

**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:**      **STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN**  
**DOE/ID-10825, November 2000**

**DATE:**      11/30/2000                      **REVIEWER:**      IDEO

<b>ITEM NUMBER</b>	<b>SECTION NUMBER</b>	<b>PAGE NUMBER</b>	<b>COMMENT</b>	<b>RESOLUTION</b>
			justification that the production rates could be achieved. The estimates should be based on what it takes to do a specific job. This method produces a more accurate and realistic design estimate.	studies will be performed for the RD/RA Work Plan.  An operations manager has been added to the team to help ensure that the processing times and manpower estimates are accurately estimated and further refined.
<u>99)</u>	<u>Section 2.1, Block Flow Diagram</u>	<u>Page 10 of 38, First Paragraph and Figure 2-2 (BFD-1) on Page 12 of 38</u>	<u>EDF 1547</u>  “The engineering BFD, Figure 2-2 (BFD-1) shows the major activities involving the flow of waste through the SSSTF facility. Each block shows an activity, such as storage or treatment, performed on the primary waste streams only. The amount of waste from the transport vehicle decontamination structure is expected to be significant enough to be included on the BFD with incoming waste streams. Items such as secondary waste, empty containers, and raw processing materials are not shown on the BFD.”  At what point will the “Items such as secondary waste, empty containers, and raw processing materials,” be shown/have their own BFDs?	No change to the 30% design.  The BFD has the vehicle decontamination station water stream. A BFD is intended to show only major waste streams, the PFDs contain the next level of detail. This is where the less significant waste streams such as most secondary wastes are shown.
<u>100)</u>	<u>Figures 2-2 through 2-7</u>	<u>Pages 12-17</u>	<u>EDF 1547</u>  These figures do not show waste streams generated from stormwater. Please include a waste stream associated with recovered contaminated stormwater under system upset conditions in these Figures.	See Resolution to Comment #96.
<u>101)</u>	<u>Figure 2-3</u>	<u>Page 13</u>	<u>EDF 1547</u>  The flow diagram indicates that waste moves from Stabilization Treatment to sampling and if not sampled, goes to ICDF Landfill (see # 91 above). This figure needs to be corrected to show that all post-treated waste goes to Post Treatment Staging and only after LDR	Clarification will be made to the 30% design. The flow diagram has been revised to replace the decision box “IS SAMPLING REQUIRED” with an activity block “POST

SSSTF PROJECT DOCUMENT REVIEW RECORD

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DATE: **11/30/2000** REVIEWER: **IDEO**

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
			verification, does the waste go to the landfill.	TREATMENT STAGING AND SAMPLING AS REQUIRED". From this box the flow diagram goes to the decision box "DOES WASTE MEET ICDF WAC" that replaces the decision block "DOES SAMPLE PASS TCLP". This issue of treatment verification will be addressed in the RD/RA Work Plan documents.
102)	<u>Section 2.2, Decision Diagram</u>	<u>Page 10 of 38, First Paragraph and Figure 2-3 Decision Diagram on Page 13 of 38</u>	<p><u>EDF 1547</u></p> <p>"A decision diagram provides documentation of activities involved in processing waste in the SSSTF/ICDF that cannot be shown on the BFD or PFDs. The decision diagram for the SSSTF/ICDF waste processes is shown in figure 2-3."</p> <p>The Decision Block containing the question " DOES SAMPLE PASS TCLPs?" is recommended to also include the question "AND OTHER CRITERIA". These other criteria would include the Paint Filter Test, The Compressive Strength Test and other WAC mandated requirements prior to disposal in the ICDF Landfill.</p>	See Resolution to Comment #101.
103)	<u>Section 2.3, Process Flow Diagrams, Figure 2-4, SSSTF Waste Receipt PFD</u>	<u>Page 14 of 38</u>	<p><u>EDF 1547</u></p> <p>The assumption is made that the waste stream, WELL PURGE/DEVELOPMENT WATER, will meet the EP WAC. Total Suspended Solids and Percent Passing Filter data will be needed to make this assumption.</p>	Clarification will be made in the 30% design. A note will be added to Figure 2-4 stating: "Purge development water accepted at the SSSTF must comply with the Evaporation Pond WAC.

**SSSTF PROJECT DOCUMENT REVIEW RECORD**

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ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
104)	<u>Figure 2-5, SSSTF Stabilization PFD</u>	<u>Page 15 of 38</u>	<p>This may be an appropriate place to consider the following:</p> <ol style="list-style-type: none"> <li>1. Please note that incoming waste from “ STABILIZATION WASTE FROM STAGING” will require screening, to remove oversized materials. Please do not rely on the WAG to perform this function. The proposed sizing unit (at this point) will not be adequate to pulverize rocks, etc. in the stabilization pit.</li> <li>2. Will there be a mechanism to by pass the PRE-MIX BIN? E.g. for waste requiring a special recipe.</li> <li>3. Second triangle under NOTES, “Design flow rates are based on 13 yd<sup>3</sup> Roll-Off containers. Are the Roll-on/Roll-off containers 13 or 20 yd<sup>3</sup> containers?”</li> </ol>	<ol style="list-style-type: none"> <li>1. See Resolution to Comment #11</li> <li>2. This issue will be addressed in the RD/RA Work Plan.</li> <li>3. The roll-on/roll-off containers have a volumetric capacity of 20 yd<sup>3</sup> but their capacity is based on weight, which is estimated to average 13 yd<sup>3</sup> of in-place waste. (i.e. 13 yd<sup>3</sup> of waste in the inventory may take up more actual volume due to fluffing, but is left as 13 yd<sup>3</sup> in the calculations).</li> </ol>
105)	<u>Figure 2-6, SSSTF/ICDF Landfill PFD</u>	<u>Page 16 of 38</u>	<p>This may be an appropriate place to consider the following:</p> <ul style="list-style-type: none"> <li>• SOLIDS FROM POND DREDGING path is in needed to show treatment prior to placement into the ICDF Landfill. Free liquids in the waste stream will be a primary concern with regards to no free liquids shall be placed in a landfill.</li> <li>• The Landfill Leachate to Stabilization, Landfill Leachate to Evaporation Pond, Decontamination water to Stabilization, Decontamination Water to Evaporation Pond, and Solids From Decontamination to Stabilization will all require a sample to determine WAC criteria, at some point in their flow paths.</li> </ul>	<p>No change in the 30% design. These issues will be addressed in the RD/RA Work Plan and in the ICDF design documents.</p> <p>Design of the leachate collection system, sampling hold-up and disposal to the Evaporation Pond will be included in the ICDF design documents.</p>

SSSTF PROJECT DOCUMENT REVIEW RECORD

DOCUMENT TITLE/DESCRIPTION: STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
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ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
106)	<u>Figure 2-7, SSSTF/ICDF Evaporation Pond Support PFD</u>	<u>Page 17 of 38</u>	<p>This may be an appropriate place to consider the following:</p> <p>Waste-waters from the ICDF Landfill, Well Purge/Development water, water from Decon Station and Raw Water for Make-up will all need to be sampled and demonstrated to be in compliance with the EP WAC, prior to their introduction into the EP.</p>	<p>So noted. There is no reason to sample raw water. See Resolution to Comment 103 and 105.</p> <p>As shown on the drawing the leachate and the water from the decon station will be required to meet the EP WAC.</p>
107)	<u>Section 2.4.3, Waste Processing Schedule Options</u>	<u>Page 22 of 38, The Fourth option</u>	<p><u>EDF 1547</u></p> <p>“The fourth option considered was to negotiate with the waste generating WAGs to store or delay generation wastes until later years to level out the incoming waste rates.”</p> <p>This option does not appear to be environmentally prudent. At this time, DOE ER funding is a variable and available now. An extension of the SSSTF Stabilization schedule could possibly level out incoming waste rates.</p>	<p>No change to the 30% design. Level loading for treatment is a reasonable and cost effective approach to dealing with variable waste volumes. Designing for a 1 year peak load is not fiscally prudent. Last sentence contradicts with the first two sentences.</p>
108)	<u>Section 2.4.4, Modified Waste Receipt Schedule and Table 2-6. Modified Nonaqueous Waste Schedule</u>	<u>Page 22 of 38, Pages 23 and 24 of 38</u>	<p><u>EDF 1547</u></p> <p>“The modified waste receipt schedule involves moving some of the waste streams currently scheduled to be received in peak input years to years when the planned receipt rates are lower. Also included are the waste streams produced prior to 2003 when the SSSTF is scheduled to open. These changes will require negotiations with the affected waste producing WAGs and storage of the waste produced prior to the SSA. The proposed changes are summarized in Table 2-5 and the modified schedule in Table 2-6 and Figure 2-10.”</p> <p>Please Note: Instead of SSSTF/ICDF operational schedule (March through November), expand the operational window to process WAG-</p>	<p>No change to the 30%. Per the conference call on December 11-12, it is not feasible to operate the landfill during the winter. For example, trying to place waste and get the required compaction is very difficult during the winter.</p>



**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:** STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
DOE/ID-10825, November 2000

**DATE:** 11/30/2000                      **REVIEWER:** IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
			generated waste in storage to level off the High receipt periods.	
109)	<u>Section 2.4.6.2, Stabilization Waste Design Processing Rates</u>	<u>Page 26 of 38, Estimate Time for Processing</u>	<u>EDF 1547</u> Sixty min/load may be unrealistic if size reduction is part of this process, if excessive steam is generated, delays in mixing encountered, etc.	<u>See Resolution to Comment #98.</u>
110)	<u>Section 2.4.6.3, Stabilization Waste Receiving Design Rates</u>	<u>Page 26 of 38, First Sentence</u>	<u>EDF 1547</u> A load of waste estimated to be 13 yd <sup>3</sup> in a 20 yd <sup>3</sup> roll-off appears to be the number of choice for calculations in this text. However, the expectation of a WAG manager, with time and budget constraints, to fill roll-on/roll-off boxes 2/3 full is somewhat unrealistic.	<u>So noted.</u> <u>See Resolution to Comment #104-3.</u> DOE Orders invoke US DOT regulations including weight restrictions for over the road hauling.
111)	<u>Section 2.4.6.3, Stabilization Waste Receiving Design Rates,</u>	<u>Page 26 of 38, Time calculations</u>	<u>EDF 1547</u> The equation " $T_{rec} = (1 \text{ shift}/44 \text{ loads})(6 \text{ hr}/\text{day})(60 \text{ min}/\text{hr})$ " may be appropriate for SSSTF treatment and ICDF operations. This will not be the case in a waste receiving office.  The conclusion that the time taken to receive a load will be ~8.3 min/load is simply not enough time to review documentation, collect weight data, documentation, etc.	<u>See Resolution to Comment #98.</u> Operations in the waste receipt office have been minimized to attempt to reduce the time and manpower requirements.
112)	<u>Section 2.4.7, Manpower Requirements</u>	<u>Page 27 of 38</u>	<u>EDF 1547</u> Please include projected manpower requirements for system upset or emergency conditions during the computer process modeling during the 90% design.	<u>So noted.</u> <u>See Resolution to Comment #98.</u>

**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:** STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
DOE/ID-10825, November 2000

**DATE:** 11/30/2000 **REVIEWER:** IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
113)	<u>Section 2.4.7.2, Personnel Numbers and Skills</u>	<u>Pages 27 and 28 of 38, Second and Sixth Bulleted Items</u>	<p><u>EDF 1547</u></p> <p>Second bulleted Item, stating that receiving and exiting will each require 1 administrative person is dependent upon what task “receiving” will entail.</p> <p>Sixth bulleted item estimates that a load going to the ICDF will take less than 8 min/truck is not including the untarping/uncovering time, getting into the ICDF and equipment check. These activities normally take 20 minutes or more.</p>	<p><u>See Resolution to Comment #7 and #98.</u></p>
114)	<u>, Section 2.4.7.2, Personnel Numbers and Skills</u>	<u>Page 30 of 38, Table 2-9, Note 1</u>	<p><u>EDF 1547</u></p> <p>The time estimated in the table are very aggressive. One example is the loading of the trucks occurring at a rate that would be difficult to maintain consistently. Experience has shown that loading waste would consistently take greater than 20 minutes.</p> <p>This table lacks the time that will be needed to decontaminate the Stabilization Tank and Associated Equipment.</p>	<p><u>See Resolution to Comment #98.</u></p> <p>1) In order to achieve the required processing rates, the timing of the inputs will have to be relatively reliable. This will need to be achieved by the waste generators. 2) This will be done on off-shift time.</p>
115)	<u>Section 2.4.7.2, Personnel Numbers and Skills</u>	<u>Page 30 of 38, Table 2-10, Task Time Estimates</u>	<p><u>EDF, 1547</u></p> <p>The time estimates for: transportation into the landfill, unloading procedures and heavy equipment operations appear to be underestimated. No traffic delays, equipment failures, equipment speed, etc. are anticipated.</p> <p>The Radcon Man Minutes are too aggressive. Auditable paperwork to adequately document the release of a vehicle typically takes 10 to 15 minutes to complete.</p> <p>Since there will be alpha contamination surveys the trucks must be dry prior to resurveying. The time for a truck to dry after deconing needs to be included.</p>	<p><u>See Resolution to Comment #98.</u></p>



**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:** STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
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**DATE:** 11/30/2000      **REVIEWER:** IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
116)	<u>Section 3.2.1, Waste Receipt</u>	<u>Page 32 of 38, First Paragraph</u>	<u>EDF 1547</u> The second sentence states, " All required fingerprinting of the waste will have been performed prior to shipment by the INEEL site generating waste." This statement begs the question, who controls/audits this off-site fingerprinting process?	No change to the 30% design. ICDF Complex personnel will audit the waste verification process at the remediation sites, as discussed.  This issue will be addressed in the RD/RA Work Plan.
117)	<u>Section 3.2.1.2, Stabilization Waste</u>	<u>Page 33 of 38</u>	<u>EDF 1547</u> 13 yd <sup>3</sup> container is used. Are these not 20 yd <sup>3</sup> containers containing 13 yd <sup>3</sup> s of waste?	<u>See Resolution to Comment #104-3.</u>
118)	<u>Section 3.2.2, Weighing and Tracking</u>	<u>Page 34 of 38</u>	<u>EDF 1547</u> 13 yd <sup>3</sup> , waste laden, container is used. Are these not 20 yd <sup>3</sup> containers containing 13 yd <sup>3</sup> s of waste?	<u>See Resolution to Comment #104-3.</u>
119)	<u>Section 3.3, Waste Storage and Staging</u>	<u>Page 34</u>	<u>EDF 1547</u> Please include consideration of stormwater management in this Section.	<u>See Resolution to Comment #96.</u>
120)	<u>Section 3.4, Treatment Process</u>	<u>Page 35</u>	<u>EDF 1547</u> Please include consideration of stormwater management in this Section.	<u>See Resolution to Comment #96.</u>
121)	<u>Section 3.4.2, Stabilization</u>	<u>Page 36, Fourth Paragraph</u>	<u>EDF 1547</u> 13 yd <sup>3</sup> container is used. Are these not 20 yd <sup>3</sup> containers containing 13 yd <sup>3</sup> s of waste?	<u>See Resolution to Comment #104-3.</u>

**SSSTF PROJECT DOCUMENT REVIEW RECORD**

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ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
122)	<u>General Comment</u>		<u>EDF 1548</u> This EDF does not adequately consider stormwater management. In particular the management of an additional waste stream associated with contaminated stormwater in the event of a release or under system upset conditions is not considered.	See Resolution to Comment #96.
123) 120)	<u>Section 2.2.2, Land Use/ Zoning</u>	<u>Page 6, First Paragraph</u>	<u>EDF 1548</u> What is meant by the statement, “ Disturbed areas should be avoided”?	Clarification will be made in the 30% design. The statement will be deleted from the document.
124)	<u>Section 2.2.4</u>	<u>Page 7</u>	<u>EDF 1548</u> Please include a paragraph summarizing the planned activities related to stormwater management. Will stormwater be collected and sampled prior to release? Will this take place under normal operating or system upset conditions? What activities are planned to minimize the potential for stormwater contamination or the release of contaminated stormwater?	See Resolution to Comment #96.
125)	<u>Appendix A, Figure</u>	<u>Page 26</u>	<u>EDF 1548</u> Please revise figure to allow for retention, collection, storage, sampling and subsequent management of stormwater assuming a site wide system upset condition during a 25-year storm event.	See Resolution to Comment #96.
126)	<u>Section 1.1, Purpose and Assumptions</u>	<u>Page 7 of 32, Second Paragraph under bulleted Item 2. On page 6 of 32</u>	<u>EDF 1549</u> “The operational mode of the EP, specifically the frequency with which the sludge in the EP will be cleaned out, will also impact the quantities of radioactive and RCRA COC that can be discharged to the EP. For purposes of this EDF, it has been further assumed that the clean out of sludge from the EP will be performed as often as necessary to prevent the excessive build up of the RCRA COCs and	No change to the 30% design. Development of the EP WAC will be part of the ICDF submittals. All fluids accepted into the EP will meet the EP WAC.



**SSSTF PROJECT DOCUMENT REVIEW RECORD**

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**DATE:**      11/30/2000                      **REVIEWER:**      IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
			<p>radionuclides in the EP and thereby ensure environmentally compliant EP operation. The sludge removed from the EP will be disposed of in the ICDF landfill unit.”</p> <p>The future designs and remedial action work plan should develop a standard protocol for sludge removal from the EP. The environmental conditions at the EP will result in the deposition of wind-blown soils and debris to accumulate in the EP. Please explain what method will be used to determine when it is necessary to clean out the EP.</p> <p>All clean-out events will have the potential to damage the EP liner. An assurance mechanism, for determination if the liner has been damaged, needs to be developed and documented for structure integrity documentation. The EP, will also at some point, require repair of damaged liner. Please also include the QA/QC plan for liner repair.</p>	
127)	<u>Section 1.1, Purpose and Assumptions</u>	<u>Page 7 of 32, Items 3 &amp; 4</u>	<p><u>EDF 1549</u></p> <p>“3. All aqueous waste generated in the ICDF and the INEEL WAGs will be capable of being disposed of in the EP without treatment. This is based on the initial NESHAPs modeling of the expected radioactive contamination levels in the potential aqueous waste streams that will be generated in the ICDF landfill leachate and from the INEEL WAGs.</p> <p>4. As part of a CERCLA remedial action, the EP is a component of a Corrective Action Management Unit (CAMU). Aqueous wastes generated within the ICDF Complex will be capable of being disposed of directly in the EP without the need for sampling. Information on the CAMU rule is provided in Section 4.1.2.1.”</p> <p>5. In number 3, “All aqueous waste generated in the ICDF and the INEEL WAGs will be capable of being disposed of in the EP without</p>	See Resolution to Comment #126.

**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:** STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
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**DATE:** 11/30/2000                      **REVIEWER:** IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
			<p>treatment.” is based on NESHAP modeling. Are physical properties of the aqueous waste, such as, percent solids, pH, phase separation and the like considered? As stated in 4, “Aqueous wastes generated within the ICDF Complex will be capable of being disposed of directly in the EP without the need for sampling.” Some type of documentation, for each delivery of aqueous waste discharged into the EP, that the waste is acceptable to the conditions of the EP WAC is needed to insure that the EP does not receive an unacceptable material.</p> <p>At a minimum, the discharged sediments should be filtered prior to discharge in the EP.</p>	
128)	<u>Section 2.1, Evaporation Pond Management Operations</u>	<u>Page 8 of 32, Bulleted items</u>	<p><u>EDF 1549</u></p> <p>Please consider some additional bulleted items presented below:</p> <ul style="list-style-type: none"> <li>• Leak detection technique to be used</li> <li>• EP clean-out “trigger” decision</li> <li>• Sludge removal</li> <li>• Liner Repair</li> <li>• Designation of who will be responsible for maintaining, cleaning and repairing the EP</li> </ul>	See Resolution to Comment #126.
129)	<u>Section 3.1.1, Waste Streams and Volumes</u>	<u>Page 9 of 32, Bulleted Item One</u>	<p><u>EDF 1549</u></p> <p>ICDF landfill leachate sampling frequency has not yet been determined. At this time, annual monitoring appears to be too infrequent.</p>	See Resolution to Comment #126.



**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:**     STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
   DOE/ID-10825, November 2000

**DATE:**           11/30/2000                           **REVIEWER:**       IDEQ

<b>ITEM NUMBER</b>	<b>SECTION NUMBER</b>	<b>PAGE NUMBER</b>	<b>COMMENT</b>	<b>RESOLUTION</b>
130)	<u>Section 3.3, Waste Delivery, Sections 3.3.1 and 3.3.2</u>	<u>Page 10 of 32</u>	<p><b>EDF 1549</b></p> <p>Aqueous waste delivery via flexible hoses drums and pumps all pose a potential risk to the EP liner. Engineering controls should be constructed to prevent the dropping of hose ends on the liner; tipping drums on the liner, pipeline vibration wear on the liner, etc.</p> <p>Historically, surface impoundment liners have been regularly damaged by poor material handling techniques that have resulted in impoundment down time, cost of repairs and the cost of documenting the repairs as adequate.</p>	So noted.
131)	<u>Section 4.1.2, Compliance with ARARs</u>	<u>Page 11 of 32, First Paragraph</u>	<p><b>EDF 1549</b></p> <p>“The pond will be designed and operated in compliance with the ARARs. The majority of ARARs fall into broad categories that relate to design and operation, release detection, and monitoring. For example, the regulations in 40 Code of Federal Regulations (CFR) Subpart K, 264.221 <i>Surface impoundment design and operating requirements</i> will be used as a basis for design requirements for the EP. This regulation also will be the basis for the pond operating procedures, including inspection frequency and pond operating levels.”</p> <p>When designing the EP, please consider access/egress for maintaining the impoundment. The contemplation of repair procedures in the original design of the EP will enhance the operability of the unit.</p>	See Resolution to Comment #126.

**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:** STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
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**DATE:** 11/30/2000                      **REVIEWER:** IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
132) 129)	<u>Section 5.,</u> <u>CONCLUSIONS</u>	<u>Page 13 of 32</u>	<u>EDF 1549</u>  The sentence, "The EP will accept ICDF leachate and other potentially contaminated aqueous waste streams generated within the ICDF and INEEL WAGs without treatment." possibly could be amended to include the filtering out of solids from the aqueous wastes. This would decrease the frequency of clean-out activities and constitute a pro-active, reduced maintenance/risk activity.	See Resolution to Comment #126.
133)	<u>APPENDIX B,</u> <u>Waste Profile</u> <u>Sheet; Part II,</u> <u>Sections 1 and 2</u>	<u>Page 27 of 32</u>	<u>EDF 1549</u>  In the "MATERIAL CHARACTERIZATION", box 1, the aqueous waste is assumed to have zero BTU/Lb value.  The primary concerns for the EP are: Total Solids, Total Suspended Solids and the Percent Passing Filter parameters. Please include these parameters on the WASTE PROFILE SHEET in this section. These parameters will directly affect the sludge intake in the EP.  In box 2, the addition of chloride content of the aqueous waste is of importance if this liquid is to be used as makeup water in the SSSTF. Please include this parameter within this box or box 3.  Please Note: all aqueous waste is wastewater, and TCLP 20 X requirements do not apply, as the analysis is considered equivalent to TCLP analytical data. This is one other factor, which demonstrates that the characterization of wastewater verses non waste-waste water is so crucial to the EP role in the SSSTF operations.	See Resolution to Comment #126.
134)	<u>Section 2.1.2,</u> <u>Compliance with</u> <u>Other ICDF</u> <u>Complex WACs</u>	<u>Page 12 of 45</u>	<u>EDF 1551</u>  This paragraph is very confusing. What does the "if necessary" mean at the end of the first sentence? How is "or other off-site disposal facility WAC, if applicable" the second sentence implemented? How do these WAC requirements get transmitted to the evaluator?	Clarification will be made in the 30% design. The text: "if necessary" was deleted.  Other off-site disposal WAC is



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DOE/ID-10825, November 2000

**DATE:** 11/30/2000      **REVIEWER:** IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
				<p>implemented for the waste deemed special case. This would be for waste that cannot be disposed of in the ICDF without treatment and for which treatment is not possible at the SSSTF. In this case, the waste would then be shipped to an off-site disposal facility where it would then be necessary for the waste to meet that facility's WAC.</p> <p>The waste generator must complete a waste profile sheet prior to shipment to the SSSTF. Prior to shipment, the waste profile sheet will be reviewed and evaluated by the SSSTF personnel, in which a designation will be made. This designation could include ICDF disposal, treatment, and storage pending further disposition. If the latter of these options is encountered, the waste will be stored until a treatment/disposal facility is identified** in which the waste meets the WAC.</p> <p>This issue will be addressed in the RD/RA Workplan.</p> <p>**Waste generator services will be used to assist in determining the final disposition (off-site facility).</p>

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**DOCUMENT TITLE/DESCRIPTION:** STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
DOE/ID-10825, November 2000

**DATE:** 11/30/2000 **REVIEWER:** IDEQ

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
135)	<u>Section 2.2.1</u>	<u>Page 12, Fifth Sentence</u>	<u>EDF 1551</u> The sentence should be corrected to read, "...the LDR, either a verification TCLP will be performed or the waste will be treated".	No change. The comment refers to text that addresses characterization of the waste and does not discuss disposal options. Therefore, the comment to include treatment is not applicable.  Also, the waste may not be treated. It could be sent off-site for disposal or placed into storage until an appropriate facility may be found.
136)	<u>Section 2.3.2</u>	<u>Page 13, Fourth Sentence</u>	<u>EDF 1551</u> The sentence should be corrected to read, "...then either TCLP analysis will be required to determine if the waste is RCRA characteristic or the waste will be treated".	See Resolution to Comment #135.
137)	<u>Table 2-1</u>	<u>Page 14, Second Paragraph, First Sentence</u>	<u>EDF 1551</u> The sentence should be corrected to read, "...then either TCLP analysis will be required or the waste will be treated".	See Resolution Comment #135.

**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:**      **STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN**  
**DOE/ID-10825, November 2000**

**DATE:**      11/30/2000                      **REVIEWER:**      IDEQ

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
138)	<u><b>Section 2.3.2, Hazardous Waste, Table 2-2 and Section 2.5, Exceptions to WAC Requirements (Case-by-Case Acceptance)</b></u>	<u><b>Page 15 of 45 and Page 20 of 45</b></u>	<u><b>EDF 1551</b></u> This table and paragraph talk about case-by-case acceptance, but does not describe how this process works or to what standards they are evaluated. Please clarify.	No change for the 30% design. This issue will be addressed in the RD/RA Work Plan. A procedure for special case waste will be developed and the Agencies will have the opportunity to review the procedure.
139)	<u><b>Table 2-3</b></u>	<u><b>Page 21, Sixth Waste Description - Used Oil, First Sentence</b></u>	<u><b>EDF 1551</b></u> How can the SSSTF allow the disposal of used oil? Do they intend to use it in the stabilization process? Do they intend to perform a waste characterization on the used oil to verify that it doesn't meet the definition of a hazardous waste? Per §264.314(b), "... the placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not sorbents have been added) in any landfill is prohibited." Additionally, §264.314(f) states in part, "...the placement of any liquid which is not a hazardous waste in a landfill is prohibitive...".	Clarification will be made in the 30% design. The text will be revised to indicate that the waste will be disposed of off-site.
<b>Treatability Study Work Plan (TSWP)</b>				
140)	<u><b>Section 1.4, Treatability Study Approach</b></u>	<u><b>Page 5, Third Sentence to end of Paragraph</b></u>	"Performance of the recipe on the surrogate will be based on TCLP testing, free-standing water test, and compressive strength of the stabilized product. Ideally, the recipe should provide a dry, nonslab-like end product similar in physical character to the original soil. Cure time will not be explicitly examined as a process parameter in these studies as the full-scale design will be based on a relatively short cure time of 24 hours."  Cure time is a large factor for compressive strength testing if ASTM D2166-98b is to be used for this testing. Is unconfined compressive	No change to the 30% design. The treatability study is being designed to mimic the operation of the large-scale facility. The current concept calls for a 24-hour "cure". The cured product is not intended to provide structural strength, as this material will be used within a landfill where it will be intermingled with soils. The point

**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:** STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
DOE/ID-10825, November 2000

**DATE:** 11/30/2000 **REVIEWER:** IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
			<p>strength testing appropriate for materials to be landfilled?</p> <p>Is a short cure time of 24 hours an operations based friendly full-scale design advantage? If the treated material achieves an end product similar in physical character to the original soil, then would not compaction parameters be more appropriate than unconfined compressive strength testing?</p>	<p>regarding compaction parameters is well taken and should be part of the ICDF WAC, which the stabilized material will meet.</p>
141)	<p><u>Section 2.1.1,</u> <u>CERCLA</u> <u>Remediation Sites</u> <u>Utilizing</u> <u>Stabilization,</u> <u>Sapp Battery</u> <u>CERCLA</u> <u>Remediation Site</u></p>	<u>Page 6</u>	<p><u>TSWP</u></p> <p>A reference is made to the SPLP tests as another measure of long-term stabilization performance. Is SPLP testing implied in the document as part of SSSTF testing requirements?</p>	<p>No change to the 30% design. SPLP testing is not being considered as part of the Treatability Study.</p>
142)	<u>Section 2.1.4</u>	<u>Page 8</u>	<p><u>Treatability Study Workplan</u></p> <p>Why wasn't Envirosafe included as an example? A site audit was performed there.</p>	<p>Clarification will be made in the 30% design. Section 2.1.4.3 has been inserted into the text to include Envirosafe as an example.</p>
143)	<p><u>Section 3., TEST</u> <u>OBJECTIVES</u></p>	<u>Page 11, Last Paragraph</u>	<p><u>TSWP</u></p> <p>"Secondary objectives of this study relate to implementing this treatment on a large scale. It is desirable for the end product to remain in a nonslab form suitable for direct exhumation from the treatment site. The concept being that treated waste will be moved from the treatment facility and placed directly in a landfill. A friable solid material would allow simple materials handling for personnel and minimize subsidence in the landfill."</p> <p>This paragraph does not address time for verification testing at the</p>	<p>No change in the 30% design. Treatment verification issues will be addressed in the RD/RA Work Plan documentation.</p> <p>See Resolution to Comment #63.</p>

**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:** STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
DOE/ID-10825, November 2000

**DATE:** 11/30/2000                      **REVIEWER:** IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
			SSSTF or unconfined compressive strength testing at the SSSTF. Please include the methods for assurance, sampling and testing requirements of the SSSTF as they relate to the Treatability Study.	
144)	<u>Section 3</u>	<u>Page 11, Second Bullet</u>	<b><u>TSWP</u></b> The use of “exhibits no free-standing water” is incorrectly stated. Per §264.314(c), the treated waste must pass the paint filter test to “demonstrate the absence or presence of <u>free liquids</u> not free-standing water.	Clarification will be made in the 30% design. The text in this bullet was revised to read: “Exhibits no free liquid as determined by the paint filter test”.
145)	<u>Section 4.2.4.2</u>	<u>Page 20</u>	<b><u>TSWP Workplan</u></b> This sentence should read, “Stabilization samples will be tested with Method 9095A (paint Filter Test).”	Clarification will be made in the 30% design. Section 4.2.4.2 was revised to read: “ Stabilized samples will be tested with Method 9095A, the paint filter test.”
146)	<u>Section 10., RESIDUALS MANAGEMENT</u>	<u>Page 30, Bulleted Items</u>	<b><u>TSWP</u></b> Please add an additional bullet item: <ul style="list-style-type: none"> <li>• Contaminated Equipment wash/rinse waters</li> </ul> Please amend bulleted item five: <ul style="list-style-type: none"> <li>• Extraction fluids (<i>TCLP</i>)</li> </ul>	Clarification will be made in the 30% design. Section 10, bullet 5 was revised to read: “Extraction fluids (TCLP)”. A new bullet was added stating “Contaminated Equipment wash/rinse waters”.
147)	<u>Section 10.1 Waste from Surrogate Tests</u>	<u>Page 30, First Sentence</u>	<b><u>TSWP</u></b> “The tests on surrogate waste will use soils spiked with leachable heavy metals; therefore, there is a potential for generating toxic metal-bearing hazardous waste.”  Hazardous waste <u>will</u> be generated by definition of the goal, “potential” should be eliminated.	No change to the 30% design. If waste meets the criteria of being hazardous waste it will be managed as hazardous waste as described in Section 10.1.

SSSTF PROJECT DOCUMENT REVIEW RECORD

DOCUMENT TITLE/DESCRIPTION: STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
DOE/ID-10825, November 2000

DATE: 11/30/2000 REVIEWER: IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
148)	<u>Section 2.1.2, Staging and Storage Function</u>	<u>Page 12 of 52, Last Paragraph</u>	<u>T&amp;FR/ARARs</u> The text needs to add language in this Section addressing TSCA staging and storage issues as presently there is no reference or discussion.	Clarification will be made in the 30% design. The first sentence will be changed to read, "The staging and storage function will meet RCRA and TSCA staging and storage requirements..."
149)	<u>Section 2.1.2</u>	<u>Page 13, First Paragraph, First Sentence</u>	<u>T &amp; FRs and ARARs</u> What is a "lay-down area"? This term should be defined in Section 1.4. How will it be regulated, as a waste pile or a temporary unit?	Clarification will be made in the 30% design. The text "lay-down area" was replaced with "staging area" to avoid confusion.
150)	<u>Appendix B</u>	<u>Page B44 of B51</u>	<u>T&amp;FR/ARARs</u> Reference to 40 CFR 268.40: Comment regarding "(3) (b) Wastewater. Treatment standards do not apply. The SSSTF will not treat wastewater." This is not true. There have been numerous references throughout the 30% SSSTF Design indicating that treatment is anticipated. For example, leachate/ decontamination waters/ purge waters are tentatively earmarked for use in the stabilization process. Please revise this section.	Clarification will be made in the 30% design. As noted in the December 11 and 12 conference calls, waste water will not be treated. This will be eliminated from the document, including the ARARs table. This issue will be addressed further in the RD/RA Work Plan.
151)	<u>Table 3.1.4-1</u>	<u>Page 33, and Appendix B</u>	<u>T&amp;FRs and ARARs</u> The ARAR list and the detailed ARAR table in Appendix B should also address the substantive requirements of the following: a) <b>IDAPA 58.01.01.203.03, Page 34.</b> Where IDAPA 58.01.01.585 and 586 are included in the ARAR Table, it would be appropriate to also refer to the applicable requirements given by IDAPA	a) No change to the 30% design. This issue will be addressed in the RD/RA Work Plan. Compliance with the IDAPA limits will be met through NESHAPs modeling and other site modeling.

**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:** STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
DOE/ID-10825, November 2000

**DATE:** 11/30/2000      **REVIEWER:** IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
			<p>16.01.01.203.03 and 210 as well. Using the methods provided in IDAPA 58.01.01.210, it should be demonstrated that the emissions of toxic air pollutants from the proposed SSSTF project would not injure or unreasonably affect human or animal life or vegetation as required by IDAPA 58.01.01.161. To accomplish this, emission rates from individual sources would need to be estimated, and air dispersion modeling would need to be conducted. Again, it may be necessary to determine the maximum production rate(s) which will assure compliance with the air toxics standards.</p> <p>b) <b>40 CFR 61.92 and 93, Appendix B, Page B4.</b> To remain consistent with other sources at the INEEL with air permits, it needs to be demonstrated that the contribution of this source, in addition to the other existing sources at the INEEL, will not exceed the allowable level of 10 mrem/yr. This should also be clarified in Section 3.1, #7, Page 3-2 (Book 1).</p> <p>c) <b>IDAPA 58.01.01.585, 586, Appendix B, Page B9.</b> It appears that consideration has only been made with respect to organic air toxics. Consideration should also be made with regard to metals contained in particulate matter that may be released from the SSSTF air emission sources.</p> <p>d) From the information presented in Section 2.1.1.1, page 2-3 (Book 1) and page 1 of EDF 1540, it is apparent that no treatment is planned for organics, however some sites may contain them. Since these wastes will still be handled in the treatment building, some emissions are likely. Even though very small, conservative emission estimates should still be prepared and modeled to show that the substantive requirements of IDAPA 58.01.01.203.03 will be met.</p>	<p>b) No change will be made to the 30% design. As noted in the requirement section of Appendix B, page B4, CAP-88 modeling will be performed to determine compliance with this standard. The CAP-88 modeling will be included in the RD/RA Work Plan design documents to show compliance with 40 CFR 61.92 and 40 CFR 61.93.</p> <p>c) Clarification will be made in the 30% design. The text in the detailed ARAR table has been modified to show that these requirements are applicable and to state: "The contaminants that have been detected in the design waste inventory will be used to determine if the SSSTF design and operations will be in compliance with screening emissions levels and acceptable ambient concentrations. These determinations will be included in the RD/RA Work Plan design document."</p> <p>d) No change in the 30% design. As noted in response to the previous comment, the contaminants that</p>

**SSSTF PROJECT DOCUMENT REVIEW RECORD**

**DOCUMENT TITLE/DESCRIPTION:** STAGING, STORAGE, SIZING, AND TREATMENT FACILITY DRAFT 30% DESIGN  
DOE/ID-10825, November 2000

**DATE:** 11/30/2000 **REVIEWER:** IDEO

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
				<p>have been detected in the design waste inventory will be used to determine if the SSSTF design and operations will be in compliance with screening emissions levels and acceptable ambient concentrations. These determinations will be included in the RD/RA Work Plan design document. This approach will address the potential for toxic air releases. As noted in response to Comment 151a, the ARAR list in the T&amp;FRs and the detailed ARAR table address all of the applicable relevant and appropriate requirements as determined by the FFA/CO signatory Agencies during development of the ROD (see Table 12-3 of the OU 3-13 ROD for a complete ARAR list). IDAPA 16.01.01.203.03 is not an ARAR in Table 12-3 of the ROD. Also, it is not invoked by either 16.01.01.585 or 16.01.01.586. Demonstration of compliance with these numbers will be met through appropriate modeling.</p>