



West Valley Demonstration Project

West Valley
Environmental
Services

Radiation Safety

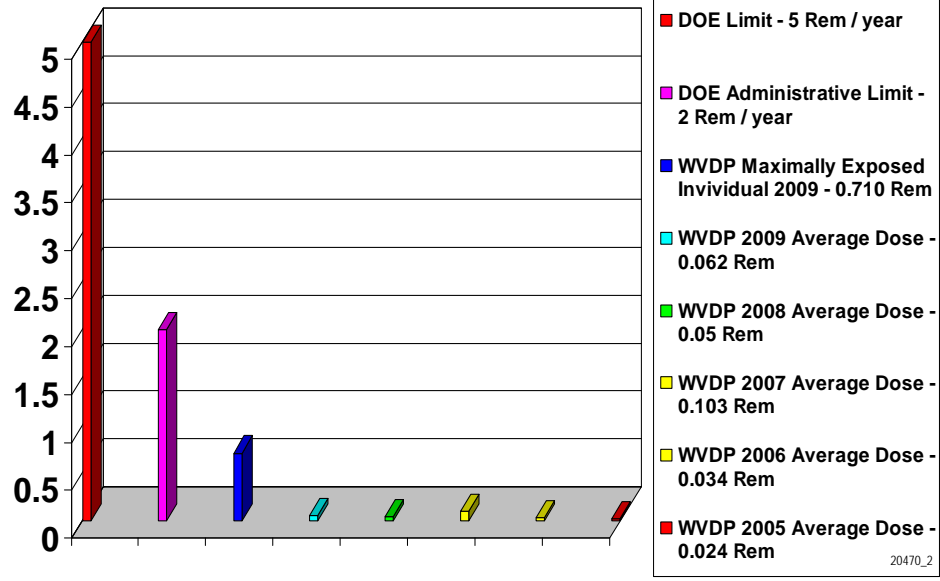
Dave Biela, WVES Radiation Safety Manager

West Valley Citizen Task Force
February 24, 2010

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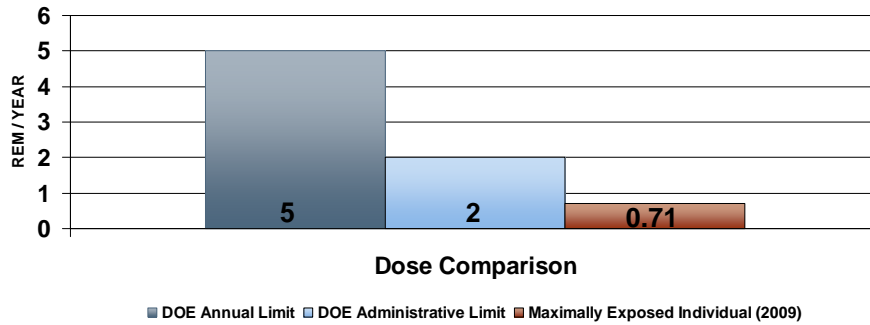


Dose Comparison



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Dose Comparison



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Yearly Dose

Calendar Year	Total Site Dose (Rem)	Total Number Monitored RadWorkers	Average RadWorker Dose (Rem)	Maximally Exposed Individual (Rem)
2001	22.197	843	.02633	
2002	30.474	786	.03877	
2003	36.468	651	.05602	
2004	39.354	684	.05754	.687
2005	14.530	605	.02402	.547
2006	16.018	470	.03408	.461
2007	44.498	434	.103	.733
2008	22.177	444	.04995	.451
2009	36.985	599	.061.74	.710
2010**				

**Current year dose is reported by electronic dosimeters.

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Protective Personal Equipment (PPE)

This employee is protected with a bubble suit and respirator while he monitors work in the Container Sorting and Packaging Facility



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PPE (cont)

In addition to protective suit and respirator, Pete Loretto is wearing a harness as fall protection as he works in the Water Treatment Area in the Fuel Receiving and Storage Building



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PPE (cont)

Employees getting ready to place the inside of a filled waste box to stabilize materials during shipment



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As Low As Reasonably Achievable

West Valley Demonstration Project ALARA Review Checklist

ALARA Review No.: _____ Work Document No.: _____ Date: _____
 Project Description (if Multiple Work Documents) ref() _____
 Work Document Title/Description: _____

- ALARA Trigger Levels (Exceeded (check all that apply)):
- Estimated individual or collective dose greater than 100 person-rem.
 - Predicted airborne radioactivity concentrations in excess of one Derived Air Concentration (DAC) to a worker taking into account assigned respiratory protection factors.
 - Removable contamination on accessible surfaces that exceed 100 times the releasable contamination levels in Table 2-2 of WVDP-010.
 - Entry into areas where dose rates exceed 1.0 rem/hour.
 - Potential releases of radioactive material to the environment (on-site or off-site) that could produce a concentration greater than or equal to (a) one Derived Concentration Guide (DCG) or other limit for an 5400.5, or result in an off-site dose to a member of the public that exceeds 0.1 rem per year.
 - Potential for significant radiological exposure

ALARA Consideration	N/A	Addressed in Work Document	Addressed in ALARA Review	Comments/Justifications
Installation of Radiological Control Hood Ports in the work area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Elimination or reduction of radioactivity through line flushing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Elimination or reduction of radioactivity through decontamination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Use of work processes and special tooling to reduce time in the work area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Use of engineered controls to minimize the release of radioactivity in the generation of airborne radioactivity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specification of special radiological training or monitoring requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specify increased biasness/frequency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Use of mock-ups for high exposure or complex tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Walk-down or dry-run of the activity using special procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Use of special tooling to reduce penetrating radiation levels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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ALARA (cont)

ALARA Consideration	N/A <input type="checkbox"/>	Addressed in Work Document <input type="checkbox"/>	Addressed in ALARA Briefing <input type="checkbox"/>	Comments/Justifications
Use of temporary shielding to reduce non-penetrating radiation levels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Strapping and preparation of necessary materials and special tools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Maximization of prefabrication and shop work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Review of abnormal and emergency procedures and plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Identification of joints where signatures and record party or independent verifications are required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Establishment of success or completion criteria with contingency plans to anticipate difficulties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Development of a pre-job estimate of collective exposure to be incurred for the job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Provisions for waste minimization and disposal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shop requiring ALARA pre-job briefing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shop requiring ALARA post-job review	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

The above referenced work document has been reviewed against the ALARA review checklist criteria. The appropriate ALARA considerations have been adequately incorporated or taken into consideration in the above referenced work document and the above project is acceptable.

Originator: _____ Name _____ (print and sign) _____ Date _____

Reviewed by: _____ RFP Reviewer _____ (print and sign) _____ Date _____

If >1000 person-hr, ALARA Committee Review and Approval: _____ ALARA Committee Chairperson _____ (print and sign) _____ Date _____

Approved by: _____ RKS Manager _____ (print and sign) _____ Date _____

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Radiation Work Permit

WVDP Radiation Work Permit	
General Job Specific Start Date:	Technical Work Document: <input type="checkbox"/> Expiration Date: _____
RFP Number:	Reference Survey:
Job Location:	
Job Description:	
Work Area Radiation Levels:	Work Area Contamination Levels:
General Area: _____ Maximum Contact: _____	Work Area Airborne Radioactivity Levels: _____ DAC (Total): _____
RCT Coverage	Dosimetry
Continuous Start Of Job	TLD Electronic (ED) Extremity
Protective Equipment:	
Hair	Shoe Covers
Hood	Boots
Disposable Sleeves	Rubber Boots
Lab Coat	F, Full Face Respirator
Paper Suit	APR
Art-C-Goggles	Eye Protection
Art-C-Gloves	Supplied Air Respirator
RCT Monitoring:	
GAS	Radi Time Air
GAIS	ARI
GAIS	ARI
Personnel Monitoring	
2,5 Minute Film	RCT @ _____
Limiting Conditions	
RWP is Not Valid If: _____	
Prepared By:	
Print: _____	Work Area Supervisor: _____
Print: _____	Supervisor: _____
Authorizing Signatures:	
Print: _____	Supervisor: _____
Print: _____	Supervisor: _____

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