MFFFNPEm Resource

From: Gwyn, Dealis W. [DWGwyn@moxproject.com]
Sent: Tuesday, November 27, 2007 3:18 PM
To: David Tiktinsky
Subject: RE: Slides - early draft
Attachments: ACNW WSB.ppt

Revised slides

-----Original Message-----
From: David Tiktinsky [mailto:DHT@nrc.gov]
Sent: Friday, November 16, 2007 5:33 PM
To: Gwyn, Dealis W.
Subject: Re: Slides - early draft
Importance: High

** High Priority **

I was working with them today and I have a couple of questions/clarifications

1. For the waste stream identified as LLW, is that the Chlorine waste from the AFS or the Excess solvent waste? Does the 7 day capacity you stated mean that MFFF will need to shut down within 7 days of a WSB problem (ie, the most restrictive storage issue)? The Waste stream chart shows chlorine waste going to the WSB and solvent waste going to the SRS. I would like to have a little more info on these waste streams including storage capacities.

2. Do you have any info on how big the batches will be for liquid waste?

3. Will the LLW also be sent in bathes or continuously.

4. I would also like to include information on the solid waste. Is it all put in drums? What is the storage capacity for waste drums? It seems like there are 2 paths, one for TRU waste and one for LLW waste. How do the waste generation rates equate to number of drums/year.

5. There appears to be an inconsistency for the High alpha waste generation rates. For the 33,000 liters for year generation rate, a 3 month storage capacity would be less that the 10,500 L (x 2) storage tanks. Should the size of the tanks be different that what you have on the slide.

6. Do you have the final Environmental report that include rev1-5? A pdf would be useful if you have it. Thanks.

7. Do you have a clearer copy of the waste stream chart?

I'm sure I will come up with more questions as I put together the presentation. Thanks and have a good Thanksgiving holiday.

>>> "Gwyn, Dealis W." <DWGwyn@moxproject.com> 11/15/2007 1:38 PM >>>
Dave,

Attached is a first cut at slides. I've pulled info mainly from the FEIS and an internal project document (Waste Management Plan). There are items that I still need to verify, but hopefully this can help you determine if this is the type of info you want for your presentation.

You can call me this afternoon if you have questions. You could call me tomorrow on my cell phone, but it looks like I'm going to have to play golf at a new course (at least new to me).

Dealis

Hearing Identifier: MixedOxideFuelFabricationFacility_NonPublic
Email Number: 475

Mail Envelope Properties (C56E360E9D804F4B95BC673F886381E70A901D701F)

Subject: RE: Slides - early draft
Sent Date: 11/27/2007 3:18:11 PM
Received Date: 11/27/2007 3:18:11 PM
From: Gwyn, Dealis W.

Created By: DWGwyn@moxproject.com

Recipients:
"David Tiktinsky" <David.Tiktinsky@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR02.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	3113	11/27/2007 3:18:11 PM
ACNW WSB.ppt	237120	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

MFFF Waste

Liquid Waste Sources

- High alpha activity waste stream
  - Liquid americium
  - Excess acid
  - Alkaline
- Stripped uranium stream
  - Less than 0.9 % uranium-235
- Low level liquid waste stream
  - very low radioactive contamination or the potential for radioactive contamination
    - Lab rinsing water
    - Sanitaries
    - HVAC condensate
    - Distillate waste
    - Chlorinated effluents

Waste Generation Basis

- High alpha activity
  - Maximum expected volume
    - 44,200 L (11,700 gal) per year
    - Approximately 25 transfers per year
- Stripped uranium
  - Maximum expected volume
    - 174,000 L (46,000 gal) per year
    - Approximately 42 transfer per year
- Low level liquid
  - Maximum expected volume
    - 1,078,000 L (285,000 gal) per year
    - Approximately 80 transfers per year

MFFF Waste Streams

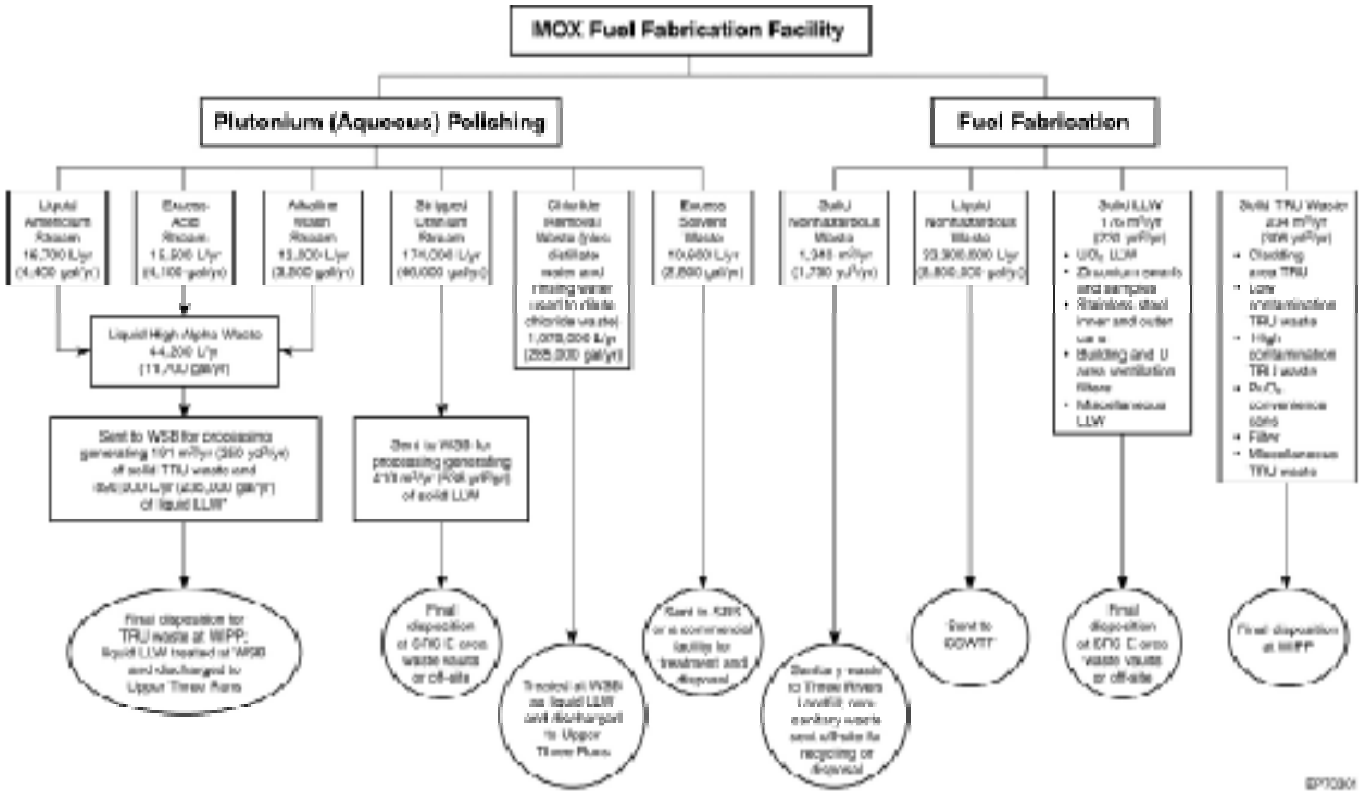


Figure 4.1. Waste streams generated by the proposed MOX facility (Source: Modified from DCS 2003a, 2004a).

Waste Holdup Capabilities

- High Alpha Waste Collection Tanks
  - 2 tanks
  - 10,500 liters each
  - Approximately 6 months holdup capacity
  - Agitated or recirculation to mix tanks
- Stripped Uranium
  - 4 tanks
  - 11,000 liters each
  - 3 months holdup capacity
  - Agitated or recirculation to mix tanks
- Low level liquid
  - 2 tanks
  - 11,500 liters each
  - 7 day holdup capacity

Waste Transfer Lines

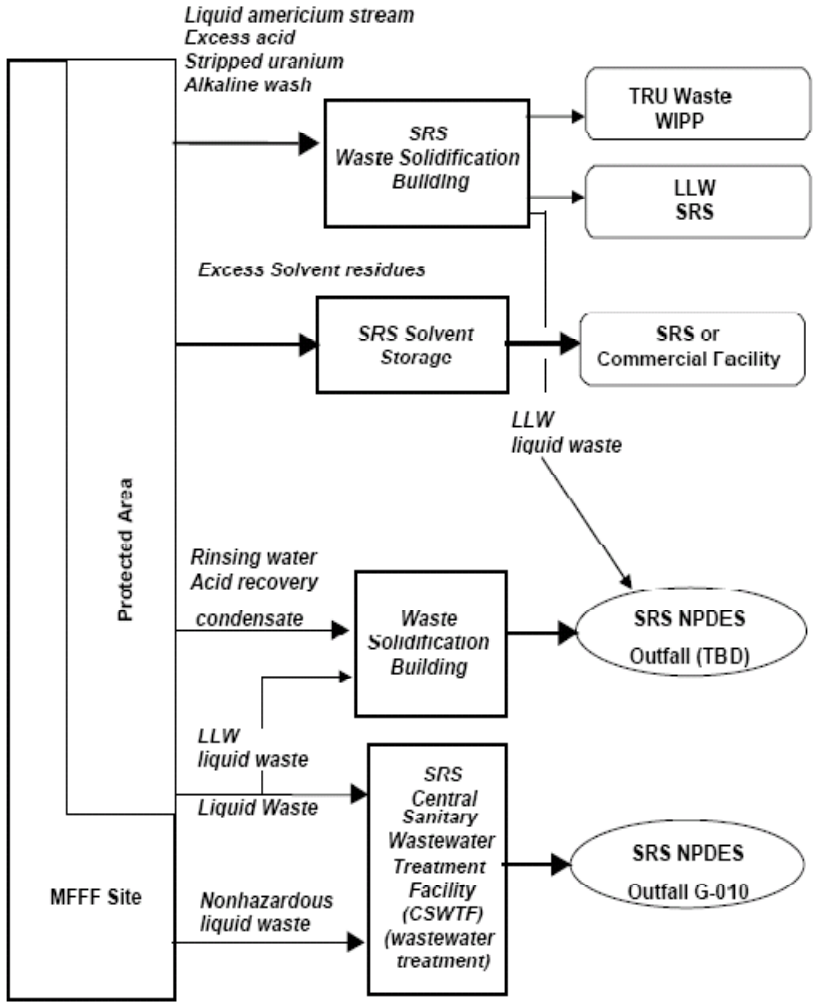
- Dedicated lines
  - Buried underground
  - Double walled stainless steel pipe
  - Item Relied on for Safety (IROFS) (high alpha waste)
  - Approximately 2000 feet
  - Leak detection system
  - Withstand seismic events and other applicable events

Solid Waste

- Loaded into drums
- Transferred to WSB for disposition
  - Approximately 1 transfer/week
- TRU Waste
  - Approximately 1100 drums/year
  - MOX storage capacity - ????
- LLW
  - Approximately 1500 drums/year
  - MOX storage capacity - ????

Waste Solvent

- Excess solvent waste
  - generated from solvent recovery process
  - slightly contaminated
  - Approximately 10,600 L (2,800 gal) per year
  - 1 tank
  - xxxxx liters
  - Sampled to determine compliance with WAC
  - Batch transferred to carboy or suitable container
  - Containers transferred to WSB


Liquid americium stream
Excess acid
Stripped uranium
Alkaline wash
SRS
Waste Solidification
Building
TRU Waste
WIPP
LLW
SRS
Excess Solvent residues
SRS Solvent
Storage
SRS or
Commercial Facility
LLW
liquid waste
Protected Area
Rinsing water
Acid recovery
condensate
Waste
Solidification
Building
SRS NPDES
Outfall (TBD)
LLW
liquid waste
Liquid Waste
SRS
Central
Sanitary
Wastewater
Treatment
Facility
(CSWTF)
(wastewater
treatment)
SRS NPDES
Outfall G-010
MFFF Site
Nonhazardous
liquid waste

MOX Services – SRS Interface Control Documents

- Waste acceptance criteria
  - consistent with MOX waste streams
  - consistent with Integrated Safety Analysis
- Provides for notifications between MFFF and WSB management
- Waste sampled and analyzed prior to transfer

WSB Disruptions

- Response no different than any difficulty in MFFF
  - Respond to event in a predefined manner per operating procedures
  - Resolve the event
- Potential impacts
  - Stop transfer of waste
  - Store waste in holding tanks
  - Suspend waste generating operations
  - Maintain facility in safe condition until issue resolved
    - Potential events evaluated in Integrated Safety Analysis
    - Agitators and/or recirculation capability provided to ensure mixing of tank contents
- WSB procedures will provide for contingencies for any facility disruptions

Waste Solidification Building Status

- DOE Critical Decision (CD) – 2 (procurement) and 3 (construction) in 2008
- Plan to start construction in xxxx
- Construction schedule consistent MOX Services construction and startup schedules