive.

The resin beds from both ion exchange vessels were transferred to tank VES-SFE-106 in 1988 and vessel VES-SF-102 was placed in standby status. Vessel VES-SF-101 was filled with PDZ-14010 as a test bed for Zeolon 900 replacement. Vessel VES-SF-101 currently contains a full bed of PDZ-14010 zeolite ion exchange resin and is nearly full of basin water. Vessel VES-SF-102 contains some residual Zeolon 900 ion exchange resin on the lower resin screen and is suspected to contain an unknown volume of water below this screen. The ion exchange vessels are currently storing resin beads and basin water. The resin beads have recently been characterized as RCRA hazardous under the VCO and the basin water has been characterized as nonhazardous.

The Old Ion Exchange Room has a containment system (i.e., a floor that is lined with stainless steel with a 6-in. lip and stainless steel-lined sump). During installation of a video camera in the room, a small amount of water was observed on the floor and in the sump. The source of the water was apparently snowmelt, as water was observed running down the walls from the metal roof. Upon reentry, a little over a week later, the water level had receded. A visual integrity inspection of the stainless steel liner and sump was performed on June 27, 2002, and no integrity issues were identified. Material was in the sump; however, a sufficient amount of material was removed to perform the integrity inspection, sampled, and determined to be nonhazardous. A procedure was modified on July 9, 2002, to include removal of accumulated liquid once it reaches the lip of the sump. Remote camera inspections of the old ion exchange vessels began on March 28, 2002, as a means of leak detection for the two vessels and to monitor the accumulation of water from precipitation infiltration.

The INTEC-077 tank system (INTEC CPP-603 Old Ion Exchange System) will be included in the RCRA closure of the basin water treatment system associated with the Fuel Storage Facility (CPP-603).

VCO UNITS COVERED BY THE INTERIM ACTION COMPLIANCE MATRIX (SECTION 4)

VCO SITE-TANK-005 Tank System INTEC-077 vessels VES-SF-101 and VES-SF-102 are covered by the Interim Action Compliance Matrix included in Section 4. The System Identification document for VCO SITE-TANK-005 Tank System INTEC-077 is found in Book 1–INTEC, Volume X.

OTHER VCO UNITS (NOT COVERED BY THE INTERIM ACTION COMPLIANCE MATRIX IN SECTION 4)

This Interim Action Compliance Matrix does not include the following ancillary piping and associated valves included in VCO SITE-TANK-005 Tank System INTEC-077 because they were either never used or did not convey waste and, therefore, are not subject to RCRA regulations.

- 1” BWA-100316
- 2” BWA-100274
- ½” BWA-100288 (from 2” BWA-100284 to V-28)
- ½” BWA-100287 (from 2” BWA-100280 to V-29)
- 2” PSA-100278 (to V-26)
- 2” BWA-101340 (from V-124 to 2” PSA-106398)
- 2” PSA-106398 (from 3” PSA-105570 to 2” BWA-101340)
- 2” BWA-100280 (from VES-SF-101 to V-18)
- 2” BWA-100279
- 2” BWA-100286
- 1” BWA-100317 and associated decontamination spray heads
- 2” BWA-100283
- 2” BWA-100275 and associated screen
- 2” BWA-100284 (from VES-SF-102 to V-24)

INTERIM ACTIONS

Table INTEC-077-1. Interim Action Compliance Matrix documenting the requirements of 40 CFR 265 applicable to the VCO SITE-TANK-005 Tank System INTEC-077.

Item	Citation/Brief Description of Requirements	Compliant	Comments/Recommendations for Compliance or Proposed Actions
1	265.13 General waste analysis.	Yes	The contents of vessels VES-SF-101 and VES-SF-102 have been sufficiently characterized for proper storage. Analysis will not need to be repeated because the vessels do not actively receive waste. The contents of these vessels will be further characterized, if necessary, prior to treatment and/or disposal.
2	265.14 Security.	Yes	INTEC is a secure facility with a perimeter fence. The fence and access points are monitored 24 hours a day by guards and video equipment. Entrance into the INTEC facility requires training and a security background check or an escort who meets these requirements. Signs on the CPP-603 building read "Restricted Area – Persons not assigned to this area must obtain permission before entering." 40 CFR 265.14(c) allows "existing signs with a legend other than 'Danger – Unauthorized Personnel Keep Out' if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous." The entrance to the area of Building CPP-603 that contains the Old Ion Exchange Room is also a secured door.
3	265.15 General inspection requirements.	Yes	A remote camera provides the capability to see vessels VES-SF-101 and VES-SF-102 inside the Old Ion Exchange Room. Although the camera only provides a visual inspection of one side of vessels VES-SF-101 and VES-SF-102, the vessel bottoms and floor beneath these vessels can be inspected using the camera to detect a release of resins. The remote camera inspections are performed and recorded daily. The camera was installed as a means to inspect these vessels since they are located in a high-radiation, high contamination area and could not be inspected without unacceptable exposures to workers. Equipment is staged for use in a procedure for the removal of any accumulated liquid that reaches the lip of the sump. This equipment is accounted for on a routine schedule.
4	265.16 Personnel training.	Yes	Idaho National Engineering and Environmental Laboratory (INEEL) and INTEC-specific training requirements have been identified for facility personnel and are met through a combination of classroom, computer-based, and on-the-job training. The required records are maintained at the facility.
5	265.17 General requirements for ignitable, reactive, or incompatible wastes.	N/A	Ignitable, reactive, or incompatible wastes are not stored in vessels VES-SF-101 and VES-SF-102. Since these vessels are inactive, no ignitable, reactive, or incompatible wastes will be added to them in the future.
6	265.31 Preparedness and Prevention.	Yes	The facility is maintained and operated to minimize the possibility of fire, explosion, or sudden release of hazardous waste to air, soil, or surface water that could threaten human health or the environment. Remote camera inspections of the old ion exchange vessels began on March 28, 2002, as a means of leak detection for the two vessels. Although the camera only provides a visual inspection of one side of vessels VES-SF-101 and VES-SF-102, the vessel bottoms and floor beneath these vessels can be inspected using the camera to detect a release of resins. In the event of a sudden release of resin beads (a hazardous waste), the INEEL Emergency Plan/RCRA Contingency Plan and Addendum 2 would be implemented because such a release would indicate a ruptured vessel, which would likely only be caused by a catastrophic event (e.g., seismic event). There are no flammable or combustible materials present in the Old Ion Exchange Room. A procedure was modified on July 9, 2002, to include removal of accumulated liquid whenever it reaches the lip of the sump.

Table INTEC-077-1. (continued).

Item	Citation/Brief Description of Requirements	Compliant	Comments/Recommendations for Compliance or Proposed Actions
7	265.32 and 265.33 Required equipment and testing and maintenance.	Yes	The requirements of this section are met through the INEEL Emergency Plan/RCRA Contingency Plan and Addendum 2 (INTEC). All required equipment is tested and maintained on a routine schedule.
8	265.34 Access to communications or alarms.	Yes	A phone is available in the area.
9	265.35 Aisle space.	N/A	Containers are not stored in the Old Ion Exchange Room; therefore, this requirement does not apply. There is adequate space to allow access of emergency equipment and personnel.
10	265.37 Arrangements with local authorities for emergency response services.	Yes	Arrangements with local authorities are located in Appendix C of the INEEL Emergency Plan/RCRA Contingency Plan.
11	265.50 through 265.56 Contingency Plan and Emergency Response.	Yes	The INEEL Emergency Plan/RCRA Contingency Plan and Addendum 2 meet the requirements of this subpart.
12	265.71, 265.72, and 265.76 Manifest System, manifest discrepancies, and unmanifested waste report.	N/A	VCO SITE-TANK-005 Tank System INTEC-077 is inactive and does not receive waste.
13	265.73 Operating record.	Yes	A written operating record of information is maintained, as required, at the facility.
14	265.74 Availability, retention, and disposition of records.	Yes	All records are available for inspection upon request. The records retention period as outlined in 40 CFR 265.73 would be extended under the circumstances described in this requirement.
15	265.75 Biennial report.	Yes	This requirement is addressed by a site-wide reporting effort that encompasses relevant waste activities and reported in the INEEL Biennial Report.
16	265.110 through 265.121 Closure and Post-Closure.	Yes	Vessels VES-SF-101 and VES-SF-102 will be included in the RCRA closure of the basin water treatment system associated with the Fuel Storage Facility (CPP-603).
17	265.191 Assessment of existing tank system's integrity.	No (See Comment)	No formal tank assessment that meets the requirements of this section has been performed. However, the tanks are believed to be in good condition because a camera was inserted into VES-SF-102 as part of sampling activities in August 2001 and no integrity issues were noted. No integrity issues were identified for the exteriors of either vessel during the August 2001 sampling activity. The exteriors of both vessels were visually inspected again during the entry on June 27, 2002, to perform a visual inspection of the stainless steel liner and sump, and no integrity issues were identified for either vessel.

Table INTEC-077-1. (continued).

Item	Citation/Brief Description of Requirements	Compliant	Comments/Recommendations for Compliance or Proposed Actions
18	265.193 Containment and detection of releases.	No (See Comment)	Vessels VES-SF-101 and VES-SF-102 do not have secondary containment that meets the requirements of this section. The INTEC CPP-603 Old Ion Exchange System is an inactive process/product system that was not designed to meet RCRA secondary containment requirements for hazardous waste storage. The Old Ion Exchange Room has a stainless steel-lined containment system (sump and floor with a 6-in. lip), and concrete walls that are interior to Building CPP-603; however, water infiltration apparently associated with snowmelt was observed in the sump and on part of the floor during installation of the remote inspection camera in March 2002. Upon reentry to the room a little over a week later, the water had receded. A visual integrity inspection of the stainless steel liner and sump was performed on June 27, 2002, and no integrity issues were identified. Material was in the sump; however, a sufficient amount of material was removed to perform the integrity inspection, sampled, and determined to be nonhazardous. Because the steam-operated jet pump associated with the sump is inoperable and the liquid level instrumentation is not serviceable, equipment is staged and a procedure was modified to allow the removal of accumulated liquid within 24 hours of reaching the lip of the sump, which can be observed from the camera. This procedure became effective July 9, 2002. The stainless steel-lined containment system does not have sufficient capacity (399 gal) to contain 100 percent of one of the ion exchange vessels (423 gal). Remote camera inspections of the old ion exchange vessels began on March 28, 2002, as a means of leak detection for the two vessels. Although the camera only provides a visual inspection of one side of vessels VES-SF-101 and VES-SF-102, the vessel bottoms and floor beneath these vessels can be inspected using the camera to detect a release of resins within 24 hours. A release of resins would necessitate implementation of the INEEL Emergency Plan/RCRA Contingency Plan and Addendum 2 because such a release would indicate a ruptured vessel, which would likely only be caused by a catastrophic event (e.g., seismic event). This tank system is inactive and will be included in the RCRA closure of the basin water treatment system for the Fuel Storage Facility (CPP-603).
19	265.194 General Operating Requirements.	Yes	The INTEC CPP-603 Old Ion Exchange System is inactive and no waste is being added to this system. No leaks or spills are known, suspected, or documented to have occurred for this tank system.
20	265.195 Inspections.	Yes	Remote camera monitoring is used to inspect the visible portions of the tank system and the area immediately surrounding it to detect corrosion, releases, leaks, and other signs of release. Although the camera only provides a visual inspection of one side of vessels VES-SF-101 and VES-SF-102, the vessel bottoms and floor beneath these vessels can be inspected using the camera to detect a release of resins. The Old Ion Exchange Room is in a high-radiation, radioactive contamination area.
21	265.196 Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.	N/A	No leaks or spills are known, suspected, or documented to have occurred for this tank system. This system is inactive. Any historical leaks or spills that are identified in the future will be addressed during RCRA closure.
22	265.197 Closure and post-closure care.	Yes	Vessels VES-SF-101 and VES-SF-102 will be included in the RCRA closure of the basin water treatment system associated with the Fuel Storage Facility (CPP-603).
23	265.198 Special requirements for ignitable or reactive wastes.	N/A	No ignitable or reactive wastes are stored in vessels VES-SF-101 and VES-SF-102.

Table INTEC-077-1. (continued).

Item	Citation/Brief Description of Requirements	Compliant	Comments/Recommendations for Compliance or Proposed Actions
24	265.199 Special requirements for incompatible waste.	N/A	No incompatible wastes have been stored in vessels VES-SF-101 and VES-SF-102.
25	265.200 Waste analysis and trial test.	N/A	The VES-SF-101 and VES-SF-102 vessels were previously part of a process and were not used to treat chemically or store hazardous waste and will not be used in the future to treat chemically or store hazardous waste that is substantially different from that which is currently stored.
26	265.1030 Air Emission Standards for Process Vents.	N/A	The VES-SF-101 and VES-SF-102 vessels do not include process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air-steam stripping operations.
27	265.1050 Air Emission Standards for Equipment Leaks.	N/A	Vessels VES-SF-101 and VES-SF-102 do not contain hazardous wastes with organic concentrations of at least 10 percent by weight.
28	265.1080 – Air Emission Standards for Tanks, Surface Impoundments, and Containers.	N/A	Not applicable because vessels VES-SF-101 and VES-SF-102 currently manage radioactive mixed waste. Mixed waste is exempt from this subpart.

VCO SITE-TANK-005 Tank System INTEC-078
(INTEC CPP-603 Reverse Osmosis and Acid Regenerant System)
Interim Action Documentation

VCO SITE-TANK-005 Tank System INTEC-078 (INTEC CPP-603 Reverse Osmosis and Acid Regenerant System Interim Action Documentation

PURPOSE

This interim action documentation for the Idaho Nuclear Technology and Engineering Center (INTEC) CPP-603 Reverse Osmosis and Acid Regenerant System (Voluntary Consent Order [VCO] Tank System INTEC-078) has been prepared to satisfy a milestone in the VCO for the SITE-TANK-005 Action Plan (IDEQ 2000). Under the SITE-TANK-005 Action Plan, within 90 days of Idaho Department of Environmental Quality (IDEQ) approval of a characterization milestone (the 30% characterization milestone was approved on September 21, 2002) the U.S. Department of Energy (DOE) is required to submit a description of proposed interim actions for those tank systems that have been characterized as Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) hazardous. VCO Tank System INTEC-078 was characterized as RCRA hazardous and the associated Engineering Design File (EDF) (EDF-2620) was approved by IDEQ as part of the 30% characterization milestone submittal. Therefore, this interim action documentation describing the proposed interim actions for VCO Tank System INTEC-078 satisfies the associated milestone.

BACKGROUND

The systems comprising the basin water treatment system at the Fuel Storage Facility (CPP-603) were used to prevent the basin water from becoming overly radioactive. Radioactive particles and ions were removed via the basin water treatment system. VCO Tank System INTEC-078 includes two nitric acid tanks (VES-SF-140, 98CPP00636; VES-SFE-133, 98CPP00638). The reverse osmosis acid feed tank (VES-SF-140; 98CPP00636) was installed in 1980 as part of the reverse osmosis system, which was installed to improve the overall efficiency of the basin water treatment system. This tank was used to automatically adjust the raw water supply to the reverse osmosis system to a pH of 4 to 6 with 13*M* (60% wt) nitric acid (HNO_3), thereby inhibiting scale formation. The portable acid tank (VES-SFE-133; 98CPP00638) supplied nitric acid to the reverse osmosis acid feed tank and regenerant makeup tank (VES-SF-130, 98CPP00631; included in the NEW-CPP-016 VCO Action Plan) for use in regenerating the basin water treatment ion exchange vessels. Additional information regarding this VCO Tank System can be found in the System Identification documentation (INEEL 2001).

The portable acid tank and the reverse osmosis acid feed tank are inactive process/product units. However, during VCO characterization activities it was determined that these tanks were not empty and had not been emptied within 90 days; therefore, the solutions remaining in the tank system were a solid waste subject to HWMA/RCRA regulations. Tank VES-SFE-133 was storing 215 gal of nitric acid and Tank VES-SF-140 was storing 5 gal of nitric acid. Since the tanks were not empty, a hazardous waste determination (HWD) was performed on the contents of the tanks. Results from sampling and analyses concluded that the nitric acid displayed the toxicity characteristic for chromium (U.S. Environmental Protection Agency [EPA] hazardous waste number [HWN] D007) and exhibited the characteristic of corrosivity (EPA HWN D002). Additional information regarding the HWD can be found in the Characterization EDF (EDF-2620).

VCO UNITS INCLUDED

This interim action documentation addresses VCO Tank System INTEC-078 and all associated ancillary equipment. The following list identifies the equipment that is included in VCO Tank System INTEC-078 and will be addressed as part of the removal and subsequent closure activities:

- Portable acid tank (VES-SFE-133) and drip pan
- Pump P-SFE-233
- 1-in. acid line (1" NAA-106397) from the portable acid tank to the regenerant makeup tank (VES-SF-130; included in the NEW-CPP-016 VCO Action Plan)
- ½-in. acid line (½" NA-AR-152514) from the "T" at 1" NAA-106397 to the reverse osmosis acid feed tank (VES-SF-140)
- Reverse osmosis acid feed tank (VES-SF-140) and drip pan
- Pump P-SF-240
- Pump P-SF-240 bypass line (¼" NA-AR-152941)
- ¼-in. acid line (¼" NA-AR-152940) from the reverse osmosis acid feed tank to the point at which it connects with the 1½-in. reverse osmosis raw water feed supply line (1½" RWP-106400)
- Flow Indicator FI-SF-140.

INTERIM ACTIONS

After the material in the tanks was determined to be hazardous, a decision was made to remove the waste and place these tanks in a configuration that would be safer for both the workers and the environment. IDEQ was notified of the intention to remove this waste on the August 2, 2001, VCO/IDEQ monthly conference call (Wessman 2001). On January 23, 2002, the nitric acid was pumped from these tanks, containerized, and managed as RCRA-hazardous waste. The removed acid was subsequently shipped (March 12, 2002) to ONYX Environmental Services, LLC in Henderson, Colorado, for treatment to meet the land disposal restrictions and for ultimate disposal (INEEL 2002). Because the waste was removed from these tanks, no ongoing interim actions are being performed for VCO Tank System INTEC-078 at this time.

VCO Tank System INTEC-078 will be addressed as part of the HWMA/RCRA Closure Plan for the CPP-603 basin water treatment system.[a] However, since INTEC-078 is readily accessible, the entire tank system may be removed as an interim action under the VCO prior to IDEQ approval of the basin water treatment system HWMA/RCRA Closure Plan. Removal activities will involve physically removing both tanks and all ancillary equipment (see equipment list included under heading "VCO Units Included"). The removed components will be managed as RCRA-contaminated debris, placed in a roll-off box, and sent to a private sector treatment, storage, and disposal facility for macroencapsulation (an approved alternative treatment standard for hazardous debris; 40 CFR 268.45) prior to land disposal. Any liquids encountered during the removal activities will be managed and disposed as RCRA-hazardous waste. All removal activities, including the disposition of nitric acid originally found in the tanks, will be documented in the HWMA/RCRA Closure Plan for the basin water treatment system and subsequent

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a. HWMA/RCRA Closure Plan for the Fuel Storage Facility Basin Water Treatment System: VCO NEW-CPP-016 Action Plan (a milestone deliverable under NEW-CPP-016 that is due to IDEQ by June 30, 2003) not only includes units and ancillary equipment associated with the NEW-CPP-016 Action Plan, but also includes units and ancillary equipment included in VCO SITE-TANK-005 Action Plan Systems INTEC-077 and INTEC-078 that were characterized as HWMA/RCRA hazardous

closure certification. Removal activities, if completed as an interim action under the VCO, will be overseen by an independent, registered professional engineer.

Because portions of VCO Tank System INTEC-078 are located outside of Building CPP-603 (portable acid tank [VES-SFE-133], the associated drip pan, and Pump P-SFE-233), soil sampling will be completed to determine whether any historical releases from this tank to the environment have occurred. Subsequent actions taken if soil contamination is identified will be addressed under the HWMA/RCRA Closure Plan for the basin water treatment system. This sampling will also be documented in the HWMA/RCRA Closure Plan and subsequent professional engineer's closure certification.

REFERENCES

40 CFR 268.45, 2002, "Treatment Standards for Hazardous Debris," *Code of Federal Regulations,* Office of the Federal Register, July 23, 2002.

EDF-2620, 2002, "Voluntary Consent Order Tank System INTEC-078 – INTEC CPP-603 Reverse Osmosis and Acid Regenerant System Characterization," Revision 0, June 17, 2002.

IDEQ, 2000, B. R. Monson, IDEQ, to D. N. Rasch, DOE-ID, Enclosure: "Consent Order," Idaho Code §39-4413, June 14, 2000.

INEEL, 2001, *Voluntary Consent Order SITE-TANK-005 System Identification,* "INTEC CPP-603 Reverse Osmosis and Acid Regenerant System (INTEC-078)," INEEL/EXT-2000-00037, Book 1-INTEC, Volume X, Revision 1, September 2001.

INEEL, 2002, *Hazardous Waste Manifest*, Manifest # 01817, Revision 0, March 2002.

Wessman, David L., DOE-ID, to D. Michael Gregory, IDEQ, August 17, 2001, "Transmittal of Voluntary Consent Order August Meeting Minutes (TS-ETSD-01-154)."

VCO SITE-TANK-005 Tank System INTEC-080
(INTEC Tank Farm Auxiliary High-Level Waste Tank System)
Interim Action Documentation

VCO SITE-TANK-005 Tank System INTEC-080 (INTEC Tank Farm Auxiliary High-Level Waste System) Interim Action Documentation

PURPOSE

This interim action documentation for the Idaho Nuclear Technology and Engineering Center (INTEC) Tank Farm Auxiliary High-Level Waste Tank System (Voluntary Consent Order [VCO] Tank System INTEC-080) documents the completion of interim actions previously identified in Revision 1 of the Interim Action Compliance Matrix (approved by IDEQ during the July 11, 2002 monthly conference call [Wessman 2002]). This revision establishes interim actions that are appropriate for the current configuration of the tank system (i.e., tanks have been emptied to their heels) and will replace, upon IDEQ approval, the current interim action documentation in Appendix E of the VCO Action Plan.

BACKGROUND

VCO SITE-TANK-005 Tank System INTEC-080 includes four underground storage tanks (VES-WM-103, 98CPP01397; VES-WM-104, 98CPP01398; VES-WM-105, 98CPP01399; and VES-WM-106, 98CPP01400), the associated mist eliminators, fill piping from the E-Cell of CPP-601, and discharge piping to diversion valve box DVB-WM-PW-B8. The tanks were installed in 1954 and each single-walled stainless steel tank has a capacity of approximately 30,000 gallons. The tanks are direct buried and are situated on reinforced concrete pads. These tanks are located within the fenced and administratively controlled INTEC Tank Farm Facility (TFF).

The tanks were originally connected to the E-Cell in the Fuel Process Building (CPP-601) and designed to hold first-cycle raffinate from spent nuclear fuel reprocessing activities. These tanks collectively stored waste from spent fuel processing and decontamination activities until operations ceased in 1974, at which time the tanks were emptied. During 1974 to 1975, the tanks were each flushed with approximately 5,000 gallons of water and emptied using commonly employed industrial practices. In early 1980, condensate for the process equipment waste evaporator (PEWE) system (a listed hazardous waste) was temporarily stored in tanks VES-WM-103, VES-WM-104, and VES-WM-105 while the service waste injection well was being refurbished, resulting in the application of the PEWE listed hazardous waste numbers to the wastes stored in these tanks. Tank VES-WM-106 was not used to store PEWE condensate and, therefore, the PEWE listed hazardous waste numbers are not applicable to VES-WM-106. The tanks were emptied to their heels in 1983 and the inlet lines from CPP-601 were cut and capped. The tanks were added to the Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) Part A Permit Application for the Idaho National Engineering and Environmental Laboratory (INEEL) in 1987. Flush water was added to each of the 30,000-gallon tanks, then sampled and emptied in February 1990. Steam condensate (RCRA nonhazardous) from the steam jets associated with the tanks subsequently accumulated in each of the tanks. The steam supply was isolated in September 2000 to prevent additional accumulation of steam condensate within the tanks. Tanks VES-WM-103, VES-WM-104, and VES-WM-105 have been characterized as RCRA hazardous as these tanks managed listed hazardous waste from the PEWE. Tank VES-WM-106 has been characterized as RCRA nonhazardous as this tank did not manage the listed hazardous waste managed in the other 30,000-gallon tanks.

Because of the lack of secondary containment, Revision 1 of the Interim Action Compliance Matrix identified the need to remove the contents of each tank. The contents of each tank were emptied to

the maximum extent possible using existing transfer equipment in September 2002, with the final transfer occurring on September 29, 2002, thus meeting the September 30, 2002 due date specified in Revision 1 of the approved Interim Action Compliance Matrix. Prior to the start of the transfers, the steam supply piping system was rebuilt and the level instrumentation for each tank was placed on the Distributed Control System (DCS), calibrated and repaired (these changes resulted in more accurate instrument level readings). Volume balance calculations were performed to ensure the successful transfer of the liquid contents of each tank. The nonhazardous contents of tank VES-WM-106 were transferred first to verify the integrity of the single wall piping between each tank and the DVB-WM-PW-B8 diversion valve box. The volume of liquids transferred (listed in the order of transfer) from each tank was: VES-WM-106 (10,375 gallons of nonhazardous liquids), VES-WM-104 (1,450 gallons), VES-WM-105 (0 gallons), and VES-WM-103 (10,250 gallons). (The liquid level in tank VES-WM-105 was already below the level probe; however, because the suction line for the steam jet is located below the level probe, the steam jet was operated to ensure that the liquids in tank VES-WM-105 were removed to the maximum extent possible.) The contents of each of the 30,000-gallon tanks were transferred to TFF tank VES-WM-187. Although the approved Interim Action Compliance Matrix specified the transfers would be made to the PEWE facility, PEWE startup problems forced the transfer of the liquids to VES-WM-187. The piping configuration from tank VES-WM-187 requires that the liquids be processed through the Evaporator Tank system (ETS) before being processed in the PEWE facility. Prior approval for this minor change was obtained from IDEQ during a separate conference call that was held on September 25, 2002.

VCO UNITS INCLUDED

Units associated with VCO SITE-TANK-005 Tank System INTEC-080 that were characterized as HWMA/RCRA hazardous are covered by this interim action documentation and include tanks VES-WM-103, VES-WM-104, and VES-WM-105, and ancillary discharge piping from these tanks to diversion valve box DVB-WM-PW-B8. The vent condensers and 6-in. stub pipe connections located in the headers (HE-WM-303, HE-WM-304, and HE-WM-305) of the three hazardous waste tanks and overflow lines that connect these tanks are also included. Specific line numbers are identified and highlighted in the characterization Engineering Design File (EDF) for VCO SITE-TANK-005 Tank System INTEC-080 (EDF-2614).

INTERIM ACTIONS

Each of the 30,000-gallon tanks has been emptied to the maximum extent possible using existing transfer equipment; however, a heel remains in each of the tanks, which is estimated to be less than 550 to 650 gallons. This volume is lower than the monitoring capability of the tank liquid level instrumentation and as a result, the tanks do not currently have leak detection. However, the small amount of remaining liquid heels in tanks VES-WM-103, VES-WM-104 and VES-WM-105 are only hazardous because of the derived-from listed Environmental Protection Agency (EPA) hazardous waste numbers associated with the PEWE condensate. The input lines to the tanks have been cut and capped inside CPP-601 and the steam supply to the steam jets associated with each tank has been disconnected, thereby eliminating all potential sources of liquids to the tanks. Tanks VES-WM-103, VES-WM-104, and VES-WM-105 and ancillary piping will be RCRA closed as part of the TFF closure, which is driven by the 1992 Consent Order (and subsequent modifications). RCRA closure will address the liquid heels remaining in tanks VES-WM-103, VES-WM-104, and VES-WM-105. (Closure will be identified as further milestones under the VCO Action Plan.)

As the tanks have been emptied to their heels and do not pose an imminent threat to human health and the environment, no additional interim actions are proposed for VCO SITE-TANK-005 Tank System INTEC-080.

REFERENCES

EDF-2614, 2002, "Voluntary Consent Order Tank System INTEC-080 – INTEC Tank Farm Auxiliary High-Level Waste Tank System Characterization," Revision 1, September 4, 2002.

Wessman, David L., DOE-ID, to D. Michael Gregory, IDEQ, July 30, 2002, "Transmittal of Voluntary Consent Order July Meeting Minutes (TS-ETSD-02-115)."

VCO SITE-TANK-005 Tank System INTEC-601
(INTEC Uranium Dissolution and Extraction Process)
Interim Action Documentation

VCO SITE-TANK-005 Tank System INTEC-601 (INTEC Uranium Dissolution and Extraction Process) Interim Action Documentation

PURPOSE

This interim action documentation for the Idaho Nuclear Technology and Engineering Center (INTEC) Voluntary Consent Order (VCO) SITE-TANK-005 Tank System INTEC-601 (INTEC Uranium Dissolution and Extraction Process) has been prepared to satisfy a milestone in the VCO for the SITE-TANK-005 Action Plan (IDEQ 2000). This interim action documentation has been prepared to document the interim actions that will be taken or are necessary to ensure protection of human health and the environment, and only addresses waste discharge piping from the 22 process units located in Building CPP-601 to the Tank Farm Facility (TFF) that were characterized as having managed a Hazardous Waste Management Act (HWMA) (State of Idaho 1983)/Resource Conservation and Recovery Act (RCRA) (42 USC 6901 et seq.) hazardous waste (EDF-4046).

BACKGROUND

As identified in the combined system identification and characterization document (INEEL 2002), 22 process units discharged waste solutions directly to the TFF. While the process units are not subject to HWMA/RCRA regulations, the piping is subject to HWMA/RCRA regulations as it transferred HWMA/RCRA-regulated waste. The CPP-601 TFF discharge piping includes numerous pipe runs (located both inside and outside Building CPP-601), valves, pumps, steam or air jets, and airlifts. Due to the complexity of this piping system, the Idaho National Engineering and Environmental Laboratory (INEEL) prepared and submitted a detailed engineering design file (EDF), EDF-4046, that included a brief description of the CPP-601 fuel dissolution and extraction process, a historical description of the TFF waste discharge piping, discharge piping configuration and system boundaries, flushing activities, and provided a summary of the current status of each of these lines to the Idaho Department of Environmental Quality. The submittal of the detailed EDF satisfied a further milestone as described in the VCO SITE-TANK-005 Action Plan Tank System INTEC-601.

VCO UNITS INCLUDED

This interim action documentation covers the waste discharge piping used to transfer waste solutions from the 22 process units to the TFF as defined in the combined system identification and characterization document (INEEL 2002). The waste discharge piping includes abandoned piping from CPP-601 to the TFF, inactive discharge piping from CPP-601 to the TFF, piping from the G-Cell to the U-Cell, and piping from the H-Cell to the U-Cell.

INTERIM ACTIONS

Piping Flushed and Empty

The uranium dissolution and extraction process was inactivated in the early 1990s, followed by extensive flushing campaigns with both nitric acid and water to recover residual uranium that may have remained in the equipment and lines. These flushes would have also removed any radiological and hazardous constituents that may have been present. Based on available process knowledge, the abandoned

waste transfer lines, inactive waste transfer lines, and piping from the G-Cell to the U-Cell have been flushed and are believed to be empty.

The abandoned waste transfer lines consist of two 3-in. stainless steel lines (3" PY-2401Y and 3" PU-2297Y) that are enclosed in vitrified tile encasements. The lines were sloped such that liquids flowed by gravity to the WM-178 airlift pit, located within the TFF fence line. These abandoned waste transfer lines have been cut and capped in multiple locations. In order to allow this hands-on activity to occur, extensive flushing of the lines to remove the radiological contamination would have been required. These empty lines do not pose a risk to human health and the environment. Therefore, no interim actions will be implemented prior to closure activities conducted in accordance with a further milestone established under the SITE-TANK-005 Action Plan.

The waste transfer lines consist of two 2-in. stainless steel lines (2" PU-AR-104853 and the inactive 2" PU-AR-104854), secondarily contained within 4-in. stainless steel encasements that are equipped with leak detection. These lines gravity-drained from CPP-601 to the TFF. A portion of the 2" PU-AR-104853 is included in the HWMA/RCRA Part B Permit Application (DOE-ID 2003) and is in compliance with interim status requirements. The secondarily contained 2" PU-AR-104854 line is empty and does not pose a risk to human health and the environment. Therefore, no interim actions will be implemented prior to closure activities conducted in accordance with a further milestone established under the SITE-TANK-005 Action Plan.

The piping from the G-Cell to the U-Cell consists of multiple stainless steel lines that are entirely contained within the CPP-601 facility. The piping, which was designed to gravity-drain, has been cut and capped at both ends. In order for this hands-on activity to occur, extensive flushing of the lines to remove the radiological contamination would have been required. These empty lines do not pose a risk to human health and the environment. Therefore, no interim actions will be implemented prior to closure activities conducted in accordance with a further milestone established under the SITE-TANK-005 Action Plan.

Piping Containing Waste

The piping from the H-Cell to the U-Cell (lines 2" UWA-211, -212, and -213) is believed to contain up to 22 gal of water/raffinate solution. These stainless steel lines are contained entirely within the structure of the CPP-601 facility and are capped at each end. These lines are configured such that there are no valves or flanges that may be susceptible to leakage. The capped ends of the piping are located in stainless steel-lined cells that are equipped with sumps with liquid-level instrumentation. Sump alarms are checked once a shift and sump liquid levels are checked daily. Any liquids collected in the sumps would be transferred to the CPP-601 deep tanks.

The piping runs (approximately 25 ft) from the H-Cell to the U-Cell are located in a lead-shielded trench between the service corridor and the access corridor. The trench is constructed of 2-ft-thick concrete I-beams and several layers of lead bricks. The trench is configured such that if a leak in the piping were to occur, the solution would migrate through the structure of the trench into the access corridor. The access corridor is coated with epoxy paint and daily RCRA inspections of the corridor are conducted as part of active waste management operations at CPP-601.

The piping from the H-Cell to the U-Cell contains liquids that have been characterized as HWMA/RCRA hazardous. Because these lines contain water/raffinate solution, interim actions will be implemented to ensure protection of human health and the environment. By March 31, 2006, the 22 gal of water/raffinate solution will be drained from the piping (2" UWA-211, -212, and -213) and transferred to the CPP-601 deep tanks (RCRA interim status tanks; included in the HWMA/RCRA Part B Permit

Application for the INEEL [DOE-ID 2003]). This timeframe will allow for the proper planning that is necessary to provide for worker safety and radiation protection while accessing these lines. Daily RCRA inspections of the access corridor will continue as part of the active waste management operations at CPP-601.

REFERENCES

42 USC 6901 et seq., 1976, "Resource Conservation and Recovery Act of 1976," as amended.

DOE-ID, 2003, *HWMA/RCRA Part B Permit Application for the Idaho National Engineering and Environmental Laboratory,* DOE/ID-10131, Volume 14, "Idaho Nuclear Technology and Engineering Center (INTEC) Liquid Waste Management System," Revision 2, October 2003.

EDF-4046, 2003, "Voluntary Consent Order SITE-TANK-005 Tank System INTEC-601 – Waste Transfer Lines From CPP-601 to the Tank Farm Facility," Revision 0, September 25, 2003.

IDEQ, 2000, B. R. Monson, IDEQ, to D. N. Rasch, DOE-ID, Enclosure: "Consent Order," Idaho Code §39-4413, June 14, 2000.

INEEL, 2002, *Voluntary Consent Order SITE-TANK-005 Combined System Identification and Characterization for the Uranium Dissolution and Extraction Process at the Idaho Nuclear Technology and Engineering Center*, INEEL/EXT-2001-00225, Revision 2, February 2002.

State of Idaho, 1983, "Hazardous Waste Management," Idaho Statute, Title 39, "Health and Safety," Chapter 44, "Hazardous Waste Management" (also known as the Hazardous Waste Management Act of 1983).

VCO SITE-TANK-005 Tank System TAN-020
(Heat Transfer Reactor Experiment Mercury Contamination Sump System)
Interim Actions

VCO SITE-TANK-005 Tank System TAN-020 (Heat Transfer Reactor Experiment Mercury Contamination Sump System) Interim Actions

BACKGROUND

Voluntary Consent Order (VCO) Tank System TAN-020 (Heat Transfer Reactor Experiment [HTRE] Mercury Contamination Sump System) was originally covered by Violation Number 54 in the 1997 Notice of Violation (NOV) received from the Idaho Department of Environmental Quality (IDEQ) (IDEQ 1997). Requirements to resolve the 1997 NOV were developed and documented in the May 6, 1999, Consent Order (Pisarski 1999). Both the system identification and the hazardous waste determination for VCO Tank System TAN-020 were submitted to IDEQ for their review and approval in a December 20, 2001, letter from Ronald H. Guymon to D. Michael Gregory (Guymon 2001a). Approval of these submittals was obtained from IDEQ on January 29, 2002, in a letter from D. Michael Gregory to Dave Wessman (Gregory 2002a). A schedule for the further milestones (i.e., submittal of the Resource Conservation and Recovery Act [RCRA] closure plan) associated with VCO Tank System TAN-020 was submitted to IDEQ for their review and approval on December 20, 2001, in a letter from Ronald H. Guymon to D. Michael Gregory (Guymon 2001b). Approval for the RCRA Closure Plan submittal date of March 31, 2005, was obtained from IDEQ on January 11, 2002, in a letter from D. Michael Gregory to Dave Wessman (Gregory 2002b).

Completion of all other terms and conditions specified in the May 6, 1999, Consent Order (Pisarski 1999) resulted in a portion of the Test Area North (TAN)/Loss-of-Fluid Test (LOFT) Containment Vessel Sump System that was determined to contain RCRA-hazardous waste to be added to the June 14, 2000, Voluntary Consent Order (IDEQ 2000) under SITE-TANK-005 “Covered Matters” (per the January 29, 2001, letter from D. Michael Gregory to Dave Wessman [Gregory 2001]).

VCO Tank System TAN-020 consists of a peripheral trench, the filter sump, the pressure reduction and decontamination sump (B-232; 98TAN00086), the high level radioactive waste sump (B-236A; 98TAN00082), and associated ancillary equipment (e.g., piping, pumps, and mixers). This extensive system of piping, trenches, and sumps located in Building TAN-650 was originally designed to collect radioactively contaminated liquid waste generated from the mobile test assembly (MTA) nuclear reactor that was housed within the TAN/LOFT containment vessel. The MTA was a scaled-down, pressurized water reactor that was utilized to perform loss-of-fluid experiments. This series of sumps ultimately discharged to the hot waste storage tanks (TAN-726) that were RCRA closed in 1996.

The LOFT Project was completed in 1980 and the LOFT Facility was inactivated in 1986. The LOFT Inactivation Project drained all process liquids and removed all equipment located on the main floor of the TAN/LOFT containment vessel. In 1987-1988, the TAN/LOFT containment vessel was used to decontaminate and decommission (D&D) the HTRE-3 Power Plant. The D&D activities included the removal of the elemental mercury from the HTRE-3 assembly followed by flushing activities to remove any residual amounts of mercury. It was during the flushing activities that a release of mercury-contaminated solution occurred. Sampling results indicate that the solid residuals present in the filter sump are RCRA hazardous for mercury (D009). The solid residuals present in the pressure reduction and decontamination sump are RCRA hazardous for cadmium (D006), lead (D008), and mercury (D009). The

solid residuals present in the high level radioactive waste sump are RCRA hazardous for lead (D008) and mercury (D009).

VCO UNITS INCLUDED

VCO Tank System TAN-020, which is depicted on Schematic P-EA-TAN-CV-A, Revision 1 (Guymon 2001a), includes a peripheral trench, the filter sump, the pressure reduction and decontamination sump (B-232; 98TAN00086), the high level radioactive waste sump (B-236A; 98TAN00082), and associated ancillary equipment (e.g., piping, pumps, and mixers). The discharge piping is included to Room B-225 of Building TAN-650 where it was cut and capped as part of the 1996 RCRA closure of the TAN-726 hot waste storage tanks.

INTERIM ACTIONS

All process equipment that discharged to the TAN-020 sump system were drained and removed as part of the LOFT Inactivation Project that was completed in 1986. All liquids associated with the mercury spill were discharged to the hot waste storage tanks located in Building TAN-726 (RCRA closed in 1996). The RCRA sampling activities and subsequent inspections of the TAN/LOFT containment vessel has confirmed that these sumps are currently dry (i.e., only solid residuals). The TAN/LOFT containment vessel was designed to withstand the temperature and pressure extremes of a simulated reactor core meltdown. The containment vessel is still intact; therefore, water infiltration issues are not likely to occur. Visual inspections of the TAN/LOFT containment vessel completed to date have not identified any water infiltration.

Since the VCO tank system is located in a radioactive contamination area and the sumps contain only dry residuals with all potential inputs removed, only minimal interim actions will be performed. The interim action activities are as follows. These activities will continue until such a time that this tank system is RCRA closed and the tank components are moved to Appendix C as a "Closed Matter" under the VCO.

1. A quarterly inspection of the containment vessel to ensure that the sumps remain dry (frequency was selected to minimize work exposure to radioactive contamination).

2. Implementation of administrative controls to ensure that the containment vessel remains empty and clear of all materials that would compromise the hazardous waste determination completed for this tank system.

REFERENCES

Gregory, 2001, Letter from D. Michael Gregory, IDEQ, to Dave Wessman, DOE-ID, "Response to the Department of Environmental Quality Comments on the Hazardous Waste Determination for the TAN/LOFT Containment Vessel Sump System at the Idaho National Engineering and Environmental Laboratory, EPA. ID No. 4890008952," Certified Mail # 7099 3220 0006 2682 0132, January 29, 2001.

Gregory, 2002a, Letter from D. Michael Gregory, IDEQ, to Dave Wessman, DOE-ID, Certified Mail # 7099 3220 0006 2682 0132, January 29, 2002.

Gregory, 2002b, Letter from D. Michael Gregory, IDEQ, to Dave Wessman, DOE-ID, January 11, 2002.

Guymon, 2001a, Letter from Ronald H. Guymon, INEEL, to D. Michael Gregory, IDEQ, "Response to Department of Environmental Quality (DEQ) Comments on the Hazardous Waste Determination for the 1997 Notice of Violation (NOV) Consent Order Item # 5.16.a.ii," CCN 28302, December 20, 2001.

Guymon, 2001b, Letter from Ronald H. Guymon, INEEL, to D. Michael Gregory, IDEQ, "Completion of 1997 Notice of Violation Consent Order Item # 5.16.a.iii," CCN 28296, December 20, 2001.

IDEQ, 1997, Notice of Violation Issued to the United States Department of Energy regarding the Idaho National Engineering and Environmental Laboratory.

IDEQ, 2000, B. R. Monson, IDEQ, to D. N. Rasch, DOE-ID, Enclosure: "Consent Order," Idaho Code §39-4413, June 14, 2000.

Pisarski, 1999, Letter from D. J. Pisarski, IDEQ, to D. R. Rasch, DOE-ID, "Signed Consent Order to resolve the August 25, 1997, Notice of Violation," Certified Mail # P 241 839 478, May 4, 1999.

VCO SITE-TANK-005 Tank System TAN-031
(TAN/TSF Demineralized Water System)
Interim Action Documentation

VCO SITE-TANK-005 Tank System TAN-031 (TAN/TSF Demineralized Water System) Interim Action Documentation

PURPOSE

This interim action documentation establishes interim actions for the Test Area North (TAN)/Technical Support Facility (TSF) Demineralized Water System (Voluntary Consent Order [VCO] SITE-TANK-005 Tank System TAN-031) and, upon Idaho Department of Environmental Quality approval, will be included in Appendix E of the VCO Action Plan (IDEQ 2000). The interim actions described in this document were implemented to ensure protection of human health and the environment.

BACKGROUND

The TAN/TSF Demineralized Water System (VCO SITE-TANK-005 Tank System TAN-031), installed approximately 20 years ago, was designed to treat raw water but was never placed into active service. This system consists of a caustic bed deionizer (98TAN00354), acid bed deionizer (98TAN00355), elementary neutralization tank (98TAN00365), and four resin bed tanks (U-5, 98TAN00660; U-10, 98TAN00661; U-9, 98TAN00662; U-6, 98TAN0065). These units and ancillary equipment are located in Room 103 of the Manufacturing and Hot Shop (TAN-607).

According to design, raw water would first be treated in the acid bed deionizer, which was to be used to exchange hydrogen ions for cationic species in the water. Water would then be directed though the caustic bed deionizer, which would be used to exchange hydroxide ions for anionic species in the water. Resin in the deionizers would be regenerated by back flushing the tanks with concentrated acid and base for the acid and caustic bed deionizers, respectively. The two waste regenerant streams would be collected in the elementary neutralization tank so that they could neutralize each other. From the caustic bed deionizer, water would be directed through one of two pairs of resin bed tanks, which are connected in parallel. Each resin bed tank contains both cation and anion exchange resins, which would provide final water polishing. After final polishing, the demineralized water was to be collected and stored in either a 10,000-gal or a 4,000-gal demineralized water storage tank. From these tanks, the demineralized water could be pumped to the large utility service pedestal and Utility Service Pedestal B in the hot shop via the hot shop tunnel. The system is tagged “Out of Service 9/23/99.”

Only the caustic bed deionizer (98TAN00354), acid bed deionizer (98TAN00355), and ancillary equipment have been determined to be Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) hazardous (EDF-2140). Both units and ancillary equipment carry the corrosive (D002) U.S. Environmental Protection Agency hazardous waste number. The caustic bed deionizer currently contains sodium hydroxide solution in addition to the anion exchange resin. The acid bed deionizer currently contains concentrated hydrochloric acid in addition to the cation exchange resin. The liquid in the acid bed deionizer also exhibits the lead characteristic (D008), which may have originated from brass fittings during prolonged contact with the hydrochloric acid.

VCO UNITS INCLUDED

This interim action documentation covers only the caustic bed deionizer (98TAN00354), acid bed deionizer (98TAN00355), and ancillary equipment (i.e., supply line and segment of waste line associated with each vessel assumed to contain liquids).

INTERIM ACTIONS

The caustic bed deionizer (98TAN00354), acid bed deionizer (98TAN00355), and ancillary equipment contain liquids that have been characterized as HWMA/RCRA hazardous. The appearance of rust exists near the top and bottom exterior of both vessels, which are also inactive. Although these vessels have not shown any evidence of further deterioration over the past two years, interim actions were implemented to ensure protection of human health and the environment and to reduce the potential spread of contamination should a leak occur from either of these vessels.

The interim actions being implemented for both the caustic and acid bed deionizers and ancillary equipment include the following:

- Daily visual inspections have been implemented to detect any sign of further corrosion or release of waste. Inspections are documented and maintained at the facility.

- Spill pigs have been placed on the floor around the base of the caustic and acid bed deionizers to contain any potential leaks or drips from these vessels. If a leak is discovered, it will be handled as a spill, cleaned up, and notifications will be made, as appropriate.

A maintenance activity was also completed to ensure that a potential release from the caustic and acid bed deionizers and ancillary equipment is contained within Room 103 of the Manufacturing and Hot Shop (TAN-607). This activity, which involved plugging floor drains in this room, was completed in September 2002.

If a leak were to occur from one of the tanks, leakage would most likely occur from pinhole leaks. Spill pigs placed around the tanks would absorb these leaks between inspections. Also, the concrete slab beneath the tanks is painted with a chemical-resistant material, and is sloped to drain liquids to a plugged floor drain. Any liquids released from the tanks will be removed within 24 hours or in as timely manner as possible to prevent harm to human health and the environment, and actions will be taken to prevent further leakage from the tanks.

Implementation of these interim actions will continue until such time that these vessels and ancillary equipment have been either emptied or completely removed as part of HWMA/RCRA closure under the VCO (IDEQ 2000).

REFERENCES

EDF-2140, 2002, "Voluntary Consent Order Tank System TAN-031 – TAN/TSF Demineralized Water System Characterization," Rev. 0, September 23, 2002.

IDEQ, 2000, B. R. Monson, IDEQ, to D. N. Rasch, DOE-ID, Enclosure: "Consent Order," Idaho Code §39-4413, June 14, 2000.