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***Operable Unit 3-14 Tank Farm Soil and
Groundwater Remedial Investigation/
Feasibility Study Work Plan (Draft)***

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U.S. Department of Energy
Idaho Operations Office**

ABSTRACT

This revised work plan for Waste Area Group 3, Operable Unit 3-14 is the planning document for the remedial investigation, baseline risk assessment, and feasibility study that will lead to a final action for contaminated soil in the tank farm and Snake River Plain Aquifer within the Idaho Nuclear Technology and Engineering Center (INTEC) fence line. The U.S. Department of Energy Idaho Operations Office; the U.S. Environmental Protection Agency, Region 10; and the Idaho Department of Environmental Quality created Operable Unit 3-14 because of uncertainties in the Operable Unit 3-13 comprehensive remedial investigation and feasibility study for INTEC. These unresolved issues led to selection of an interim action for the tank farm soil and the aquifer at INTEC under the Comprehensive Environmental Response, Compensation and Liability Act. The decision on a final remedy for these sites was deferred to Operable Unit 3-14. The former INTEC injection well and three no action sites have been included in an explanation of significant difference to the Operable Unit 3-13 record of decision, so these sites have been removed from this revision of the work plan. This revised work plan supersedes the previous Operable Unit 3-14 work plan and scope of work. As a result of an agreement to resolve dispute, the Department of Energy committed to revising the data quality objectives for Operable Unit 3-14 as a modification to the work plan, and the revised objectives are presented in this work plan.

The revised work plan describes historical site information, the data collection tasks, and the proposed methodology for data use and interpretation associated with the production of a remedial investigation and feasibility report that supports selection of remedial alternatives for contamination in tank farm soil and the Snake River Plain Aquifer. Site data will be collected to support the selection of the final remedy for these sites using two investigation phases.

Phase I will involve evaluating extensive historical data on the tank farm, collecting gamma-radiation data from new and existing probeholes in tank farm soil, and preparing contaminant transport and moisture monitoring study work plans, which are necessary to improve the predictive ability of groundwater models, reduce their uncertainty, and initiate moisture monitoring. The scope of the Phase II activities will depend on the results of the Phase I efforts but will involve, at a minimum, more detailed characterization of radioactive areas within the tank farm soil. Treatability studies may be conducted using nonradioactive and/or radioactive soil from the tank farm. The feasibility study will evaluate remedial alternatives to clean up the tank farm soil to mitigate risks and protect the Snake River Plain Aquifer. A strategy to accelerate a record of decision for tank farm soils and groundwater is presented.

CONTENTS

ABSTRACT	iii
ACRONYMS	xv
1. INTRODUCTION	1-1
1.1 Comprehensive Environmental Response, Compensation and Liability Act Regulatory Background.....	1-2
1.1.1 Operable Unit 3-13	1-2
1.1.2 Operable Unit 3-13 Perched Water Final Action	1-3
1.1.3 Operable Unit 3-13 Interim Action for the Snake River Plain Aquifer.....	1-4
1.1.4 Operable Unit 3-13 Tank Farm Soils Interim Action.....	1-5
1.1.5 Agreement to Resolve Dispute	1-5
1.2 Regulatory Background of the Tanks.....	1-6
1.3 Operable Unit 3-14 Objectives	1-10
1.4 Major Changes from the Previous Work Plan	1-11
1.5 OU 3-14 Scope	1-12
1.5.1 Tank Farm Soil	1-12
1.5.2 Snake River Plain Aquifer.....	1-13
2. BACKGROUND AND OPERATIONAL HISTORY	2-1
2.1 Physical Setting	2-1
2.1.1 INEEL Geology	2-2
2.1.2 INEEL Hydrogeology	2-4
2.2 Tank Farm Historical Summary	2-7
2.2.1 Liquid Waste Calcination	2-12
2.2.2 Process Equipment Waste	2-12
2.3 Current Mission of INTEC and the Tank Farm.....	2-12
2.3.1 Closure of the Tank Farm System	2-13
2.3.2 Tank Farm Soil Remedial Investigation	2-14
2.4 Physical Description of Tanks.....	2-14
2.4.1 300,000-gal Tank Design	2-14
2.4.2 Composition, Past Usage, and Closure Status.....	2-16
2.4.3 30,000-gal Tanks	2-23
2.4.4 Tank Farm Piping and Secondary Containment	2-23

2.5	Sources of Tank Farm Waste	2-29
2.5.1	Fuel Reprocessing	2-31
2.5.2	Waste from Other Sources.....	2-32
3.	EVALUATION OF OU 3-14 SITES	3-1
3.1	Sources of Tank Farm Soil Contaminants.....	3-2
3.1.1	Site CPP-31	3-8
3.1.2	Site CPP-28	3-21
3.1.3	Site CPP-79	3-30
3.1.4	Site CPP-15	3-40
3.1.5	Sites CPP-27 and CPP-33.....	3-42
3.1.6	Site CPP-26	3-50
3.1.7	Site CPP-32	3-55
3.1.8	Site CPP-16	3-57
3.1.9	Site CPP-20	3-58
3.1.10	Site CPP-25	3-60
3.1.11	Site CPP-58	3-61
3.1.12	Site CPP-24	3-64
3.1.13	Site CPP-30	3-64
3.1.14	Site CPP-96	3-65
3.1.15	Suspect Piping	3-68
3.1.16	Summary of Operable Unit 3-14 Site Contamination	3-68
3.2	Tank Farm Residual Contamination.....	3-69
3.2.1	Tank Heels.....	3-69
3.2.2	Sand Pad Contamination	3-75
3.2.3	Residual Radionuclide Inventory in Piping.....	3-77
3.3	OU 3-13 Risk Assessment Summary	3-79
3.3.1	Summary of the OU 3-13 Tank Farm Surface Soil Pathway	3-79
3.3.2	Summary of the OU 3-13 Groundwater Pathway Modeling and Risk Assessment.....	3-79
3.4	Contaminant Data Review Summary	3-85
3.4.1	OU 3-13 Risk Assessment Uncertainties	3-85
3.4.2	Tank Farm Soil Contaminants of Potential Concern.....	3-87
3.4.3	OU 3-14 BRA COPC Screening	3-90
3.5	Conceptual Site Model for Risk Assessment	3-92
3.5.1	Contaminant Sources and Pathways.....	3-92
3.5.2	Surface Soil Exposure Routes and Receptors.....	3-92
3.5.3	Groundwater Exposure Routes and Receptors	3-93

4.	CONTAMINANT FATE AND TRANSPORT MODELING	4-1
4.1	OU 3-14 Conceptual Model	4-1
4.1.1	Physical Setting	4-1
4.1.2	Subsurface Geology of INTEC	4-2
4.1.3	Hydrogeological Setting.....	4-3
4.1.4	Liquid Waste/Soil Interactions	4-13
4.1.5	Perched Water and Contaminant Movement through the Vadose Zone in the Tank Farm Area.....	4-15
4.2	Subsurface/Groundwater Transport Modeling	4-19
5.	WORK PLAN RATIONALE.....	5-1
5.1	OU 3-13 and OU 3-14 Remedial Investigation/Feasibility Study Assumptions	5-1
5.1.1	Baseline Risk Assessment Assumptions	5-2
5.1.2	Assumptions used to Scope the Feasibility Study Remedy Evaluation	5-3
5.1.3	Long-Term Land Use Assumptions	5-4
5.1.4	Assumptions for Development of Preliminary Remedial Action Objectives.....	5-5
5.1.5	Investigation-Derived Waste Management	5-6
5.1.6	HWMA/RCRA Tank Farm Closure/ CERCLA Transition.....	5-6
5.1.7	Operational Interfaces	5-7
5.2	OU 3-14 Data Quality Objectives	5-8
5.2.1	Problem Statement	5-9
5.2.2	Decision Statements	5-13
5.2.3	Identify Decision Inputs	5-17
5.2.4	Define Study Boundaries.....	5-26
5.2.5	Define Decision Rules	5-29
5.2.6	Specify Tolerable Limits on Decision Errors	5-32
5.2.7	Optimize the Design.....	5-33
5.3	Phase I Field Investigation	5-36
5.3.1	Installing and Gamma Logging Boreholes.....	5-37
5.3.2	Soil Moisture Monitoring.....	5-38
5.3.3	Contaminant Transport Studies	5-38
5.4	Phase II Field Investigation	5-39
5.4.1	Collecting Samples to Determine Composition	5-39
5.4.2	Collecting Samples for Treatability Studies.....	5-39
5.4.3	Collecting Samples for K _d Studies	5-40

6.	REMEDIAL INVESTIGATION/FEASIBILITY STUDY TASKS	6-1
6.1	Project Plan and Scope	6-1
6.1.1	Field Sampling Plans and Quality Assurance Project Plan	6-1
6.1.2	Health and Safety Plan	6-2
6.1.3	Waste Management Plan	6-2
6.1.4	Data Management Plan.....	6-2
6.2	Quality Assurance and Quality Control.....	6-2
6.3	Data Management and Evaluation.....	6-3
6.3.1	Laboratory Analytical Data	6-3
6.3.2	Field Data	6-3
6.3.3	Data Evaluation	6-4
6.4	Risk Evaluation and Methodology	6-4
6.5	Additional OU 3-14 Investigations	6-6
6.5.1	Contaminant Transport Study.....	6-6
6.5.2	Treatability Study	6-10
6.6	Remedial Alternatives Development and Screening	6-14
6.6.1	Establish Remedial Action Objectives and General Response Actions	6-14
6.6.2	Preliminary Remedial Process Options	6-15
6.6.3	Screening of Process Options.....	6-15
6.6.4	Development of Alternatives.....	6-16
6.6.5	Screening of Alternatives	6-16
6.7	Detailed Analysis of Alternatives.....	6-17
6.7.1	Overall Protection of Human Health and the Environment	6-18
6.7.2	Compliance with ARARs.....	6-18
6.7.3	Long-Term Effectiveness and Permanence	6-18
6.7.4	Reduction of Toxicity, Mobility, and Volume	6-18
6.7.5	Short-Term Effectiveness	6-18
6.7.6	Implementability	6-19
6.7.7	Costs	6-19
6.7.8	State of Idaho Acceptance	6-19
6.7.9	Community Acceptance	6-19
6.8	Remedial Investigation/Feasibility Study Report.....	6-19
6.9	Proposed Plan and Record of Decision	6-20

6.10	Identification of Potentially Applicable or Relevant and Appropriate Requirements (ARARs).....	6-20
6.10.1	Preliminary ARARs Identification for OU 3-14 Tank Farm Soils.....	6-21
6.10.2	To-Be-Considered Guidance	6-24
7.	SCHEDULE	7-1
7.1	OU 3-14 RI/FS Activities.....	7-1
7.2	Accelerated OU 3-14 Schedule	7-7
8.	PROJECT MANAGEMENT PLAN	8-1
8.1	Key Positions and Responsibilities	8-1
8.1.1	NE-ID Project Manager.....	8-2
8.1.2	INTEC Clean/Close Director	8-2
8.1.3	SP-6 Manager	8-2
8.1.4	SP-6 Project Engineer	8-3
8.1.5	OU 3-14 RI/FS Task Lead.....	8-4
8.2	Planning.....	8-4
8.2.1	Planning and Budgeting Overview.....	8-4
8.2.2	Project Baselines	8-4
8.3	Change Control.....	8-5
8.4	Communications.....	8-5
8.4.1	Routine Reports.....	8-5
8.4.2	Event Reports	8-5
9.	REFERENCES	9-1
	Appendix A—Tank Farm Soil and Groundwater Field Sampling Plan for the Operable Unit 3-14 Remedial Investigation/ Feasibility Study (Draft).....	A-1
	Appendix B—Tank Farm Soil and Groundwater Health and Safety Plan for the Operable Unit 3-14 Remedial Investigation/ Feasibility Study (Draft)	B-1
	Appendix C—Waste Management Plan for the Operable Unit 3-14 Tank Farm Soil and Groundwater Remedial Investigation/Feasibility Study (Draft).....	C-1
	Appendix D—Release Site Field Investigation Summaries	D-1
	Appendix E—Evaluation of the Feasibility of an Early Decision and Permanent Remedy for Tank Farm Soil	E-1

FIGURES

1-1.	Location of the INEEL, INTEC, and the tank farm soil sites.....	1-3
1-2.	Map of OU 3-14, including the tank farm area, contaminated soil sites, and key structures	1-8
2-1.	Arial view of the INEEL, showing the bordering mountain ranges	2-2
2-2.	Typical vertical cross-section structure of a basalt flow in the ESRP	2-5
2-3.	Conceptual view of the tank farm looking northeast.....	2-8
2-4.	Schematic showing the PEW system looking east	2-10
2-5.	September 2003 tank farm waste tank volumes (300,000-gal tanks).....	2-11
2-6.	Monolithic octagonal vault for WM-180.....	2-15
2-7.	Pillar and panel octagonal vault for WM-182	2-17
2-8.	Vault and dome of WM-185, with the concrete beams and concrete risers on top	2-18
2-9.	Monolithic square vault for WM-190 (forefront) and WM-189	2-19
2-10.	Split-clay tile encasement design	2-25
2-11.	Locations of the waste transfer lines using split-clay pipe and split-steel encasement	2-27
2-12.	Split-steel encasement design.....	2-28
2-13.	Stainless-steel-lined concrete trough encasement design	2-28
2-14.	Piling and support cap design for the stainless-steel-lined concrete trough encasement design.....	2-29
2-15.	Stainless-steel pipe-within-a-pipe encasement design.....	2-30
2-16.	The process flow of historical fuel operations at INTEC	2-33
2-17.	Facilities that were sources of liquid waste stored at the tank farm	2-34
3-1.	Known tank farm soil contamination sites	3-3
3-2.	CPP-31 release site boundary and locations of monitoring wells and soil probes in and around the release site.....	3-9
3-3.	Plan view of the piping configuration at the CPP-31 release site.....	3-10
3-4.	Extent of lateral contamination at the CPP-31 release site (measurements in R/hr)	3-14
3-5.	Fence diagram showing vertical and lateral extent of soil contamination (measurements in R/hr) at CPP-31	3-15

3-6. East-to-west, A-to-A', fence diagram through the CPP-31 zone of contamination (radiation readings are in R/hr; readings >5R/hr are shown in red)	3-16
3-7. West-to-east, B-to-B', fence diagram through the CPP-31 zone of contamination (radiation readings are in R/hr; readings >5R/hr are shown in red)	3-17
3-8. North-to-south, C-to-C', fence diagram through the body of contaminated soil at CPP- 31 (radiation readings are in R/hr; readings >5R/hr are shown in red).....	3-18
3-9. North-to-south, D-to-D', fence diagram through the body of contaminated soil at CPP-31 (radiation readings are in R/hr; readings >5R/hr are shown in red).....	3-19
3-10. North-to-south, E-to-E', fence diagram through the body of contaminated soil at CPP-31 (radiation readings are in R/hr; readings >5R/hr are shown in red).....	3-20
3-11. CPP-28 trenching investigation location map	3-22
3-12. Test pipes being driven into the ground during the contaminant release investigation in 1974 at CPP-28	3-24
3-13. Drill hole found in waste-transfer line 3"PWA-1005 at CPP-28	3-26
3-14. CPP-13 fence diagram location map	3-27
3-15. East-west fence diagram through the contaminated soil zone at CPP-28	3-28
3-16. North-south fence diagram through the contaminated soil zone at CPP-28.....	3-29
3-17. CPP-79-Shallow piping configuration.....	3-31
3-18. West-to-east fence diagram through A-61, CPP-79-1, and A-62 showing soil sample analytical results	3-34
3-19. Map of the tank farm showing locations of boreholes drilled around sites CPP-28 and -79	3-36
3-20. Cross section through CPP-79 release site showing planned excavation depths	3-38
3-21. Site CPP-15 location map.....	3-41
3-22. Schematic diagram showing piping layout in release area CPP-27/33	3-44
3-23. Map of sites CPP-27 and -33 showing the boundaries of the sites and the locations of previous excavations	3-46
3-24. Photo showing the amount of soil removed from the CPP-27/33 release area during 1983 excavation.....	3-47
3-25. Map of site CPP-27 showing the locations of previously drilled boreholes.....	3-48
3-26. Extent of 1983 excavation within the CPP-27/33 release sites	3-49

3-27. Isometric view of piping associated with the CPP-26 steam release.....	3-51
3-28. Location of the existing boreholes at site CPP-26.....	3-53
3-29. Location of the excavated area within site CPP-26.....	3-54
3-30. CPP-32 east and west release sites	3-56
3-31. Site CPP-16 location map.....	3-57
3-32. Excavation in 1982 north of building CPP-604 showing the soil that was removed	3-59
3-33. Closeup view of 1982 excavation north of building CPP-604 showing the soil that was removed.....	3-60
3-34. Site CPP-58 soil boring location map	3-62
3-35. Tank farm map showing gamma survey results and well, probe, borehole, and cathodic-protection anode drilling locations	3-66
3-36. Tank farm map showing wells, cathodic-protection boreholes/anode estimated locations, and probe/soil-boring locations.....	3-67
3-37. Decision logic for tank farm soil COPC identification	3-88
3-38. CSM for OU 3-14.....	3-89
3-39. INTEC conceptual model features	3-93
4-1. INTEC well location map.....	4-4
4-2. Approximate past extent of shallow perched water identified in the WAG 3 RI/FS	4-5
4-3. North-south fence diagram of INTEC	4-6
4-4. Contour map of the top surface of the upper basalt flow	4-8
4-5. Fence diagram location map.....	4-9
4-6. East-west fence diagram of INTEC.....	4-10
4-7. Southwest-to-northeast fence diagram through the tank farm area	4-11
4-8. Conceptual model of pathways of water and contaminant migration at the alluvium/basalt interface	4-17
5-1. Decision logic for investigating known soil release sites.....	5-35
7-1. Schedule of major project and critical path activities for the OU 3-14	7-2
7-2. OU 3-14 RI/FS work plan logic	7-6
8-1. OU 3-14 tank farm RI/FS organizational structure	8-2

TABLES

1-1.	Current regulatory milestones for closure of the tank farm.....	1-9
2-1.	The 1998 estimated chemical properties and concentrations in 300,000-gal tanks.....	2-20
2-2.	The 1998 estimated radionuclide concentrations (Ci/L) in 300,000-gal tanks.....	2-21
2-3.	March 2001 radionuclides of interest from composite summary of tank farm tanks.....	2-22
2-4.	Types of fuel dissolution performed at INTEC	2-24
3-1.	Known release sites contained in CPP-96	3-4
3-2.	Direct radiation measurements in 1975 from boreholes or observation wells installed at site CPP-31 after the release.....	3-12
3-3.	Summary of the subsurface radiation profile performed on selected probes at site CPP-31 on August 18, 1992	3-21
3-4.	1974 test hole radiation readings for CPP-28 (R/hr)	3-25
3-5.	Borehole sample result comparison (results in pCi/g).....	3-35
3-6.	Estimated curies remaining at CPP-96 release sites.....	3-70
3-7.	Single tank heels inventory at the assumed time of facility closure in 2016.....	3-73
3-8.	Inventory for the sand pads at the time of facility closure (2016).....	3-76
3-9.	Estimated radionuclide inventory for piping at facility closure in 2016	3-78
3-10.	Summary of OU 3-13 tank farm surface soil release sites, OU 3-13 COCs, and PRGs	3-80
3-11.	Summary of the identified groundwater COPCs for OU 3-13	3-81
3-12.	Summary of the OU 3-13 maximum and peak simulated contaminant concentrations for the entire aquifer domain	3-83
3-13.	OU 3-13 groundwater ingestion cancer risk and noncancer hazard quotients in the year 2095 and for the peak concentration if it occurs beyond the year 2095	3-84
3-14.	Site-by-site preliminary summary of radionuclide analyses required to meet BRA data needs for OU 3-14 tank farm soil release sites. An asterisk indicates that the COPC has not been analyzed for at the site.....	3-90
3-15.	Site-by-site summary of inorganic analyses required to meet BRA data needs for OU 3-14 tank farm soil release sites. An asterisk indicates that the COPC has not been analyzed for at the site	3-90
5-1.	Summary of DQO Steps 1 through 7 outputs.....	5-10

5-2.	Summary of DQO Step 2 information.....	5-14
5-3.	Summary of decision inputs required to resolve the PSQs.....	5-17
5-4.	Spatial scale of decision-making	5-28
5-5.	Summary of parameters of interest, action levels, and decision rules.....	5-30
6-1.	Preliminary list of ARARs for tank farm soil and groundwater.....	6-22
6-2.	Preliminary list of TBC environmental criteria for OU 3-14	6-23
7-1.	Schedule for the major OU 3-14 RI/FS documents that will be submitted to the EPA and IDEQ for review and comment	7-2

ACRONYMS

ARAR	applicable or relevant and appropriate requirement
ARD	agreement to resolve dispute
BCP	baseline change proposal
bgs	below ground surface
BRA	baseline risk assessment
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COC	contaminant of concern
COPC	contaminant of potential concern
cpm	counts per minute
CPP	Chemical Processing Plant
CPT	Cone Penetrometer Test
CSM	conceptual site model
CSSF	Calcined Solids Storage Facility
CTS	contaminant transport study
DD&D	deactivation, decontamination, and decommissioning
DOE	Department of Energy
DQOs	data quality objectives
EDF	engineering design file
EPA	U.S. Environmental Protection Agency
ESD	explanation of significant differences
ESRP	Eastern Snake River Plain
FAST	Fluorinel Dissolution Process and Fuel Storage (facility CPP-666)
FFA/CO	Federal Facility Agreement and Consent Order
FDM	finite difference method
FDP	fluorinel dissolution process

FSP	field sampling plan
FY	fiscal year
gpm	gallons per minute
GRA	general response action
HASP	health and safety plan
HLW	high-level waste
HLW&FD FEIS	Idaho High-Level Waste and Facilities Disposition Final Environmental Impact Statement
HWMA	Hazardous Waste Management Act
ICDF	INEEL CERCLA Disposal Facility
ICP	Idaho Completion Project
IDEQ	Idaho Department of Environmental Quality
IDW	investigation-derived waste
IEDMS	Integrated Environmental Data Management System
INEEL	Idaho National Engineering and Environmental Laboratory
INEL	Idaho National Engineering Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
K _d	soil/water partition coefficient
MCL	maximum contaminant level
MCP	management control procedure
MRDS	monitoring report and decision summary
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
ND	not detected
NE-ID	Department of Energy Idaho Operations Office
NEPA	National Environmental Policy Act
NGLW	newly generated low-level waste
NOV	notice of violation

NPAT	neutron probe access tube
NPL	National Priorities List
NRTS	National Reactor Testing Station
NWCF	New Waste Calcine Facility (CPP-659)
OU	operable unit
PEW	process equipment waste
PRG	preliminary remediation goal
psi	pounds per square inch
PRG	preliminary remediation goal
PSQ	principal study question
QAPjP	quality assurance project plan
RAL	Radiological Analysis Laboratory
RaLa	radioactive lanthanum-140
RAO	remedial action objective
RBC	risk-based concentration
RCRA	Resource Conservation and Recovery Act
RD/RA	remedial design/remedial action
RfD	reference dose
RI/BRA	remedial investigation/baseline risk assessment
RI/FS	remedial investigation/feasibility study
ROD	record of decision
SBW	sodium-bearing waste
SF	slope factor
SNF	spent nuclear fuel
SP	subproject
SRPA	Snake River Plain Aquifer

SVOC	semivolatile organic compound
TBC	to be considered
TBP	tributyl phosphate
TFIA	tank farm interim action
TRU	transuranic
UCL	upper confidence level
USGS	United States Geological Survey
USSR	Union of Soviet Socialist Republics
VOC	volatile organic compound
WAG	waste area group
WCF	Waste Calcine Facility
WIR	waste incidental to reprocessing